



# Introduction to ACI Shared Solutions for Shared Success

Paul Wilson  
ACI Faculty Director

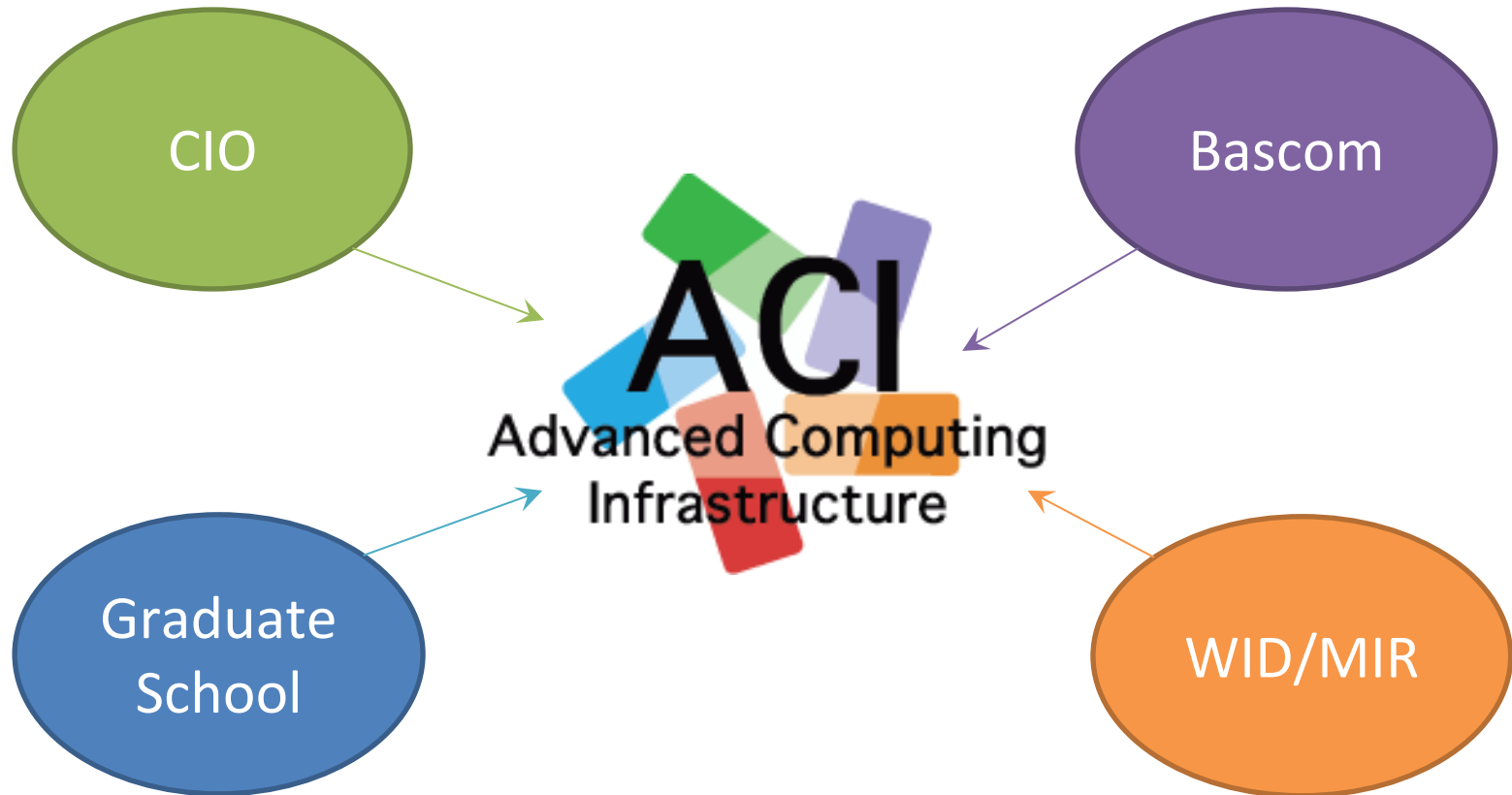
Spring 2014

# Mission

The University of Wisconsin-Madison Advanced Computing Infrastructure delivers a combination of shared computing resources and shared human resources to enable a broad range of researchers to improve their use of computers in their scholarly work. The successful outcome will provide expertise, hardware, and software in the right ratio to empower the research mission of UW-Madison through computation.

# Supporters

- ACI exists due to the convergence of support from different parts of the UW campus

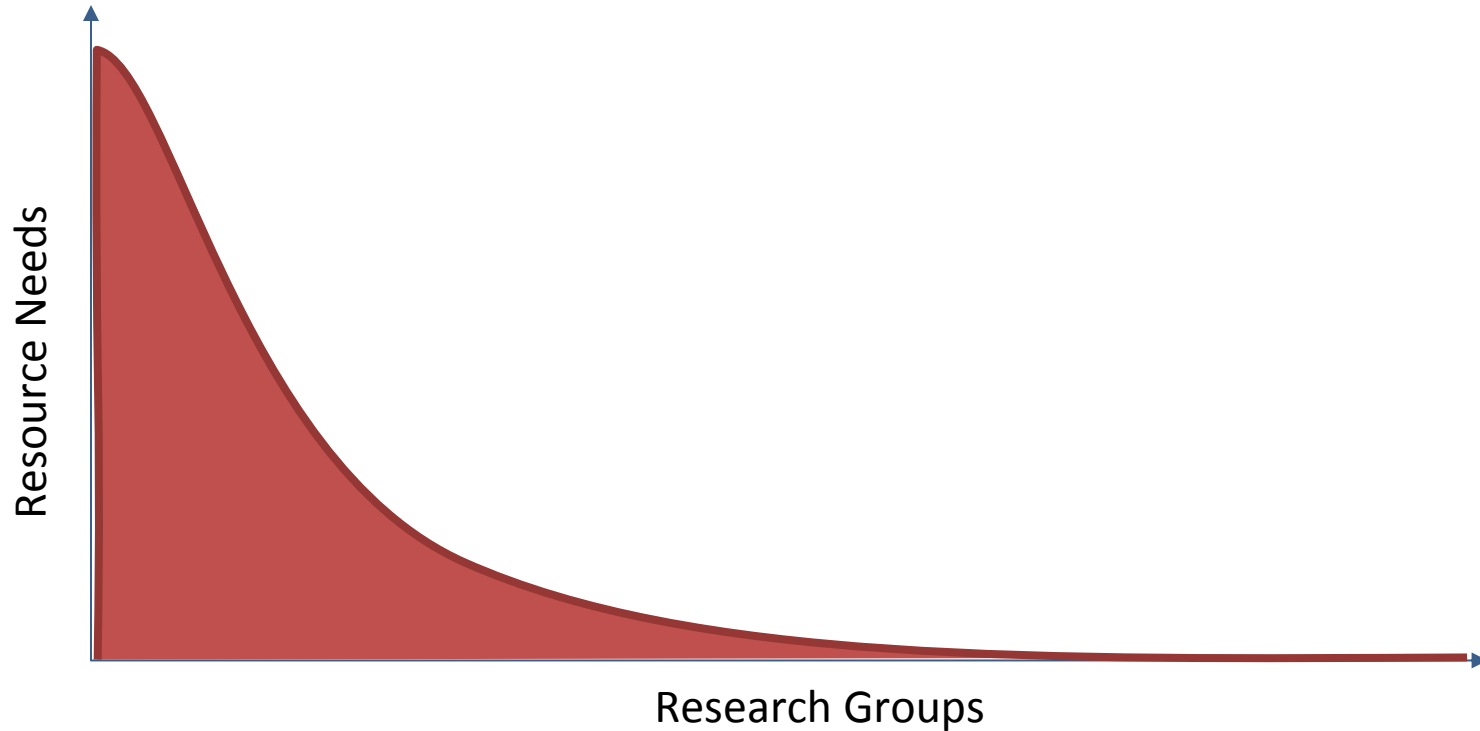


# Research Computing has Broad Scope

- Computing Services
- Software licensing
- Data management & storage
- Network infrastructure
- Training & Education
- Community Building
- Extramural Collaborations

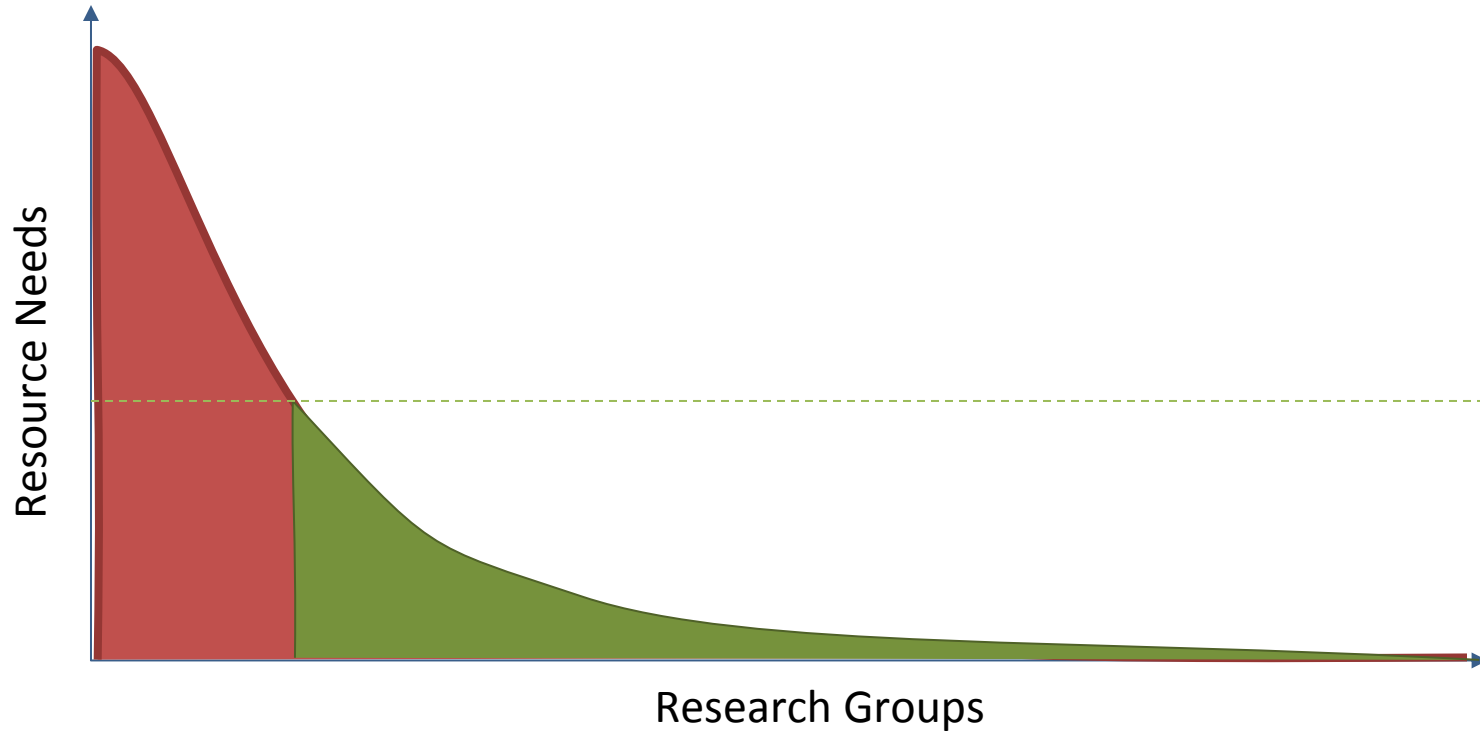
# Finding Economies of Scale in Research Computing

- Not one-size-fits all



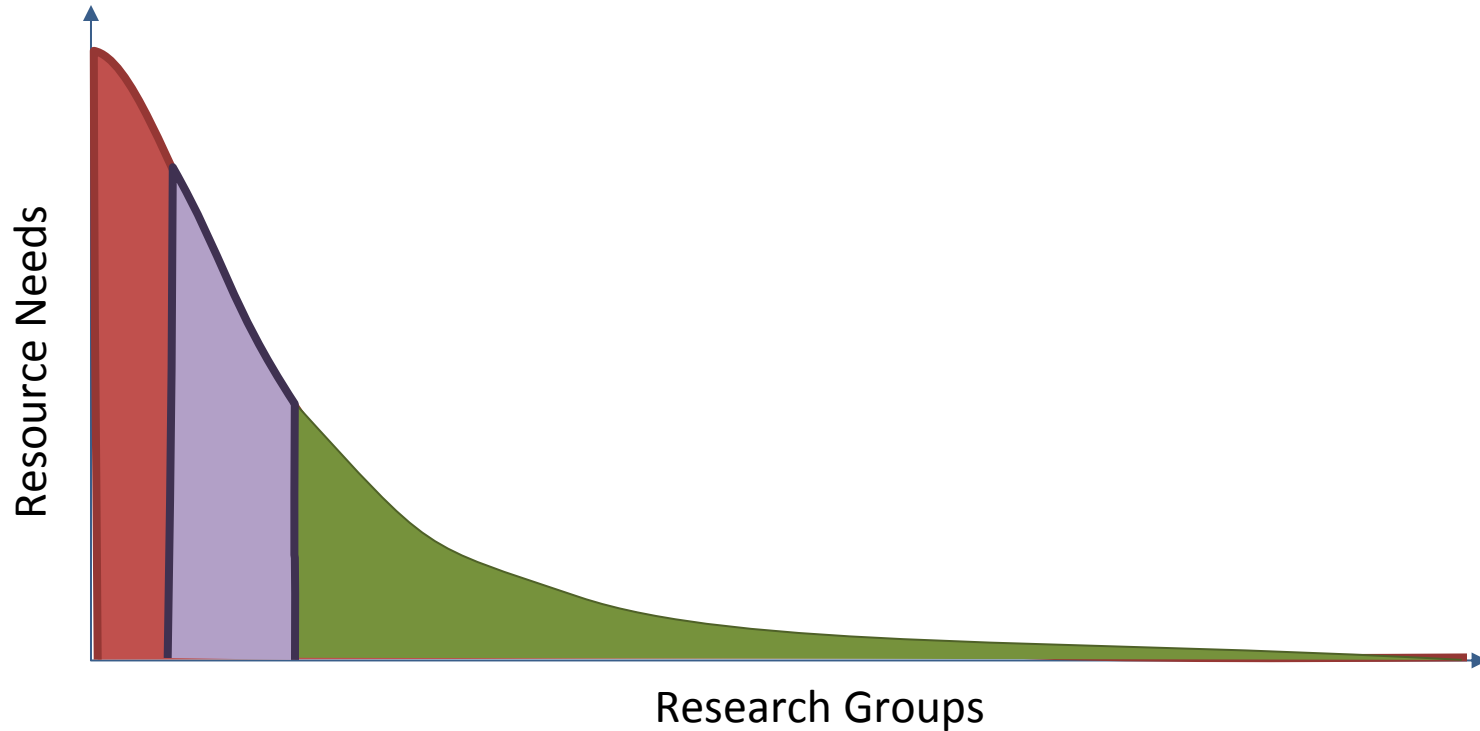
# Finding Economies of Scale in Research Computing

- May be solutions that work for majority
- Where is the transition? Is it sharp?



# Finding Economies of Scale in Research Computing

- Is there an intermediate group?
- How do we serve them?



# ACI is a Connecting Hub

- Identify gaps
- Engage existing service partners
- Coordinate resources (new & existing)
- Guide strategic investment
- Advise campus decision makers
- Advocate a stable investment from campus



## Case Study

# Research Computing Facilitation

- Gap identified as near term need in ACI proposal
- CHTC engaged as service partner
- New staff hired with strategic investment

# Case Study

## Research Computing Facilitation

- Status
  - First facilitator hired in January 2013
    - Lauren Michael
  - Engaged 56 new research groups in year 1
  - Defining role of ACI facilitator
    - Represent the users interests
    - Know when to bend, when to break, and when to push back

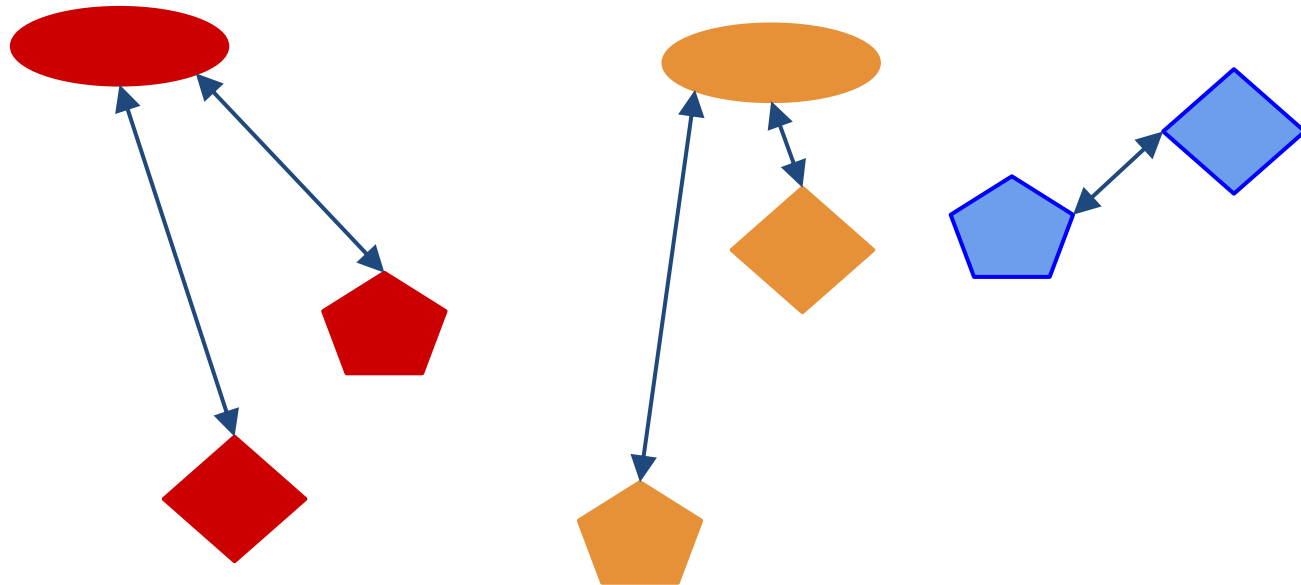
# ACI-REF:

## Advanced Computing Infrastructure Research and Education Facilitator

- NSF-funded effort to define a new career path that
  - Accelerates scholarly outcomes using cyberinfrastructure
  - Creates a community of facilitators based on mentorship and shared expertise
  - Develops a framework for sharing experiences
  - Increases breadth and depth of interactions with campus researchers
  - Enables scholars to be more competitive and more collaborative

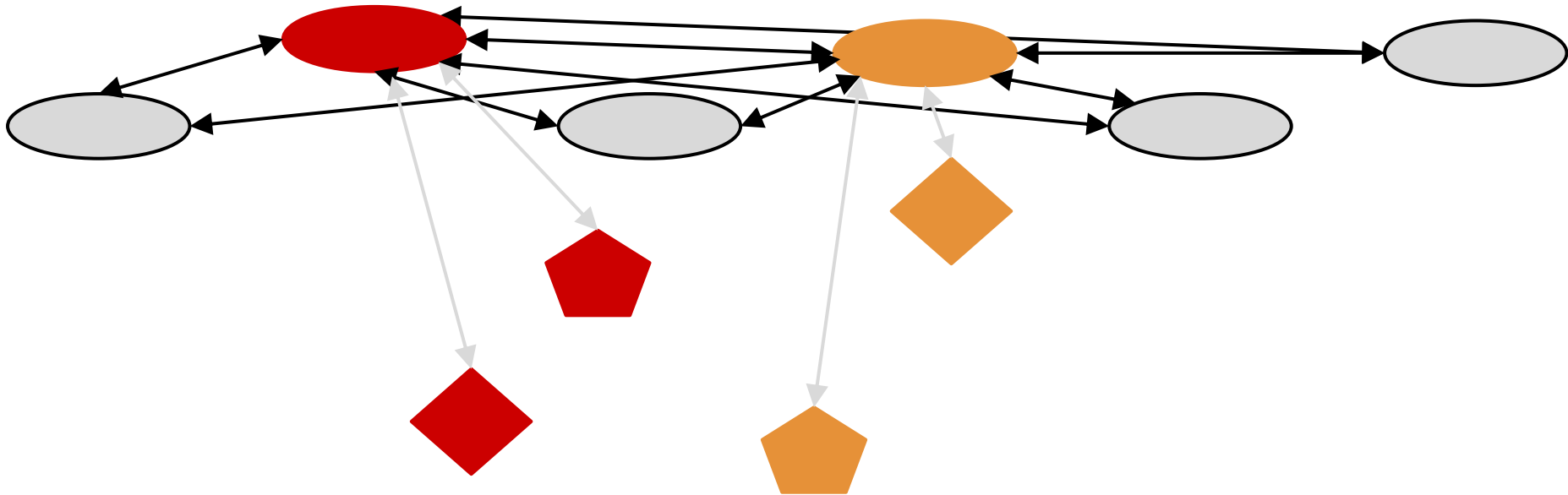
# ACI-REF Network

- 12+ Facilitators across 6 campuses
  - Clemson, Wisconsin, Harvard, Hawaii, USC, Utah



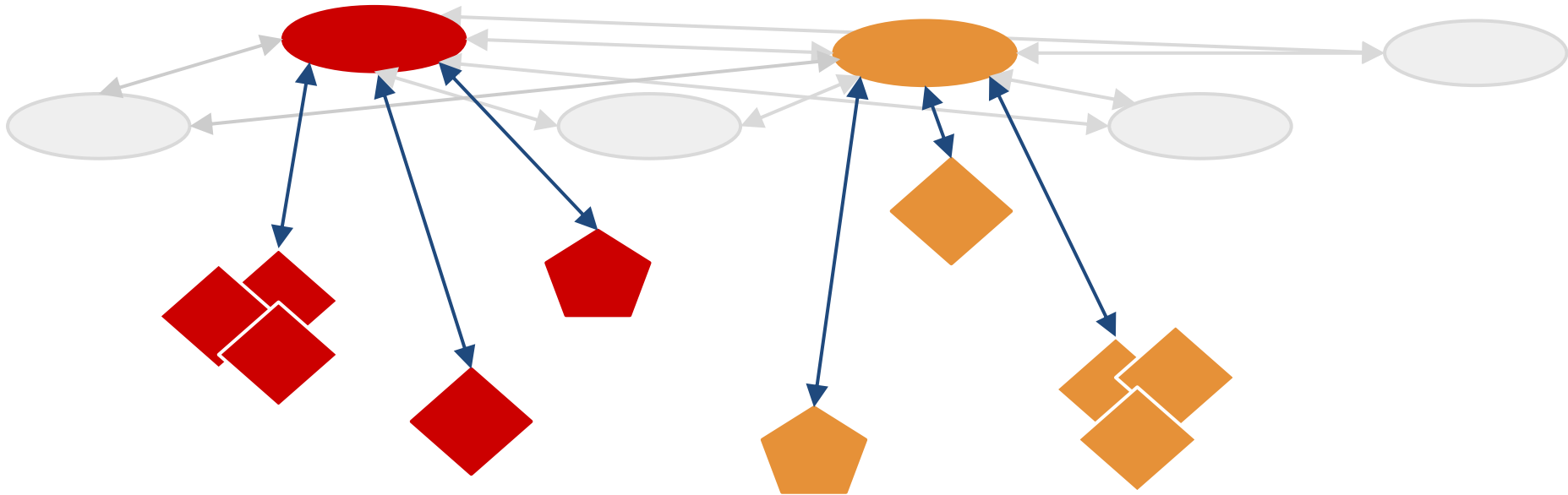
# ACI-REF Network

- 12+ Facilitators across 6 campuses
  - Clemson, Wisconsin, Harvard, Hawaii, USC, Utah



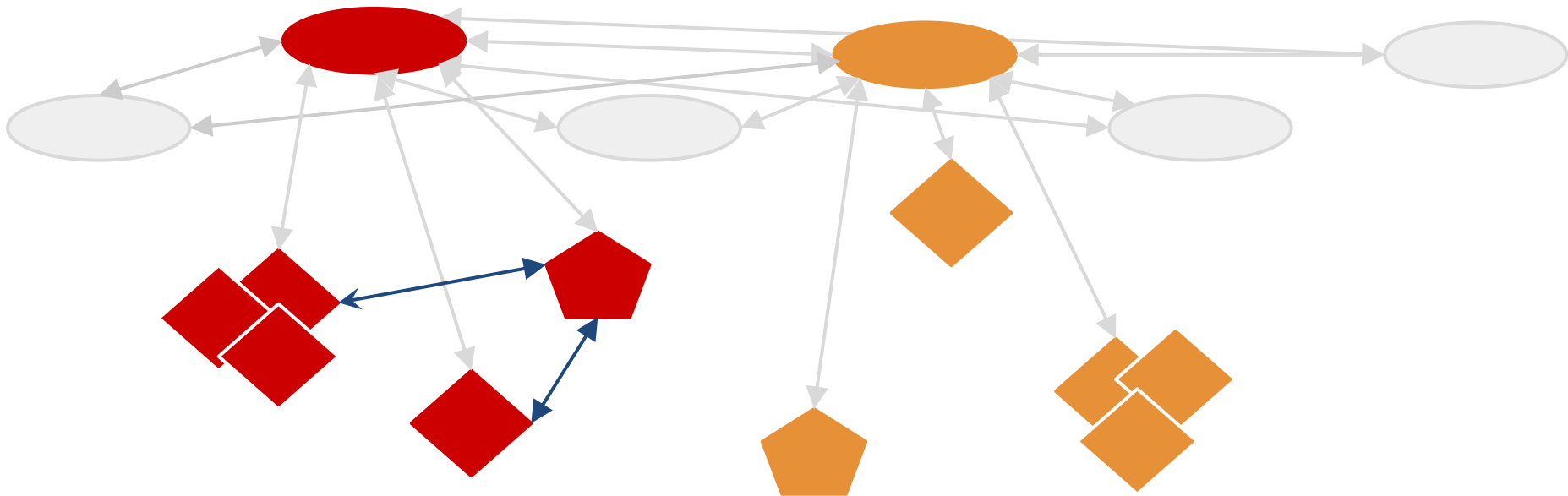
# ACI-REF Network

- 12+ Facilitators across 6 campuses
  - Clemson, Wisconsin, Harvard, Hawaii, USC, Utah



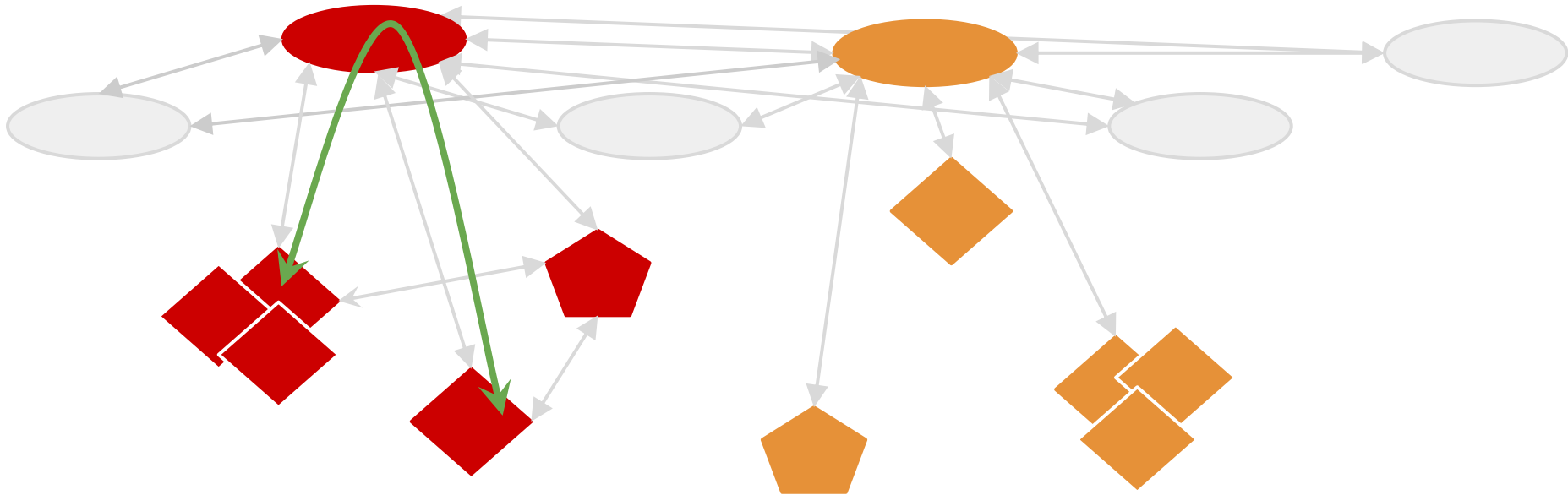
# ACI-REF Network

- 12+ Facilitators across 6 campuses
  - Clemson, Wisconsin, Harvard, Hawaii, USC, Utah



# ACI-REF Network

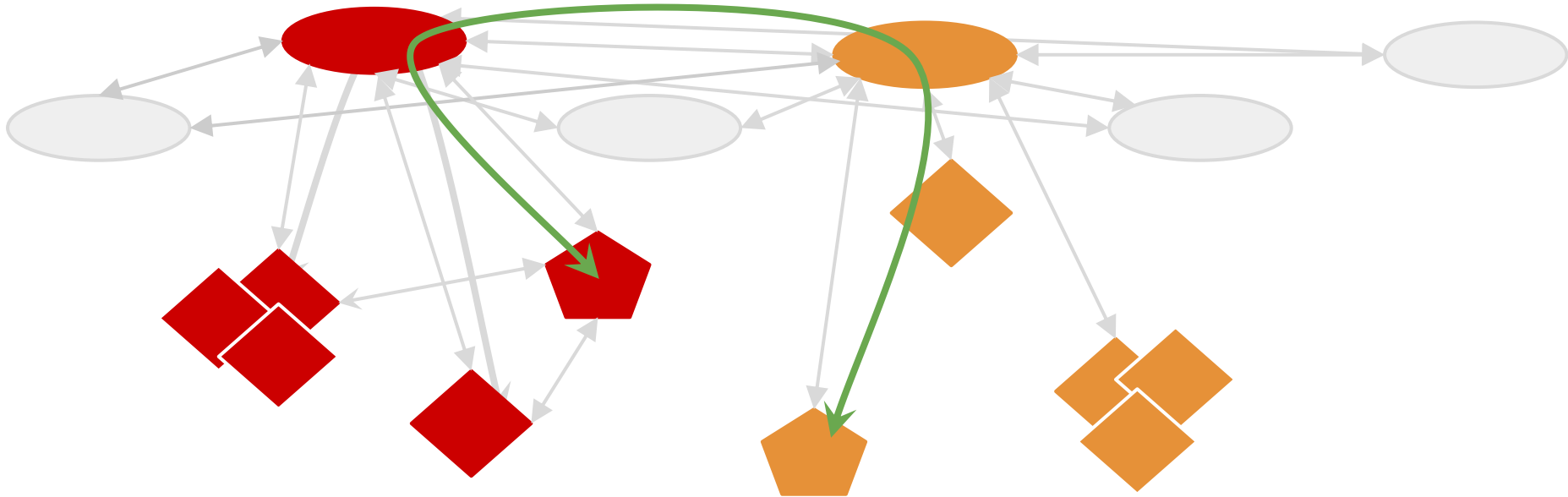
- 12+ Facilitators across 6 campuses
  - Clemson, Wisconsin, Harvard, Hawaii, USC, Utah





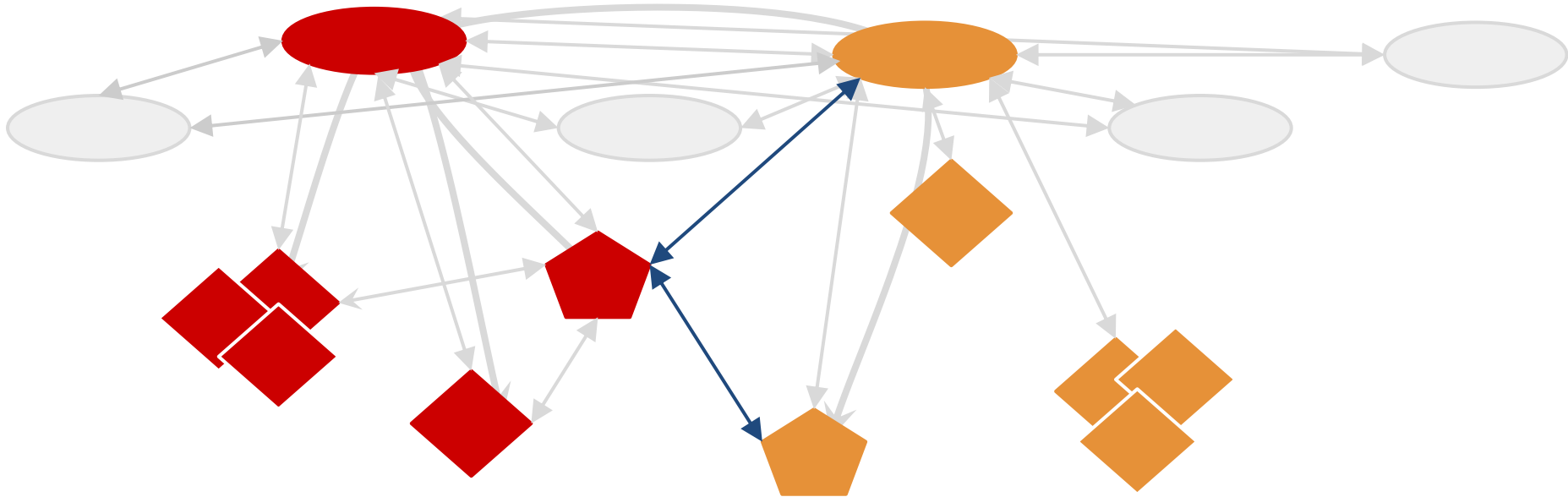
# ACI-REF Network

- 12+ Facilitators across 6 campuses
  - Clemson, Wisconsin, Harvard, Hawaii, USC, Utah



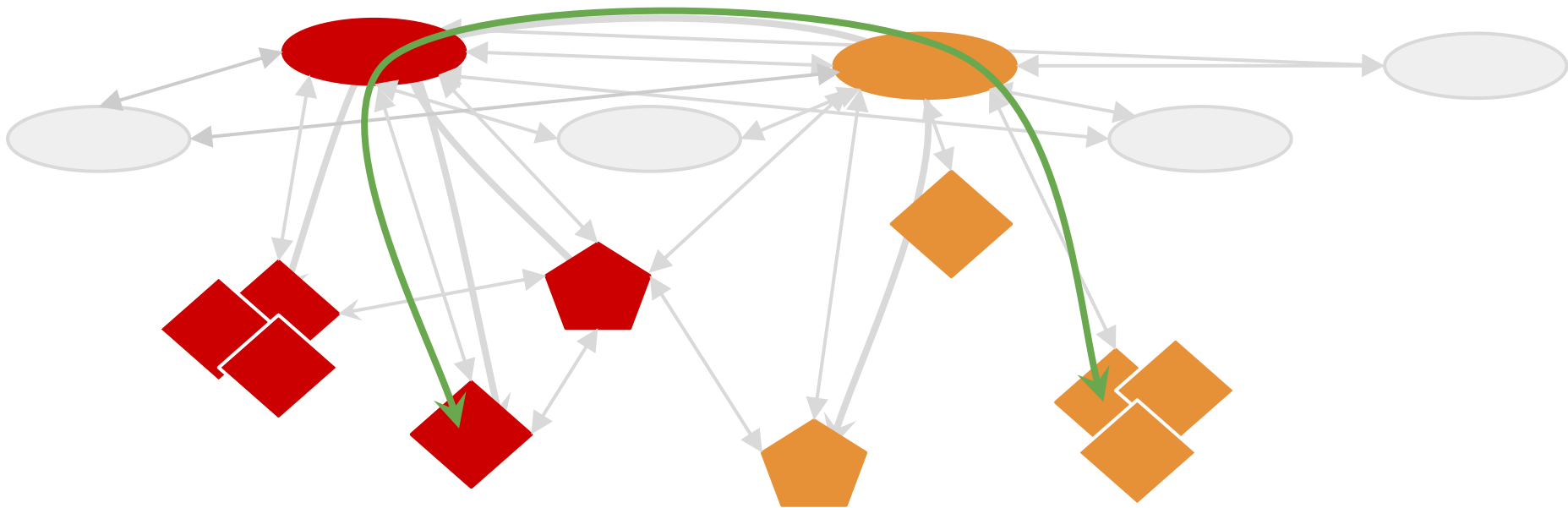
# ACI-REF Network

- 12+ Facilitators across 6 campuses
  - Clemson, Wisconsin, Harvard, Hawaii, USC, Utah



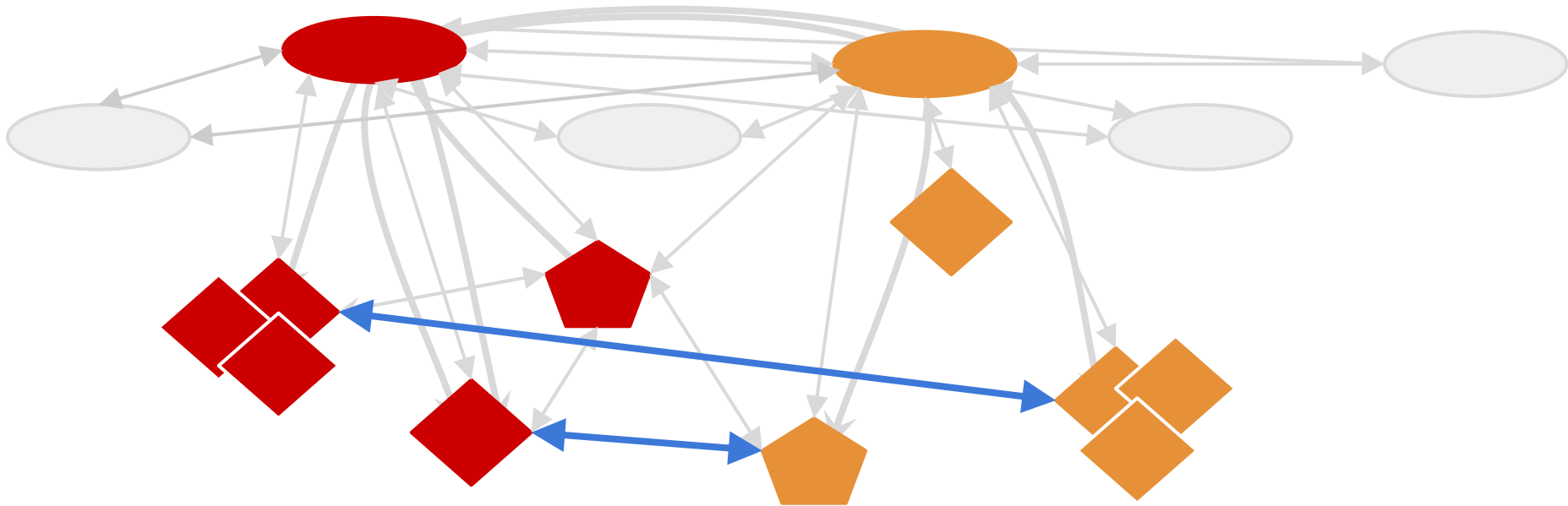
# ACI-REF Network

- 12+ Facilitators across 6 campuses
  - Clemson, Wisconsin, Harvard, Hawaii, USC, Utah



# ACI-REF Network

- 12+ Facilitators across 6 campuses
  - Clemson, Wisconsin, Harvard, Hawaii, USC, Utah




# ACI-REF

## Next Steps in Wisconsin

- Sharing best practices
  - Transfer successful strategies among research groups, esp. HTCondor
- Increasing instructional opportunities
  - Build network
  - Change culture
- Collect information on needs beyond computing
  - esp. Data storage

# Accomplishments

- ACI portal: aci.wisc.edu
  - Services, Partners, News, Events
- Shared HPC Computing Platform
- New Research Computing Facilitator
  - Engaged 56 new research groups in year 1
- 3  software carpentry bootcamps
  - committed to 2 per year
  - exploring intensive in-service version

# Accomplishments

- Community building activities
  - Monte Carlo Markov Chains
  - Research Sys Admin
- Recruited first ACI Fellows
  - Sid Kiblawi (Medical Microbiology)
  - Courtney Hall (Ed Psych)
- Engaging with campus decision makers
  - Software licensing
  - Data center aggregation
  - COE IT

# What's next?

- Engage a broader set of service partners
- Engage/advise campus decision makers
- Embark on review of data management and storage needs
- Increase education & training opportunities
- Continue to build communities around common methods/tools



# Keys to Ongoing ACI Success

- Open communication and close collaboration across leadership
  - Researchers, CIO, Service providers
- Recognize the importance of people
  - Increased access to technology requires more people to make it successful
- Offer a portfolio of services to adapt to needs of scholars



Questions? Comments?

Contact [ACI@lists.wisc.edu](mailto:ACI@lists.wisc.edu)

Spring 2014

