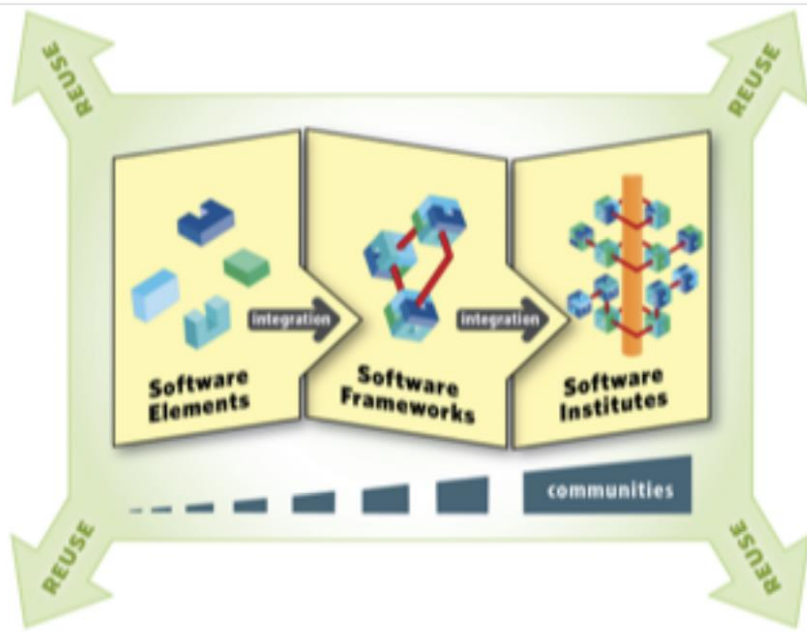


Xpert Network – Exchanging Best Practices in Supporting Computational and Data-Intensive Research

Sandra Gesing
sandra.gesing@nd.edu

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Sustainability for Cyberinfrastructure - NSF



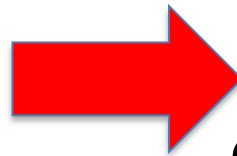
Elements: Small groups - create & deploy robust capabilities for demonstrated need to advance science & engineering.

Framework Implementations: Larger teams organized around the development and application of common infrastructure aimed at solving common research problems, resulting in a sustainable community framework serving a diverse community or communities.

Planning Grants for Community Cyberinfrastructure: Focus on long-term capabilities in cyberinfrastructure to serve a research community of substantial size and disciplinary breadth.

Community Cyberinfrastructure Implementations: Focus on long-term hubs of excellence in cyberinfrastructure and technologies, to serve a research community of substantial size and disciplinary breadth.

SI2
Software Infrastructure for
Sustained innovation



CSSI
Cyberinfrastructure for Sustained
Scientific Innovation

Sustainability for Cyberinfrastructure - NSF

Sustainability Institutes and Excellence Hubs are funded to support the CI and research community

Support via implemented institutes is free!

- **Science Gateways Community Institute (SGCI)**
- The Molecular Sciences Software Institute (MolSSI),
- **US Research Software Sustainability Institute Conceptualization (URSSI)**
- ...



Science Gateways Community Institute

Incubator

Get advice (sustainability, usability, cybersecurity, other) on your existing gateway

Extended Developer Support

Work with SGCI to build a gateway for you – up to 1 year developer time

Scientific Software Collaborative

Find a working gateway or gateway development software in our catalog

Community Engagement and Exchange

webinar series, gateways in the news, google scholar feed, case studies, annual conference, blog posts

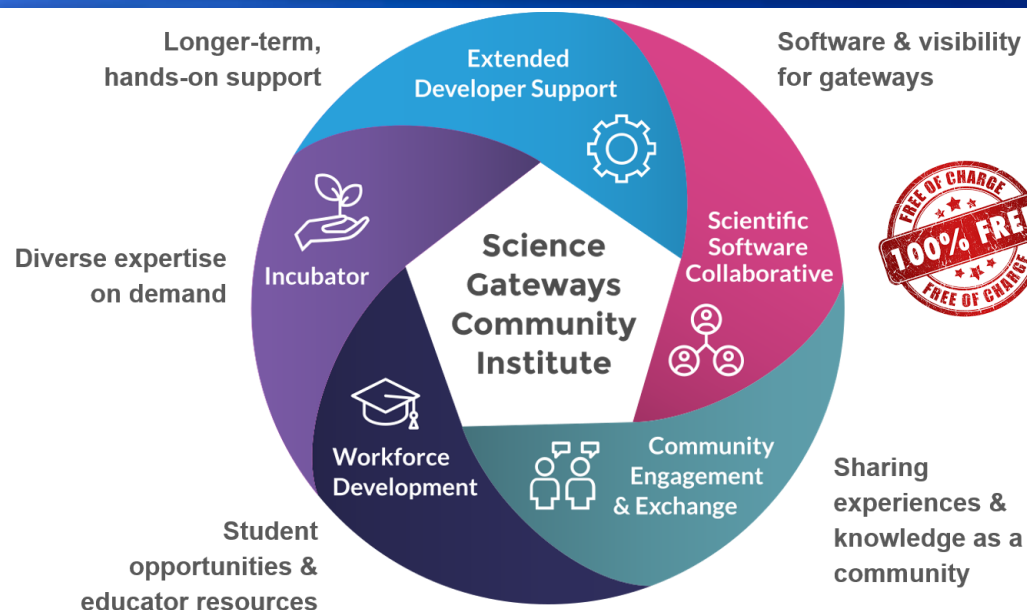
Workforce Development

Enroll a student in an internship program to learn gateway development

Gateway Ambassadors

Community building

Building of gateway groups at institutions and in consortia



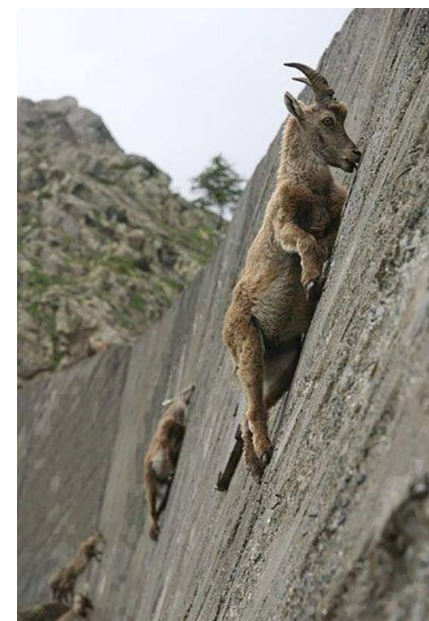
Collaborations

Make

Challenges

Less

Steep



URSSI Conceptualization

- Workshops
- Survey
- Ethnographic studies
- Outreach and communication

Goal: Community-driven institute proposal

Some envisioned activities:

- Complementing actions for existing institutes
- Summerschool on software engineering practices – filling a gap in existing training landscape
- URSSI points to tools and standards

What Best Practices Have Worked for Us?

- Consultancy via experts (usability, sustainability, ...)
- Bootcamp/Focus week (cohort building)
- Yearly Gateways conference
- Gateways catalog

The screenshot displays the Science Gateways Catalog website. At the top, the SGC logo is visible, along with navigation links for 'Log In' and 'Sign Up'. A banner message reads: 'We welcome you to contribute your own gateway to this list. Sign up to get started.' Below this, the main heading is 'Science Gateways Catalog' with a subtext: 'Save time - reuse gateway technologies or discover gateways and virtual research environments that you can use for your own research, teaching, and learning.' The page indicates 'Total Entries: 596'. On the left, there is a 'FILTERS' sidebar with a 'None' button and a list of categories: GATEWAY (507), SOFTWARE (89), SGC AFFILIATE (13), SGC CLIENT (27), USED IN CLASSROOM (38), PHYSICAL (244), LIFE (243), SOCIAL (80), APPLIED (149), INTERDISCIPLINARY (147), FORMAL (23), and PHILOSOPHY (30). A search bar is located in the top right, and a 'Sort by' dropdown menu is set to 'SGCI Affiliate'. The main content area shows a detailed entry for 'HUBzero', which is an SGC Affiliate and Education. The entry includes the HUBzero logo, the URL 'https://www.hubzero.org', and a description: 'HUBzero® is an open source software platform for building powerful websites that host analytical tools, publish data, share resources, collaborate and build communities in a single web-based ecosystem. Originally created by researchers at Purdue University in conjunction with the NSF-sponsored Network for Computational Nanotechnology to support nanoHUB.org, the HUBzero platform now supports dozens of hubs across a variety of disciplines. HUBzero includes a powerful content management system built to support scientific activities. Users on a hub can write blog entries, participate in discussion groups, work together in projects, publish datasets and computational tools with Digital Object Identifiers (DOIs), and make these publications available for others to use—not as dusty downloads, but as live, interactive digital resources. Simulation/modeling tools published on a hub can be accessed with the click of a button, running on cloud computing resources, campus clusters, and other national high-performance computing (HPC) facilities and serve up compelling visualizations.'

Ideas to Create Synergy

- Advertising of related events
- Including projects/initiatives in presentations where suitable
- Cross-invitation of speakers to events and webinars
- Cross-linking of projects
- Re-use of created materials