

*Connecting people and resources to
accelerate discovery by empowering the
science gateway community*



Science Gateways Bootcamp: Strategies for Developing, Operating and Sustaining Science Gateways

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Award Number
ACI-1547611

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IWSG
International Workshop on Science Gateways

Science Gateways Survey 2014

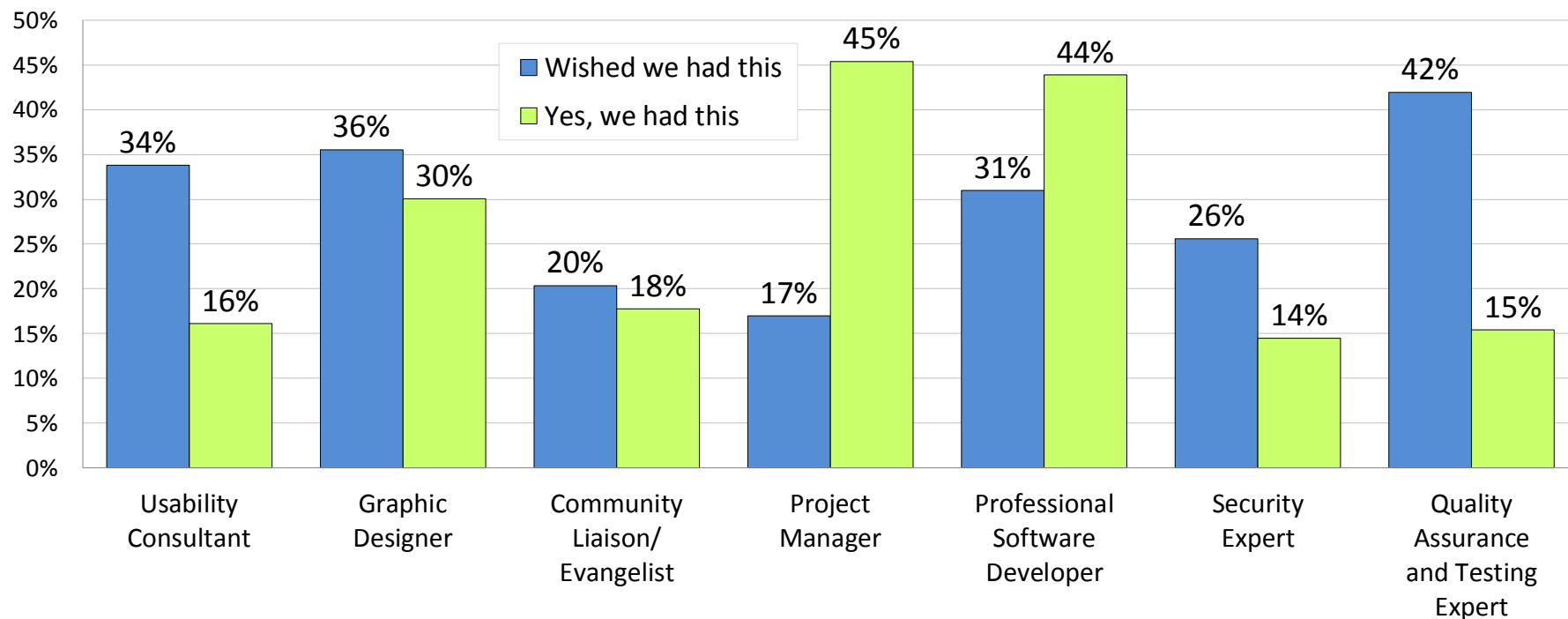
- sent out to 29,000 persons
- 4,957 responses from across domains
- 52% from life, physical or mathematical sciences
- 32% from computer and information sciences or engineering
- 45% develop data collections
- 44% develop data analysis tools

What services would be helpful?

Proposed Service	% Interest
Evaluation, impact analysis, website analytics	72%
Adapting technologies	67%
Web/visual/graphic design	67%
Choosing technologies	66%
Usability Services	66%
Visualization	65%
Developing open-source software	64%
Support for education	64%
Community engagement mechanisms	62%
Keeping your project running	62%
Legal perspectives	61%
Managing data	60%
Computational resources	59%
Mobile technology	59%
Database structure, optimization, and query expertise	59%
Data mining and analysis	58%
Cybersecurity consultation	57%
Website construction	57%
Software engineering process consultation	53%
Source code review and/or audit	51%
High-bandwidth networks	45%
Scientific instruments or data streams	44%
Management aspects of a project	38%

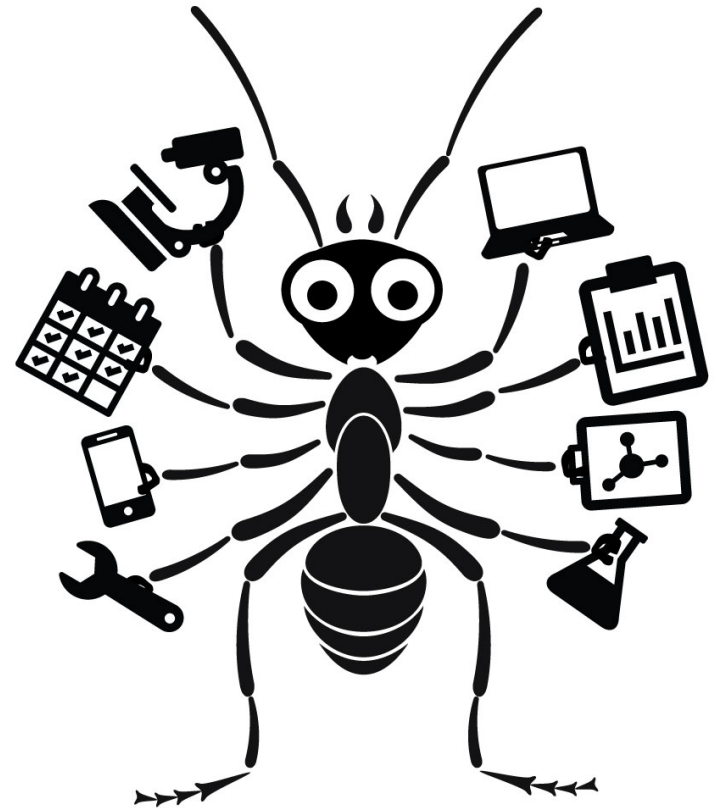
Science Gateways Survey 2014

Well-designed gateways require a variety of expertise

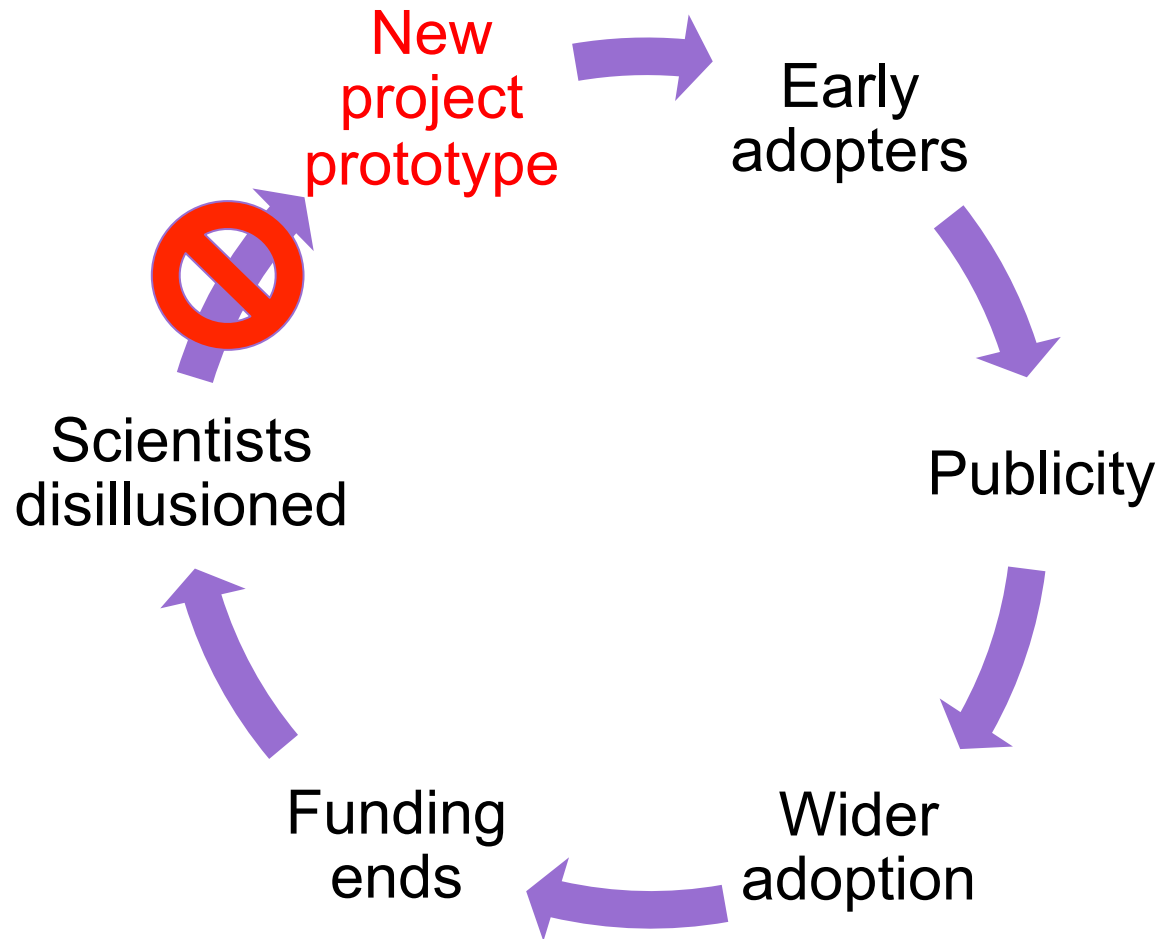


Challenges

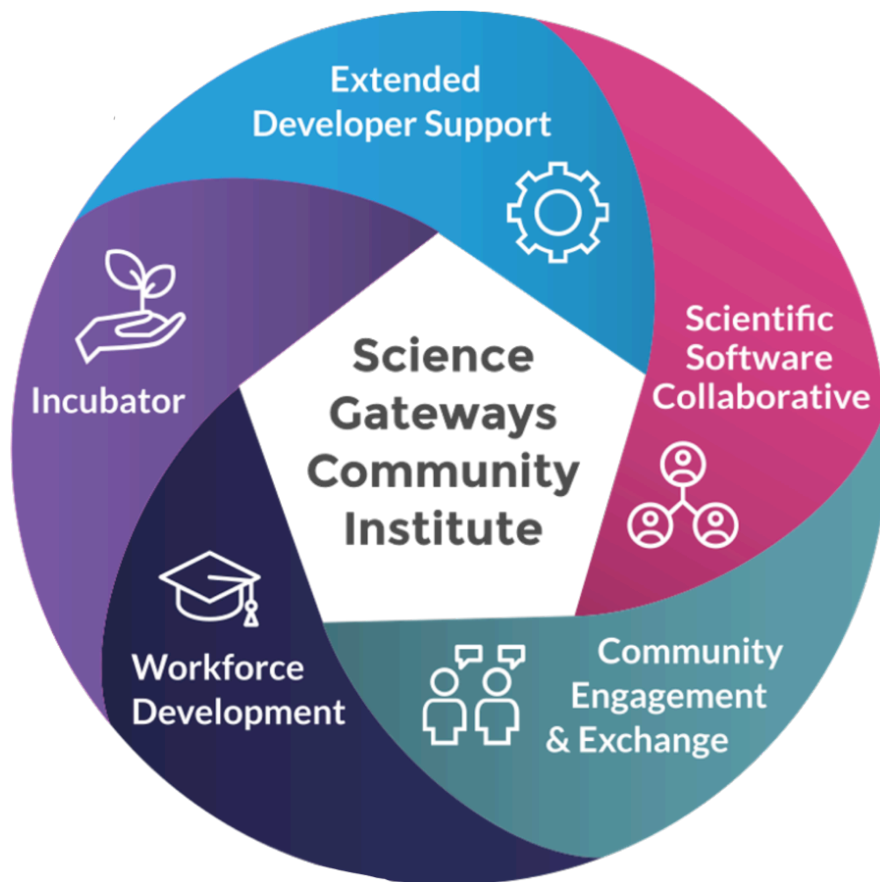
- Some topics and roles are only needed for part of the project
 - ⇒ Not fully funded positions via one project
 - ⇒ For diverse expertise, several different people are needed



Typical Lifecycle of a Science Gateway



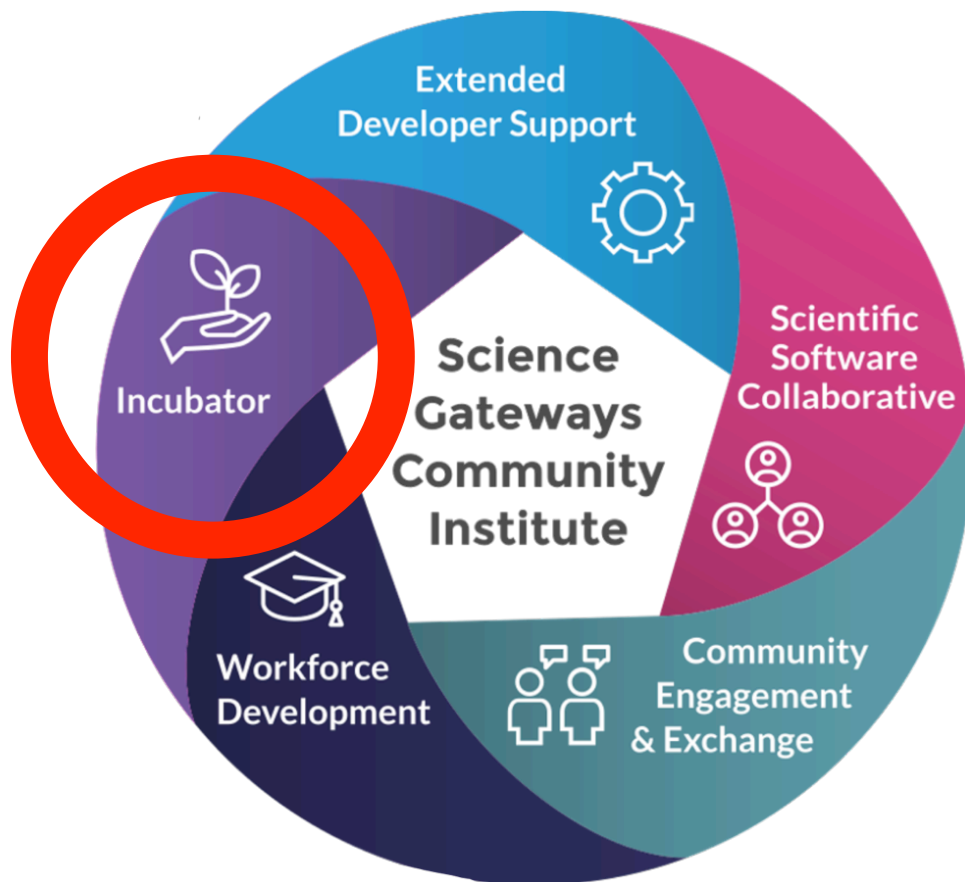
Science Gateways Community Institute



help@sciencegateways.org
<http://sciencegateways.org/>

- Diverse expertise on demand
- Longer term support engagements
- Software and visibility for gateways
- Information exchange in a community environment
- Student opportunities and more stable career paths

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Incubator Service

A Framework for Decision Making

Technology Planning

- Choosing technologies
- Cybersecurity
- Software engineering
- Interfaces to compute and data

Business Planning

- Business model development
- Financial planning
- Project management
- Software licensing
- Staff and sustainability planning

Client Interaction Planning

- Usability studies
- Web/visual/graphic design
- Impact measurement
- Community engagement
- Support for education

Specialized Expertise

Security

- Center for Trustworthy Scientific Cyberinfrastructure

Sustainability

- Nancy Maron, creator of the ITHAKA S+R course on Sustaining Digital Resources

Evaluation & Impact Measurement

- Ann Zimmerman Consulting

Campus Resource Development

Network / Cohort Formation

Common Experiences

- Training sessions
- Group interactions

Continuing Engagement

- Customized structure, content, goals
- Mentoring
- Pay It Forward

An Ongoing
Dispassionate Ear

I have an idea!



Articulate the value of your gateway and how it's distinctively different from what already exists.

Who benefits?



Identify audience and stakeholder groups and consider how they impact your success.

Where does it fit in?



Establish where your gateway solution fits within the existing market landscape of partners and competitors.

How do I make it happen?



Define measurable goals for success and sustainability. Consider multiple needs such as technology, security, project management, usability, and funding.

How do I sell it?



Spread the word!
Plan how to tell the unique story of your gateway.

Bootcamp at a Glance

- 5 full days
- Teams on science gateways
- Knowledge dissemination
- Interactivity
- Community formation
- Putting away the normal daily routine
- Homework

COURSE PLAN

MONDAY

TUESDAY

WEDNESDAY

THURSDAY

FRIDAY

Your Audience(s)
and Stakeholders

Technology,
Open Source

Cybersecurity

Outreach

Mapping the
landscape

User Centered
Design

On-Campus
Support

Your
Sustainability
Model – Making
Your Case

Introductions

Course Outline
and Goals

The “Napkin”
Drawing

Defining Your
Value
Proposition

Going beyond
your initial
market

Goal Setting

Budgeting

Funding
Models

Marketing &
Outreach

Impact
Measurement
Case Study

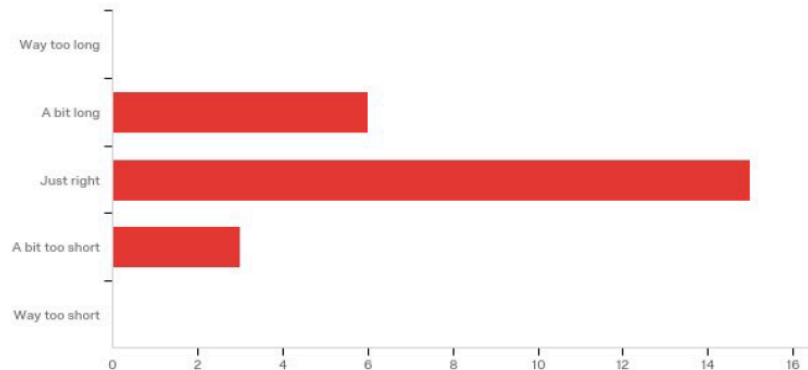
Next Steps

Closing

Bootcamps

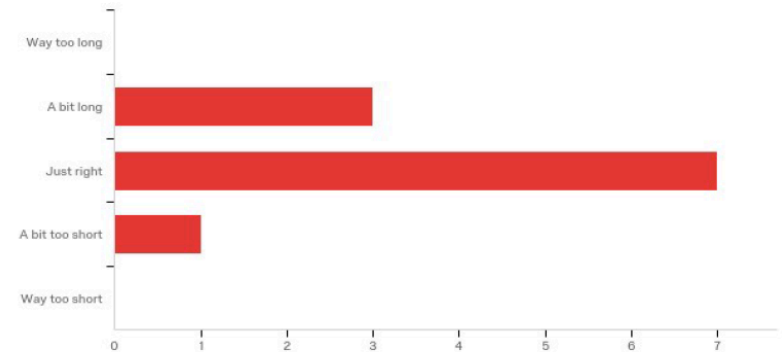
- twice per year
- additional ones can be booked (travel expenses for presenters)
- adapted to feedback

Q6 - How would you rate the length of the Bootcamp?



Bootcamp 1

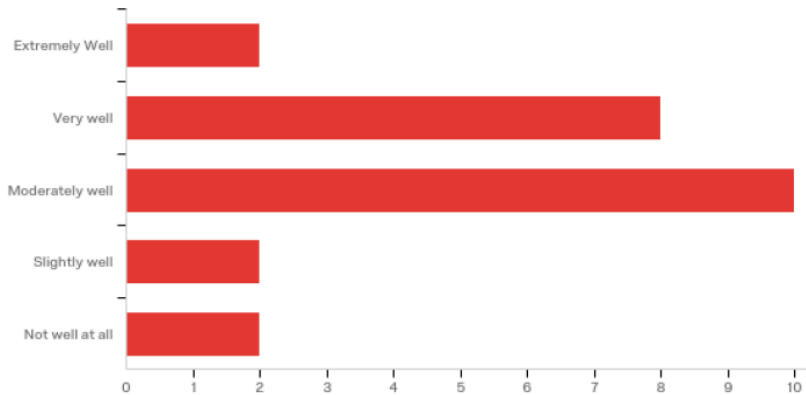
Q6 - How would you rate the length of the Bootcamp?



Bootcamp 2

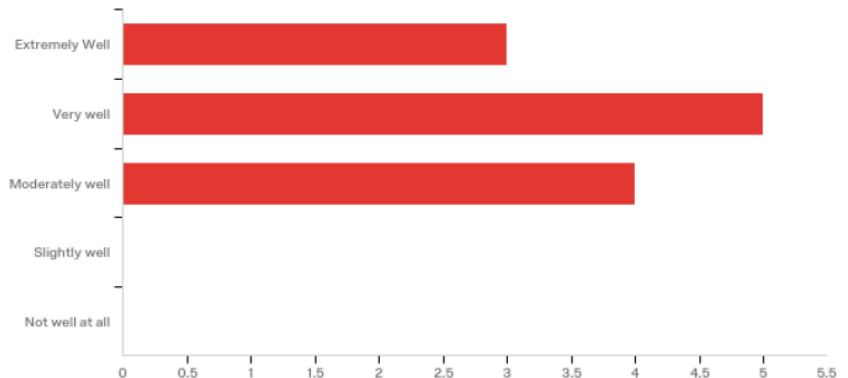
Feedback to the Bootcamps

Q4 - How well did the information you received prior to the Bootcamp prepare you to participate?



Bootcamp 1

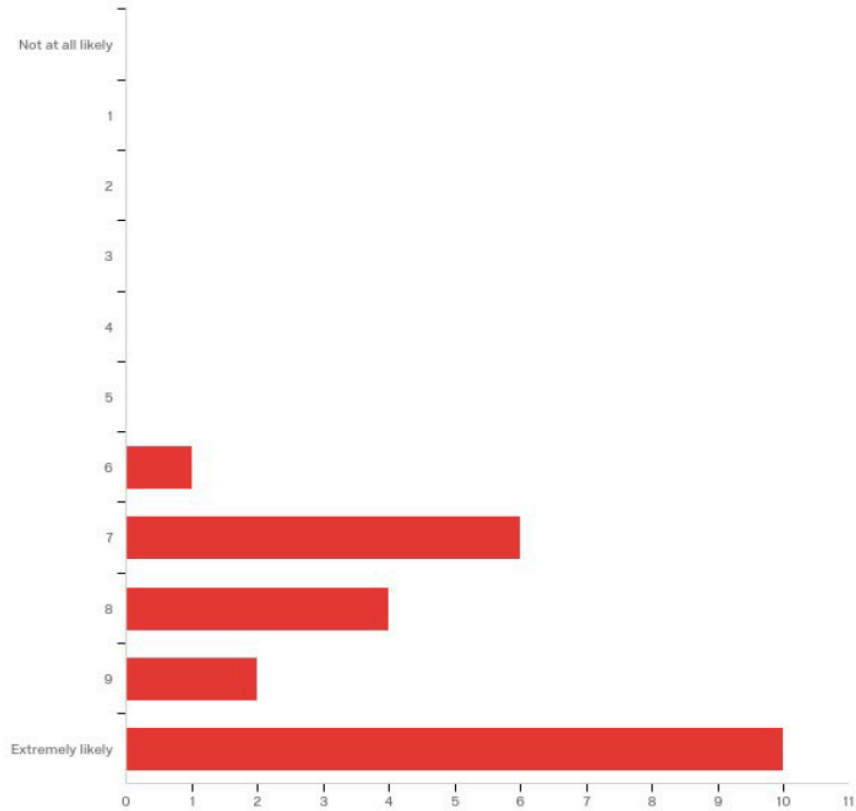
Q4 - How well did the information you received prior to the Bootcamp prepare you to participate?



Bootcamp 2

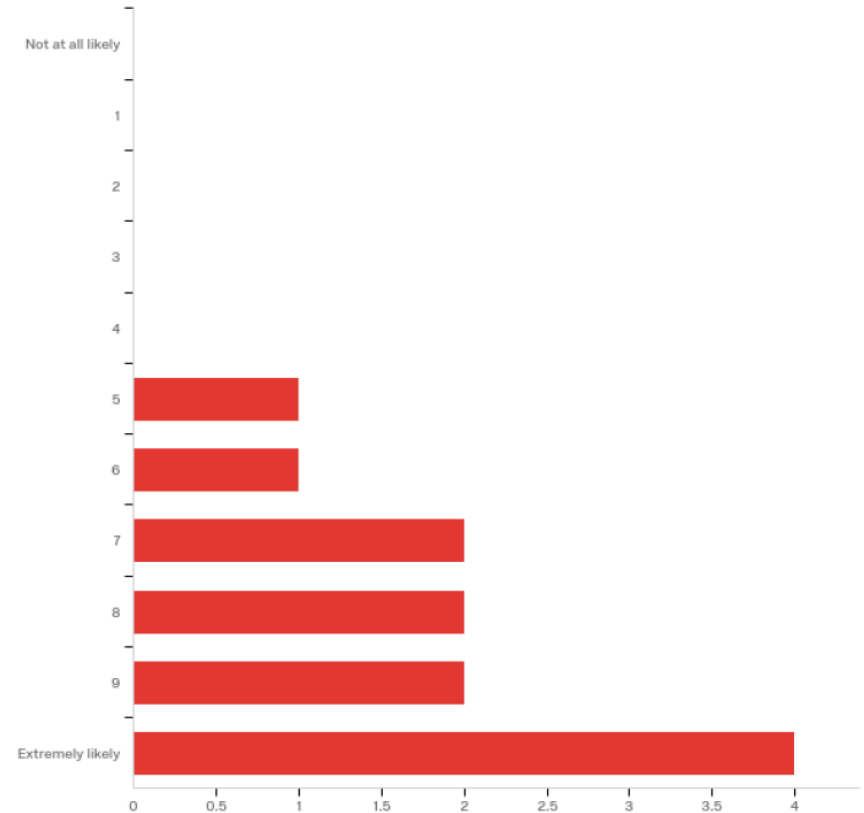
Feedback to the Bootcamps

Q8 - How likely is it that you would recommend this workshop to a colleague?



Bootcamp 1

- How likely is it that you would recommend this workshop to a colleague?



Bootcamp 2

Feedback to the Bootcamps

"The Science Gateways Bootcamp is useful to people involved at any stage of their science gateway project, and in any role. Their experts have you consider all aspects of sustainability, from understanding your unique value proposition and audience, through to best practices and standards in software development. They cultivate a lively, active, hands-on environment. A great experience overall."

Steve Androulakis
Manager — Community Platforms,
NeCTAR.org.au, ANDS.org.au, RDS.org.au
(now at Amazon)

"The SGCI Bootcamp has fundamentally altered, in a constructive way, my view toward developing and implementing the projects on which I work. The work during the week helped me to generate a new approach to the gateway on which I'm working that has much greater potential to be successful, and I intend to apply the ideas and concepts from the Bootcamp to all project phases, from idea to implementation."

Christopher Lenhardt
Domain Scientist for Environmental Data Science &
Systems, RENCi Data Observatory
Risk Analytics Discovery Environment (RADE) gateway

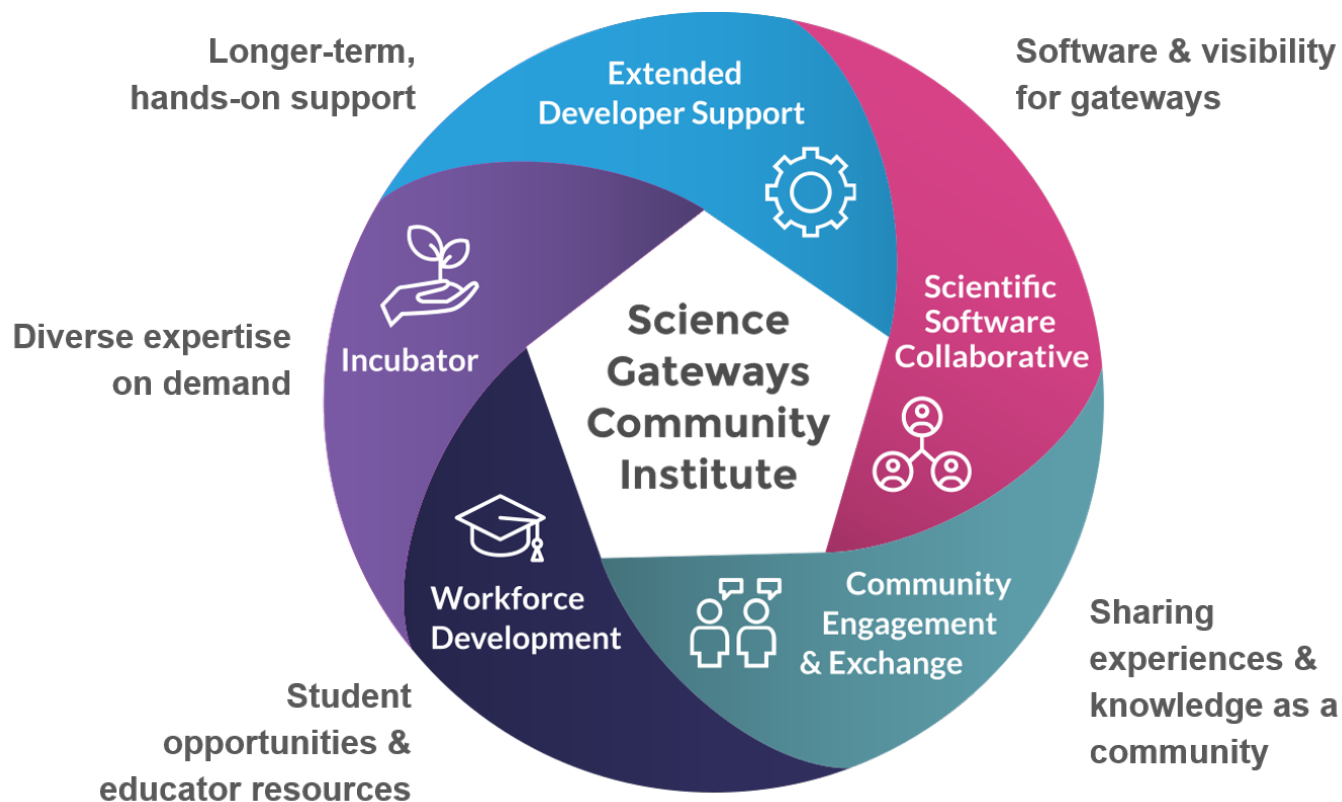
<https://sciencegateways.org/-/reflections-from-the-inaugural-science-gateways-bootcamp-in-april-2017>

International Collaboration

- Hire consultants
- Partner with us
- Apply to the bootcamp
- Bring the bootcamp to you!
(Travel expenses for 8 instructors is more cost efficient than sending 20 researchers)



Thanks for your attention!



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