



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

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INTRODUCTION

The main goal of science gateways is to deliver a computational solution for serving communities effectively, efficiently and reliably via enabling users to focus on their research questions without them becoming acquainted with complex computing and data infrastructures. Besides good software engineering practices further considerations are crucial such as understanding the users' need to prepare a science gateway for success. The US Science Gateways Community Institute (SGCI) [1] funded since August 2016 by the National Science Foundation (NSF) [2] serves user communities and science gateway creators to support the growth and success of science gateways. Its Science Gateways Bootcamp [3] offers the possibility to learn about beneficial strategies for developing, operating and sustaining science gateways.

THE CONCEPT BEHIND THE BOOTCAMP

Three main areas are addressed in the bootcamp:

1. Core business strategy skills as they apply to leading an online digital presence, such as understanding stakeholder and user needs; business, operations, finance, and resource planning; and project management;
2. Technology best practices, including the principles of cybersecurity; software architecture, development practices, and tools that ensure implementation of strong software engineering methods; usability and
3. Long-term sustainability strategies, such as alternative funding models; case studies of successful gateway efforts; licensing choices and their impact on sustainability.

The bootcamp is setup for five days as intensive workshop with a maximum number of ten teams to be accepted for each event. The teams consist ideally of project members in diverse roles such as PIs or developers. In the inaugural session in April 2017 we had ten teams with about two thirds of the time interactive sessions. The teams out of the pool of applicants had been selected to present a wide diversity of topics addressed by the science gateways and a diversity of the stage of the science gateway. The feedback of the participants showed that the concept was found beneficial, thought-provoking and entertaining with some room for improvement.

REFERENCES

- [1] Gesing, S., Wilkins-Diehr, N., Dahan, M., Lawrence, K., Zentner, M., Pierce, M., Hayden, L.B., and Marru, S. Science Gateways: The Long Road to the Birth of an Institute. Proc. of HICSS-50 (50th Hawaii International Conference on System Sciences), 4-7 January 2017, Hilton Waikoloa, HI, USA, <http://hdl.handle.net/10125/41919>
- [2] <http://www.nsf.gov/>
- [3] <https://sciencegateways.org/engage/bootcamp>