Community Building in Science Gateways
Considerations and a Case Study

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A Short History of nanoHUB

- Started with a problem – how to easily share code with a colleague → PUNCH & nanoHUB

- NCN officially established and funded by the US National Science Foundation in 2002

- Content beyond code added in 2004 – simulation “and more”

- Rappture lowers barriers for developers and brings a truly interactive experience for users.

- Jupyter Notebook integration lowers barriers further
Fast Facts

“Always on, around the globe”

- **5656** resources including **450+** simulation tools
- **1.4 million** worldwide visitors annually
- Nearly **16,000** simulation users, **1.3 million+** simulation runs
- **35,000+** students using **345** tools in formalized courses
- **1863** papers in the literature refer to nanoHUB
  - Nearly **29k** secondary citations
  - H-index of **79**
Building a Community

• Understand who your users are (and what they do)
  • Students
    • In formal classroom settings
    • Independent learners
  • Educators
  • Researchers
  • Industry professionals

• Provide ways for them to communicate their needs
  • Take their pulse – surveys/microsurveys
  • Online mechanisms – tickets, wishlists, forums
  • Outreach

• Motivate your users to:
  • Use the gateway
  • Participate
  • Create
What Do Users Need?

nanoHUB Outreach Specialist asks several faculty:

“How can we make your life easier?”

U of Minnesota faculty answers:

“I would like to use simulation in my experimental work and there is an open source tool that would help”
How Do We Solve It?

nanoHUB Outreach Specialist provides a nudge:

“We have experimentalists interested in your code and it would be great to have it on nanoHUB”
What is the Impact?

- Useful tool serving hundreds of users in less than a year
- Active user group set up on nanoHUB
- Citations begin to appear referencing nanoHUB version of the tool
- nanoHUB users enjoy the ease of use
- Tool incorporated into a Jupyter notebook
Final Thoughts

- Understanding and engaging the user community is critical to a science gateway’s success
- There are a variety of mechanisms to engage with users – some offer big wins with moderate effort
- Leverage engagement for multiple ways to impact the community – users, development, participation, etc.
Questions?