

[Elevating nanoHUB to the Next Level]

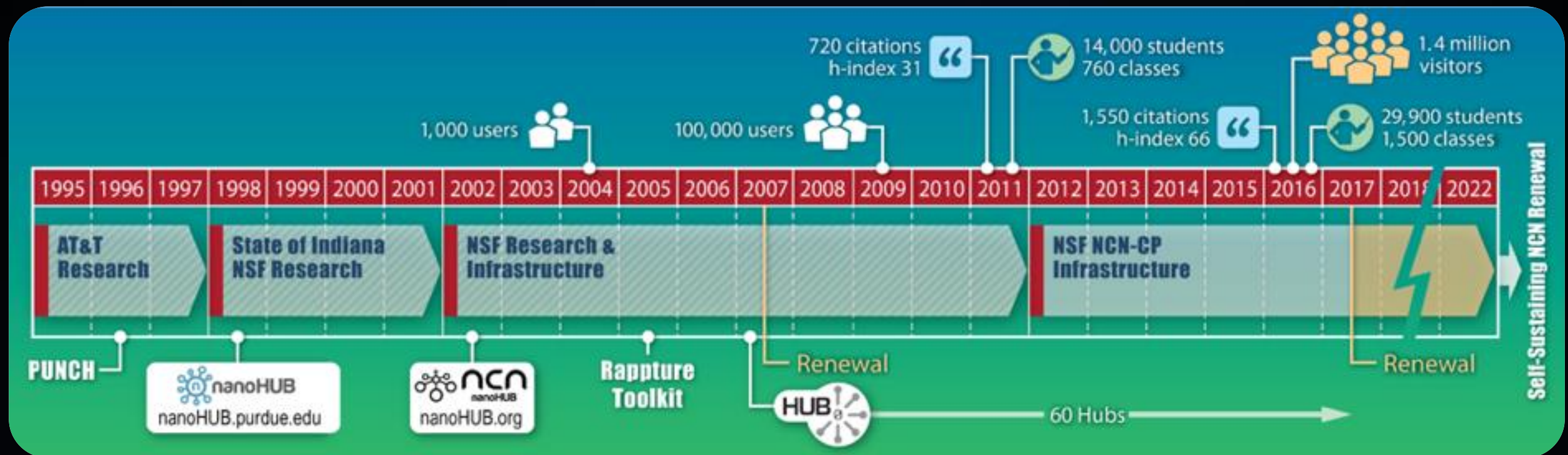


Community Building in Science Gateways Considerations and a Case Study

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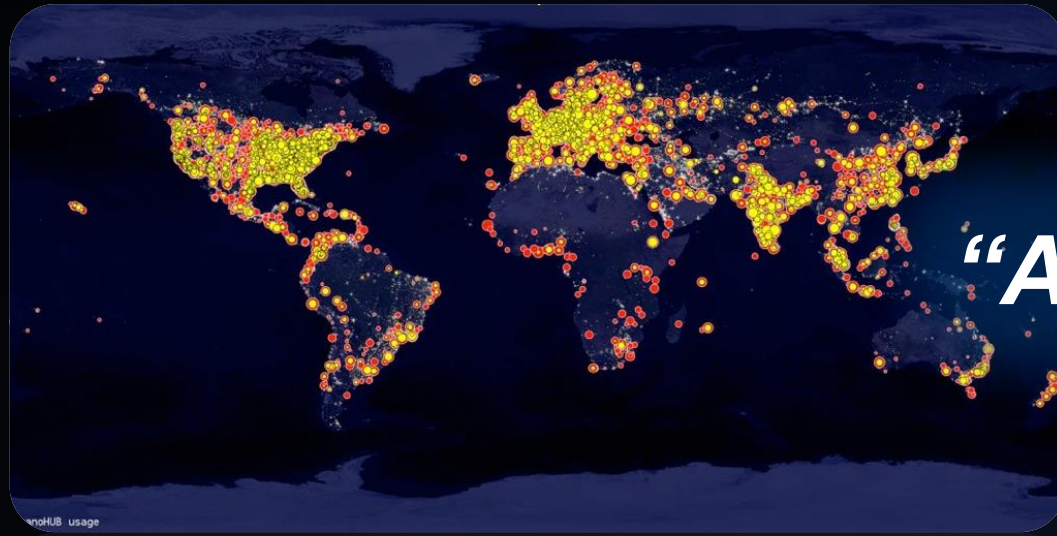
A Short History of nanoHUB



- 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**

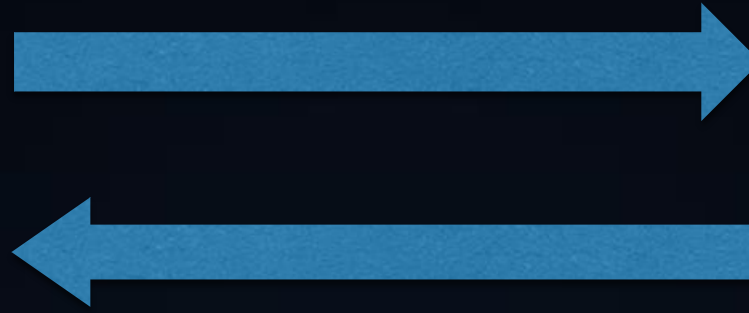


Building a Community

- **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?

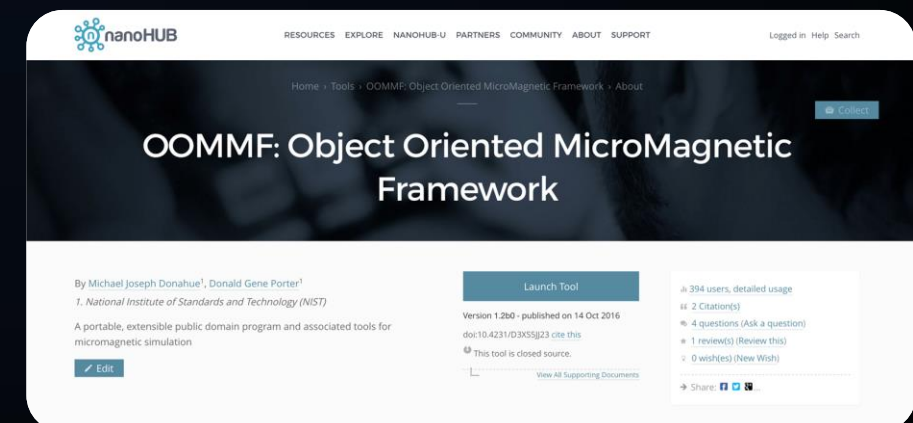
nanoHUB Outreach Specialist provides a nudge:



“We have experimentalists interested in your code and it would be great to have it on nanoHUB”



NIST
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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?