The story of Sage Weil

- 2004: summer internship at LLNL, SC'04
- 2005: summer project -> thesis topic
- 2006: OSDI'06 and SC'06
  - Lots experience with open source tools, strategies, techniques
  - Published source code licensed under LGPL
- 2007: Ph.D. defense
- 2008: Continued to work on Ceph
- 2010: Ceph Linux kernel client in 2.6.34
  - Companies demanded it
- 2011: Inktank startup
- 2014: Red Hat acquires Inktank for $175m

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Generally true?

- Student is well-versed in open source software tool chains, strategies, and technologies

- Research project results in interesting infrastructure

  Quite often!

- Student is able to open-source infrastructure

- Student is able to continue working on it after graduation

- Companies want that infrastructure if it's mature **Yes**

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Generally true?

- Student is well-versed in open source software tool chains, strategies, and technologies **NO**

- Research project results in interesting infrastructure **Quite often!**

- Student is able to open-source infrastructure **NO**

- Student is able to continue working on it after graduation **NO**

- Companies want that infrastructure if it's mature **Yes**

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CROSS | CENTER FOR RESEARCH IN OPEN SOURCE SOFTWARE

- Bridges gap between student research & open source projects
- Funded by Sage Weil endowment & corporate memberships

- Educate the next generation of OSS leadership
- Embed UCSC research in OSS culture
- Incubate work beyond graduation to reach critical mass

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Members of Industry	Education	UC Santa Cruz Faculty and Students
	Research	
	Incubation	

Talent, Projects, Technologies

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Founding UCSC Faculty Members

Carlos Maltzahn, Director, Adjunct Professor, Computer Science
http://users.soe.ucsc.edu/~carlosm/UCSC/Home/Home.html

Scott Brandt, Vice Chancellor of Research, Professor, Computer Science
https://www.soe.ucsc.edu/people/sbrandt, https://systems.soe.ucsc.edu/

J.J. Garcia-Luna-Aceves, Chair/Professor, Computer Engineering
https://www.soe.ucsc.edu/people/jj

Lise Getoor, Associate Dean for Research, Professor, Computer Science
http://www.umiacs.umd.edu/~getoor/index.shtml

Ike Nassi, Former SAP EVP & Chief Scientist, Adjunct Professor, Computer Science
https://www.soe.ucsc.edu/people/inassi

Katia Obraczka, Graduate Director, Professor, Computer Engineering
https://www.soe.ucsc.edu/people/katia

Wang-Chiew Tan, Professor, Computer Science
http://users.soe.ucsc.edu/~tan/

44 Students (38 Ph.D. students)

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Open Source Experts

- Ensure that the work we do at CROSS is acceptable to the open source software community

Karen Sandler, JD, Executive Director, Software Freedom Conservancy
https://en.wikipedia.org/wiki/Karen_Sandler

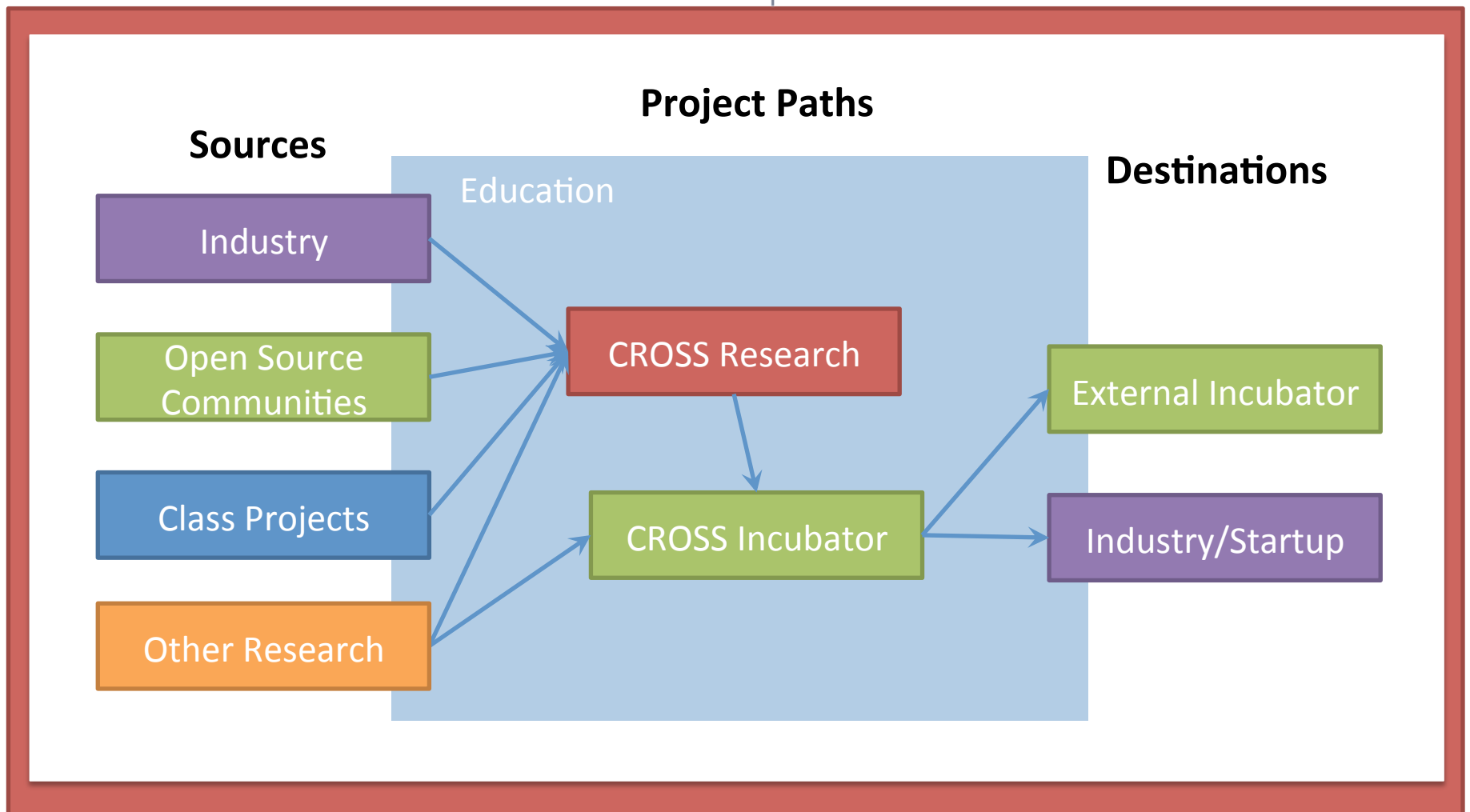Sage Weil, UCSC Alum, Ceph creator, Founder & CTO, Inktank
https://en.wikipedia.org/wiki/Sage_Weil

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Education:

- Goal: educate & train future OSS leadership
- Specialized courses on open source software, e.g.
  - Linux kernel programming
  - Open source software tool chains
  - Attendance: 100s of undergrad and grad students
- Guest lectures & workshops, e.g.:
  - Ally skills (in collaboration with the Ada Initiative)
  - Open source licensing
  - Maintaining OSS communities
- Programmer-in-residence program
  - Combines academic program with apprenticeship

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Research

- Goal: Embed UCSC research in OSS culture

- Pair industry mentors with students and faculty
  - Provide infrastructure for regular mentor meetings
  - Provide university appointment opportunities for mentors
- Provide infrastructure for regular mentor meetings
- Support open-sourcing research prototypes (incl. what license to use)
- Support publishing open source software
- Fund a selection of projects and leverage outside funding
  - Projects can come from a variety of sources
  - Projects can take different paths

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Incubation

- Goal: Research prototype -> viable OSS project
  - Project fit for other incubators, e.g. Apache, SFC
  - Resources provided by CROSS
- Highly competitive application process
  - Evaluation by CROSS Members and Faculty
- Phase 1: 3 months
  - Create out-of-box experience
- Phase 2: 1 year (postdoc)
  - Only if phase 1 successful
  - Grow diverse developer community
  - Participate in CROSS as mentor

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Thank you!

Questions

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Frank Howley, fhowley@ucsc.edu

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