

Scientific Software Success: Developing Metrics While Developing Community

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*3rd Workshop on Sustainable Software for Science:
Practice and Experiences (WSSSPE3)
September 28-29, 2015, Boulder, CO, USA*

Background

- Feb 17-18, 2015 NSF SI2¹ PI workshop² breakout team:
 - Framework for the creation of metrics
 - Define software success factors across different research domains
 - Improve both the software and the metrics (i.e. “eat their own dogfood”)
 - Stakeholders put up their own software for evaluation within the network to
 - Build community
 - Improve the cross-talk among different research domains of what makes software successful

¹<http://www.nsf.gov/si2/>

²<http://cococubed.asu.edu/si2pimeeting2015/>

Developing Metrics while Developing Community

- Build an open framework by which to develop software success metrics
 - Software “peer review group”
 - Representative stakeholders who will self-review software works created by their respective communities; concurrently develop metrics
 - Community-governed; no single institution oversees the activity or infrastructure for this
 - No central “group of experts”!
 - Evolve into community generated and adopted standards

Framework

- Tie generation of metrics to actual evaluation of software
 - Incent through improving their own software; benchmarking; publishing opportunities
 - Volunteer, opt-in
- Infrastructure support
 - Code, code review; in contributors infrastructure
 - Social: forums for generation of software success metrics tied to code review
 - Can we fit metrics in a common template

Work Thus-far

- Wrote and submitted a 2-page white paper to CSESSP 2015²
 - Computational Science & Engineering Software Sustainability and Productivity Challenges
 - Organizers: Gabrielle Allen, Michael Heroux
 - Will be posted soon
- Plus this WSSSPE3 lightning talk
 - We have a lot of example metrics

WSSPE provides...a forum for the community to assemble and act.

²<https://www.nitrd.gov/csersp/>

Next Steps

- Use WSSSPE, CSESSP, other future events to build this community and framework
 - Continually take advantage of these venues
 - Collaborate with other metric & framework projects
- Consider proposal around this idea to give enough runway to build community & metrics
 - Encouraging the community to take up this idea and run with it

Contributors

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