Theory- Software Translation Workshop – US Edition
Feb 4-5, 2019
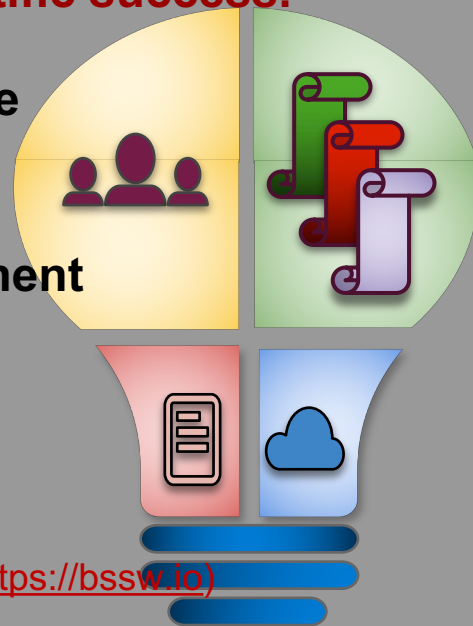
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- Several ECP projects (Checkpointing VeloC, Exascale operating system/resource management through ARGO)
- Fault tolerance, Programming models
- Sustainability/Developer Productivity

ECP IDEAS Project : Improve Exascale Computing Project (ECP) developer productivity and software sustainability while ensuring continued scientific success.

IDE▲S
productivity

1. **Interviews with Exascale Computing teams**
2. **Productivity and Sustainability Improvement Plans (PSIPs)**
3. **Customize and curate methodologies**
4. **Outreach and training**
   - Better Scientific Software site (https://bssw.io)
   - **www.ideas-productivity.org**

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How to create an ecosystem to communicate theory to teams and communities in order to facilitate correct and efficient development and sustainability of corresponding software?

- Disconnect between folks who propose theory and developers who develop software
- Software developers lack ways to see "forest" from "trees" – lack of capture tools
- Frequent churn of developers and lack of best practices for sustainability → increases gap between theory and software
- Lack of appropriate training for folks to understand theory and even develop software
- Software is many times a means for publications : which dilutes the software as well as theory → needs best practices