Proposed Policies for DESC Software

The Software Review Policy Committee

Camille Avestruz, Matthew Becker, Céline Combet, Catherine Heymans, Mike Jarvis (chair), David Kirkby, Joe Zuntz

Our charge

Draft a DESC Software Review Policy (SRP) as mentioned in the current Publication Policy. In the Software Review Policy, the SRPC will be asked to consider:

- The current **definition of DESC Software**, and to refine the definition.
- Is a code review committee is necessary?
- The **process of a software review** and the appropriate level of detail to outline in the SRP
- Timelines for software review
- How production code is reviewed in other collaborations
- Guidelines for assessing code **reproducibility,**
- Guidelines for assessing ease of **visibility** within the collaboration
- Guidelines for assessing end-to-end production and science output
- Guidelines for **software licensing** in DESC Software, and how this might impact software review
- How the Software Review Policy will **impact junior members** of the collaboration.

Principles

We settled on the following guiding principles to try to promote:

- Reliability
- Reproducibility
- Reusability
- Agility

- Flexibility
- Visibility
- Trust

Furthermore, we felt that

- most of the details about how code is developed should be **guidelines, not prescriptive rules.**
- **the authors are ultimately the arbiters** of when there has been sufficient code review and testing to produce accurate results for the paper

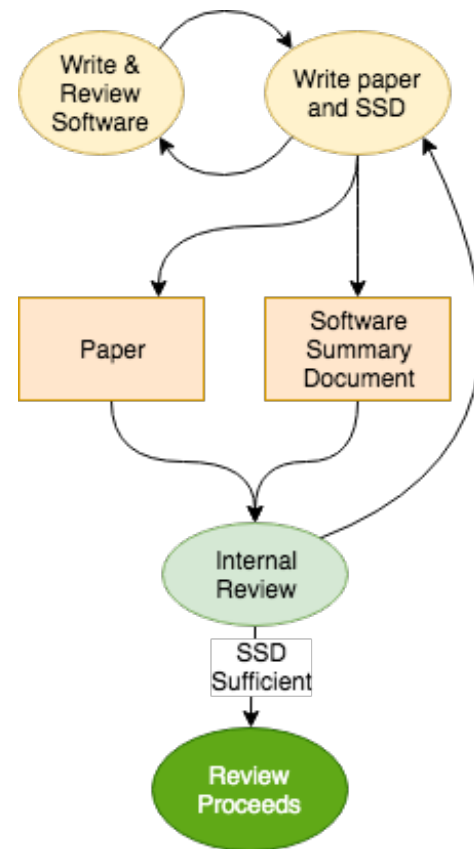Longer set of guidelines in the [LSST DESC Coding Guidelines](#)

Types of DESC Software

We also found it helpful to distinguish several different kinds of software developed by DESC members:

1. **DESC Tools**: flagship DESC software to be used by many groups.
2. **Analysis Software**: software developed nominally for a single paper/project.
3. **Paper Support Scripts**: short scripts used to make plots or compute some value for a paper.
4. **External Software**: software external to DESC to which DESC members contribute for the purpose of a paper.
5. **Software to Analyze non-LSST Data:** may be constrained by an EC

Proposed policy

1. When submitting a paper to internal review, authors will need to also **submit a "Software Summary Document"** (SSD), **listing all the code developed for the paper, and how it was validated.**

2. The SSD should also **list other code used in the paper**.

3. Code may be either **open- or closed-source during development**.

4. **Upon publication** in a journal, **the code** developed for the paper **should be made publicly available**.

   - Except External Software, which has whatever license it has.

5. Exceptions to any aspect of the policy may be granted by a coordinator.

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The main sticking point from the feedback we had so far…
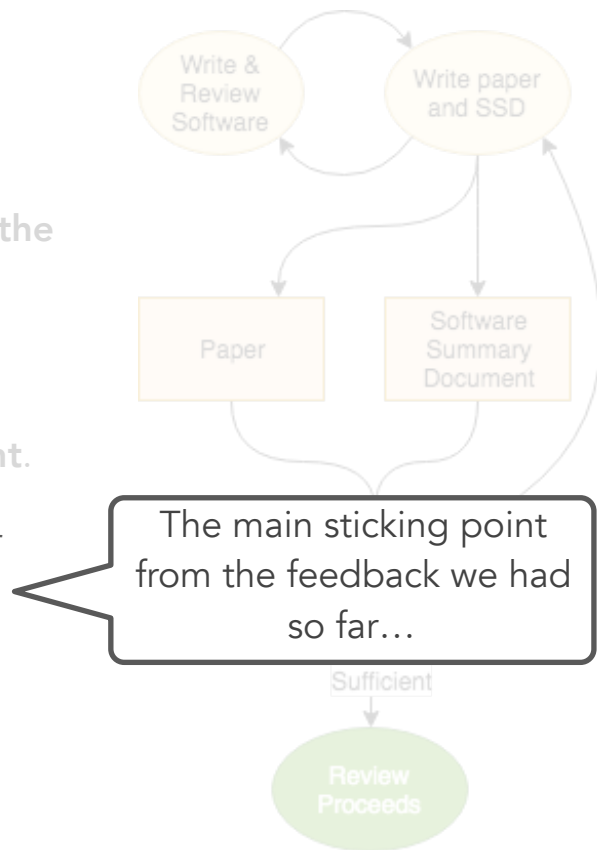
The full policy document

Ways to give feedback:

- Comment on the policy document directly.
- Slack channel: **#desc-software-policy-discuss**.
- For longer-form, in-depth discussions, you may write your comments in this discussion document.
- Anonymous feedback to CC: https://goo.gl/kmB2oa
- Townhall anonymous survey: http://bit.ly/desc-townhall-az