**1. Bibliographic Data**

* **Title:** Requirements engineering for sustainability: an awareness framework for designing software systems for a better tomorrow
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* **Year:** 2020
* **Publication:** Requirements Engineering (2020), Volume 25, pages 469–492, Springer.

**2. Theme of the Paper**

* **Scientific area:** RE and sustainability in software systems
* **Specific topics:**
  + integrating sustainability into software development processes
  + structured awareness framework for sustainability
  + techniques for eliciting sustainability effects
  + sustainability dimensions (social, individual, environmental, economic, technical)

**3. Synthesis of the Paper**

**Motivation and importance of the research**

The software systems play an important part in our socio technical environments. Software engineers, however, do not know much about sustainability impacts. This research specifically emphasizes solving sustainability issues in requirements engineering activities in order for software systems to be useful in enabling sustainability goals rather than undermining them.

**Main points of the background information and state-of-the-art**

* traditional software engineering hardly ever considers sustainability explicitly
* sustainability has five dimensions comprising social, individual, environmental, economic and technical
* existing frameworks and methodologies have fallen short of bringing forth awareness or fully accounting for the larger sustainability implications in software development

**Main findings and results and their novelty**

* they introduce the Sustainability Awareness Framework as inquiry driven and centered on five dimensions of sustainability
* semi structured interview guides, extreme scenario discussions and SuSAF's Sustainability Awareness Diagram offer visual representation of impacts on dimensions
* innovation in the approach for systematically invoking the potential sustainability impacts of software to meet the research methodological void in existing studies

**Main conclusions and/or discussion points**

* SuSAF effectively raises awareness of sustainability implications through facilitated discussions
* the structure was discovered to be relevant in other areas of software besides sustainability focused software
* the integration of the stakeholders' viewpoints significantly contributed to knowledge on possible sustainability effects, uncovering previously unknown impacts and impact chains
* the research highlighted the necessity of further refinement and implementation within industrial and academic environments for the purposes of strengthening sustainability elements in software projects

**4. Questions and Reflection**

**Questions raised by the reading of the paper**

* is SuSAF really scalable and viable for application to real world industrial sized projects?
* how can the real impact of embedding sustainability awareness in requirements engineering activities be measured?
* would SuSAF's complexity exclude it from general use and what are some possible ways it can be modularized and simplified?

**My opinion about the paper**

The document addresses an important and topical issue of systematically integrating sustainability into software engineering. SuSAF is thoroughly described, realistic and experience tested by student teams. Its step wise structure nicely guides stakeholders through complex elements of sustainability. More industrial testing would add to its practicability.

**What to retain for my future research/professional practice**

* the formalized dimension based approach for measuring sustainability impacts in software projects
* contribution of stakeholder involvement and systematic questioning in bringing out clear sustainability issues
* hands on techniques like visual aids and scenarios of extremes enabling stakeholders to consider sustainability concerns at deeper levels