

# WHAT MAKES AN OPEN SOURCE PROJECT “CRITICAL”?

## Thesis

We set out to answer the question: “What makes an open source project critical digital infrastructure?” Along with this question immediately came two more: **What is critical? For whom and according to whom?** We were particularly interested in what is **critical for civil society and participation in democracy.**

## Methodology

We combined legal research (mostly doctrinal; analysis of laws and case-law) and the mapping and study of utilities regulation (focusing on water and transportation), with an ethnographic study, comprising participatory observation and interviews with communities that build and use open source tools – particularly civil society communities who have democratic self-governance or self-determination as a core value

## Key findings

**There are different approaches to criticality depending on the stakeholder in question.** Laws and regulations of various infrastructures (e.g. cybersecurity laws and utilities regulations) indicate that nation states tend to define criticality mainly on the basis of security and against national and other threats. Case-law points to market actors understanding and expressing criticality based on profit and/or exclusivity.

**Civil society’s views on criticality are understudied.** So are, particularly, the views of software—including FOSS—developers and users on what is critical in our digital infrastructure.

Our study indicates that **participation** in the design and maintenance **is as critical to civil society as any piece of code.**

We identified three areas – all interlinked – which fail to support inclusive participatory practices with FOSS. These are: socio-cultural, economic, and technical/organizational.

## Recommendations

### **Support participatory design with users.**

Engineers working with community projects are seeking guidance and research on how better to involve civil society communities, especially across genders, race, class, age, and education.

**Provide funding schemes and incentives for both public and private maintenance of our public digital infrastructure;** that is open source infrastructure.

These recommendations require both development and further research. **Don’t forget about the humanities and social sciences!** Humanities’ and social sciences’ methods prove extremely useful to communities of technologists, as pointed out also by engineers in our ethnographic study.

## Calls to action

**DEVELOP PROTOCOLS,** both technical and organizational, **for complex participation** – distributed and non-hierarchical design processes require new tools and organizational forms.

**FUND OPERATING SUPPORT** that allows FOSS communities the opportunity and time to develop **mechanisms for participatory governance** and the **distribution of labor.**

Access more information at the **Digital Civil Society Lab** webpage: <https://pacscenter.stanford.edu/research/digital-civil-society-lab/mapping-policy-infrastructure-2/>

Contact us at: **Lucy Bernholz:** [bernholz@stanford.edu](mailto:bernholz@stanford.edu) | **Jessica Feldman:** [jessfeld@stanford.edu](mailto:jessfeld@stanford.edu) and [jfeldman@aup.edu](mailto:jfeldman@aup.edu) | **Argyri Panezi:** [argyri@stanford.edu](mailto:argyri@stanford.edu) and [argyri.panezi@ie.edu](mailto:argyri.panezi@ie.edu)