

# Free Open Source Research Letter

## The Philosophy of Readiness

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### Introduction

There is no doubt that the Internet has changed engineering knowledge, especially in providing rapid and often free access to information. Researchers can use the Internet to improve their professional knowledge and skills. As a result, the free open source software (FOSS) philosophy is presented. Emphasis is placed on World Wide Web search mechanisms and the opportunity that the researchers have to access information that will permit them to do their jobs better.

FOSS is a way for building, deploying, and sustaining large software systems on a global basis, and differs in many interesting ways from the principles and practices traditionally advocated for software engineering (SE) [1].

Free (as in freedom/liberty) software and open source software are often treated as the same thing [2]. However, there are differences between them with regards to the licenses assigned to the respective software. Free software generally appears licensed with the General Public License (GPL), while Open Source Software (OSS) may use either the GPL or some other license that allows for the integration of software that may not be free software [3]. Free software can be seen as a social movement [4], whereas OSS is just a software development methodology, according to free software advocates like Richard M. Stallman and the Free Software Foundation [6].

This paper/letter discusses key success factors (KSFs) for adopting FOSS philosophy in terms of environmental Readiness. It focuses on KSFs that thought as critical or crucial to implement FOSS philosophy. This is based on argumentative and philosophical approach. No formal research methods used in this paper/letter; however, literature review and personal knowledge is presented.

### Readiness Key Success Factors

#### **Building FOSS Community: Participants/Contributors**

Community building, alliance forming, and participatory contributing are essential and recurring activities that enable FOSS projects to persist without central corporate authority. Thus, linking people, systems, and projects together through shared artefacts and sustained online discourse enables a sustained social network [4,5] and socio-technical community, Web-based information infrastructure [5], and network of alliances [4,5,6] to emerge.

This is mainly in order to form FOSS developers in one visual or “e-visual” body who are typically also end-users of the FOSS [7]. They develop and other end-users often participate in and contribute to FOSS efforts. There may also be widespread recognition that FOSS projects may produce high quality and sustainable software systems that may be used by thousands to millions of end-users [7]. Subsequently, what is known about SE processes may not be equally applicable to FOSS processes without some explicit rationale or empirical justification. Thus, it is appropriate to review what is known about FOSS. However, people who participate, contribute, and join FOSS projects tend to act in ways where building trust and reputation, being creative, advancing through evermore challenging technical roles [7], as well as giving and being generous with one’s time, expertise, and source code [7] are valued traits.

### **Managing FOSS Community**

As mentioned in the previous section, one of the important factors in adapting FOSS philosophy is the organizing of FOSS developers in one visual body and facilitates communication among them. Normally the tool that facilitates this is a web-site for the group. The web site may facilitate a site map that constitutes a classification of site and domain content, as well as outlining community structure and boundaries. Therefore participants can engage most frequently. Moreover, participants in FOSS projects can engage in online discussion forums or threaded email messages as a central way to observe, participate in, and contribute to public discussions of topics of interest to ongoing project participants [8].

### **Gate Keepers**

Administrators of FOSS project Web sites and source code repositories also serve as gatekeepers in the choices they make for what information to post, when and where within the site to post it, as well as what not to post. Similarly, they may choose to create a site map that constitutes a classification of site and domain content, as well as outlining community structure and boundaries [9].

### **Trust and social accountability mechanisms**

Developing FOSS source code and applications requires trust and accountability among project participants [10, 11]. Though trust and accountability in a FOSS project may be invisible resources, ongoing software and project development work occur only when these intangible resources and mechanisms for social control are present [10, 11]. These intangible resources (or “social capital”) arise in many forms. They include (a) assuming ownership or responsibility of a FOSS project software module, (b) voting on the approval of individual action or contribution to ongoing project software [11], (c) shared peer reviewing [11, 12], and (d) contributing gifts [3] that are reusable and modifiable common goods. They also exist through the project’s recognition of a core developer’s status, reputation, and geek fame. Without these attributions, FOSS developers may lack the credibility they need to bring conflicts over how best to proceed to some accommodating resolution. Finally, as a FOSS project grows in terms of the number of contributing developers, end-users, and external sponsors, then project’s socio-technical mass (i.e., web of interacting resources) becomes

sufficient to insure that individual trust and accountability to the project are sustained and evolving, thus enabling social networking externalities [13, 14].

## Conclusion

Probably FOSS philosophy is an alternatives approach for traditional SE processes, however yet more researches needed to study the quality of the end product of each approach, bear in mind, the similarity of the measurable attributes such as complexity, product size, resources and so forth.

FOSS research domain is growing, governments trying to free their software products from large companies' dominance and external governments' policies and rigidness. Also FOSS philosophy encourage socio-technical concept and contribute to the knowledge fairly.

The KSFs that mentioned in this paper/letter are meant to help in initiating the basic infrastructure for implementing FOSS philosophy for an environment/body wishing to implement this philosophy. However, we think there are more KSFs not covered in this letter/paper yet to be considered here as future work for investigation.

## References

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