

UNDERSTAND YOUR SYSTEM

Actors

- The size of the community is positively correlated with the progress of the project. On the one hand one might guess that projects tend to grow over time and that it might be easier for successful projects to attract considerable attention from the wider developer community; on the other hand a larger community could carry on the development.
- The participation of commercial contributors is positively correlated with the progress of the project.

Open source products are generally suitable for end users, advanced users and developers.

- Different backgrounds
- Non-separate categories

Governance Structure

- It cannot be said that projects distributed under very restrictive conditions are less likely to reach an advanced stage of development. Commercial actors seem to prefer to protect their work by registering the project name, which is less common for private or research actors.
- Rather, there is a positive correlation between brand protection and late stages of development, and an interrelationship between the release of unlicensed information and small projects in the early stages of development. Both the absence of licensing and the complete openness could reflect a general absence of intellectual property strategies which seems to reduce the size of the community and is rarely observed if commercial actors are involved.

Projects developing highly complex products appear, or at least expect to achieve more innovative results and attract commercial contributors

Innovative Result

- No strong evidence can be found to indicate that targeting advanced audiences is positively correlated with project progress. Open design is applied to the full spectrum of innovativeness, from the generation of incremental to radical innovations, with a greater proportion striving for incremental or intermediate degrees of innovativeness
- Larger projects reach higher stages of progress or, conversely, projects grow as they mature. Most projects have not fully completed development, but around 60% have reached a stable production stage and are commercializing their products

Projects with a large community, which includes commercial players or even is organized by professionals, have a high probability of reaching advanced stages of development.

Object

- No strong evidence can be found that indicates that low or high complexity products are better suited to open source development. All levels of complexity are addressed by opens design projects.
- Complex objects are often modularized into manageable pieces and developed separately.
- Participants make a great effort to enable digital design and development as much as possible. Hardware development plays the major role while software development takes a back seat, but it remains important to control the functionality
- The development of 3D printers, CNC cutters, and similar tools for home use increasingly allows developers to produce their designs independently of a central manufacturing facility. With the emergence of communities around the equipment needed to share experiences and facilitate access, decentralized manufacturing becomes increasingly accessible.

Therefore, a focal manufacturer supplying the products is no longer a necessity, and open physical product development becomes even more like OSS development

Development Process

- Activity is positively correlated with project progress. Strong correlation between the intensity of developer activity and the stage of development.
- OSS projects and open design projects with higher activity tend to be in more advanced stages of development. In both fields, more research is needed to arrive at conclusions on the impact of process design on project success.

In 70-80% of projects, product development is driven by private contributors, i.e. the project leader, core team or even the wider community with no dedicated authority.

In about half of the respective cases this group also acts as a producer, the second half interacts with a production and marketing support company

Environment

- The internet is the main support tool for the low cost developer community. The most common means of communication are mailing lists, chat rooms and discussion forums
- OD products are very attractive to open source software enthusiasts. Developing these products not only typically involves a great deal of software development, but many of these products are also software modifiable

In some cases it is observed that the absence of required tools slows down the entire development work.

OPEN DESIGN SYSTEM

| | | AREAS OF INTEREST | | |
|---------------------|---|-------------------|---|---|
| | | A | B | C |
| AREAS OF COMPETENCE | 1 | | | |
| | 2 | | | |
| | 3 | | | |



CLASSIFICATION SCHEME OF STAKEHOLDERS BASED ON SKILLS - QUALITATIVE ANALYSIS

| AREAS OF INTEREST | A | B | C |
|---------------------|---|---|---|
| | | | |
| AREAS OF COMPETENCE | 1 | 2 | 3 |
| NECESSARY SKILLS | | | |
| PRO SKILLS | | | |
| APPRECIATED SKILLS | | | |

*Add as many interests and/or competences as you want based on your project (white space is for YOU!)