PAPER: Open source guilds: enabling micro-businesses to create a sustainable community of practice?

Justin Larner
HighWire
The LICA Building, Lancaster
University LA1 4YW
j.larner1@lancaster.ac.uk

ABSTRACT

This paper outlines how the concept of open source guilds was developed through undertaking a pilot action research project with three micro-businesses in the North West of England as co-researchers. The research initially aimed to explore how a virtual guild could enable micro-businesses to move towards sustainability by creating a community of practice based on open source principles. However, research findings raised the issue of both the business and its community needing to become sustainable. The open source guild addresses this issue by adding the proprietary aspect of the original medieval guilds, enabling a micro-business to defend its core intellectual property while creating a sustainable community based on shared values that operates both off- and on-line.

Categories and Subject Descriptors

K.4.3 [**Computers and Society**]: Organizational Impacts - *computer-supported collaborative work.*

General Terms

Management, Design, Economics, Human Factors.

Keywords

Open source, guilds, micro-business, sustainability, intrinsic values, participatory design.

1. INTRODUCTION: SUSTAINABLE VALUES-LED MICRO-BUSINESS?

Micro-businesses are often started by people with a passion, driven by their values and interests. They are a fast-growing sector of British industry, with 4.8 million firms with nine employees or less, of which 3.6 million are sole traders [22]. As the business evolves, its founders may find themselves at a point where the business has grown bigger than them. At this point the founders could bring in new stakeholders who will have other values, particularly those of economic performance above all else.

Information and communication technologies offer an alternative, enabling the micro-business to build up networks that can be a key factor in building up social capital and accessing the resources they need for survival [12]. The rise of social media channels such as Facebook, Linked In and Twitter is leading to claims that traditional business marketing is becoming replaced by trusted personal recommendations through social media [26]. However there are ethical issues with the use of social media, particularly in terms of undermining privacy [21].

2. CREATING OPEN SOURCE COMMUNITIES OF PRACTICE

Considering values in human society can start from the ground-breaking work of Schwartz [29], who created a typology of 10 basic values that are consistent in all human societies, grouping them into conservatism, openness to change, self-enhancement and self-transcendence. Holmes et al.'s work builds on this typology to relate extrinsic values to extrinsic goals and self-enhancement values, similarly intrinsic values to intrinsic goals and self-transcendence values [16], while Chilton et al. claim that promoting long-lasting change in behavior by engaging with people's intrinsic rather than extrinsic values is key to achieving true sustainability [7].

Digital technology can facilitate computer supported co-operative working (CSCW) [28], promoting social learning through a community of support [6] that enables peer learning and review [3]. Open source is an example of CSCW in action, working to a 'private-collective' model [31], where faults in software are openly found and fixed through immediate feedback [20]. Participation in open source projects is driven by intrinsic motivations or by the prospect of gaining intrinsic value from doing so [2, 4], which are reinforced rather than displaced by extrinsic motivations such as being paid to develop open source software [27, 1].

Open source is a development of Free Software, allowing companies to keep some intellectual property private while open sourcing the remainder [11]. In a micro-enterprise context, the mechanism of open source thus enables creating an commons that can contribute to sustainability through sharing 'know-how' while protecting the IP of their designs from exploitation in a global marketplace [15]. Applying the principles of open source in a business context could be realized by creating a virtual guild [5], which can promote learning through a master-apprentice model, where learning can be shared through a community of practice [19, 32] operating on-line, which also enables sharing of materials and access to new markets [5].

3. AIMS AND OBJECTIVES OF THE PILOT RESEARCH PROJECT

The pilot research project operated between May and August 2013, initially aiming to develop and test the concept of virtual guilds in the context of creating a community of practice around existing or emergent values led micro-businesses. The objectives were:

1. Review the relevant literature.
2. Work with established and emergent micro-businesses in the North West of England that have open source as a core value.
3. Create a specification that could be applied by participating organizations in their day to day work.

4. METHODOLOGY

The pilot research project took an ethnographic action research approach [30], where ethnography and action research are combined in a planning - doing - observing - reflection cycle. In

this case, the process starts with observation and reflection on how participating organizations engage with their stakeholders, followed by a planning and doing process, working with the participating organizations to design a specification for a virtual guild.

The pilot project worked with established and emergent micro-businesses in the North West of England who shared the characteristics of:

1. Operating on a micro-business scale.
2. Committed to the principles of open source as a core value.
3. Wished to develop a community.
4. Wished to develop a mechanism for sharing experience from experts within the community to new members.

This project operated over a short time-scale (four months), thus the techniques of rapid ethnography [24] were applied to gain a good enough understanding of the culture of participating organizations [8, 10] to be able to begin the design process, with the design process itself providing further ethnographic data.

5. METHODS

The pilot research project arose from previous knowledge of participating organizations and their founders, where each organization was driven by the principles of open source and was working to create a community of stakeholders. The research followed a two stage process:

1. The first stage included participant observation of workshops facilitated by each organization, unstructured interviews with their founders and key stakeholders, together with examination of publicly available on-line documentation. The notes from this data gathering were then verified by the participating organizations before being used in the next stage of the research, following the recommendations of Flick [13].
2. The second stage used participatory design methods, focusing on values as the 'engine' of a co-design process [18]. These values were established from data gathered during the first stage of the research and expressed through personas, a technique introduced by Cooper [9] and further developed by other authors [17, 25], see Floyd et al. [14] for a useful summary.

6. INITIAL RESEARCH FINDINGS

The first stage of the research included discussions with participating organizations that developed the concept of virtual guilds to create the open source guild. The open source guild takes into account the the proprietary aspect of the original medieval guilds, an issue highlighted by Merges [23], who related medieval guilds to modern institutions including open source software development, highlighting three key characteristics:

1. An "appropriability structure" that makes it worthwhile to develop and share new technologies.
2. Reliance on group norms.
3. Balance of competition and cooperation including between sharing information with the group and keeping it proprietary.

Open source guilds build on the concept of communities of practice [32] in that, as well as a shared domain of interest and the joint community of practitioners, the open source guild adds the proprietary aspect of the medieval guild [23] that is also the distinguishing factor of open source in relation to Free Software [11]. The open source guild can enable a micro-business to

maintain a proprietary core of intellectual property that the business is founded on and profits by, while developing a community of practice (including other businesses) who can profit through a shared, higher profile marketplace. The open source guild can thus deal with the problems of virtual guilds, which operate more like Free Software, however free exchange of information causes problems when trying to develop an idea into a business [5].

7. PARTICIPATORY DESIGN

The participatory design process started by establishing and building on each organization's core values, as expressed through personas, where a value-led approach succeeded in enabling participating organizations to relate the guild to the practicalities of their everyday work. The participatory design process was successful in identifying values common to participating organizations and creating a specification for the open source guild, shown in Figure 1 below.
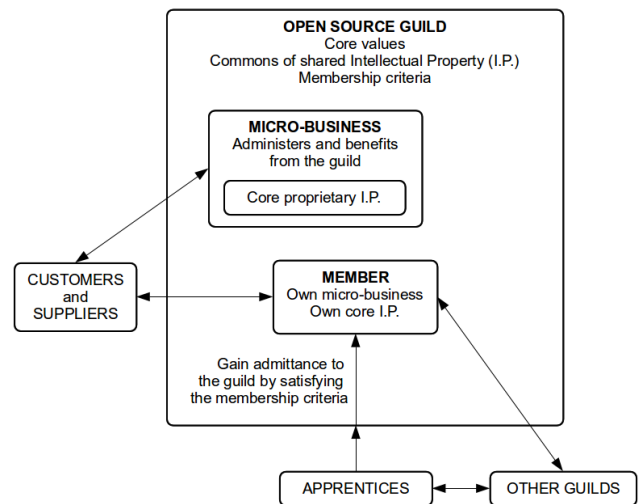

Figure 1. Specification for the open source guild.

The outcome of the participatory design process indicated that the open source guild can be a means of gradually building a sustainable business. The entrepreneur first creates a commons around a core product or idea, then the micro-business can emerge to protect the core intellectual property (which could just be a name and logo), service the guild and make a living providing goods and services developed through the commons.

The overall research findings also indicate strongly that face to face communication is vital to build up trust in new entrants to the community, then for sharing knowledge that can be tacit and not easily communicated through on-line methods. This finding is reinforced by the literature, for example see Bobrow and Whalen [3], also Wood et al. [33]. Future work can explore the potential of the open source guild to build sustainable micro-businesses in a wider range of contexts.

8. ACKNOWLEDGEMENTS

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