In between open and closed:  

*Drawing the fine line in hybrid OSS communities*

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Motivation – Open innovation

Crowdsourcing allows profit-oriented companies to outsource tasks to the general public, yielding better results at less expense than they would otherwise cost.

These opportunities are highlighted at early stages of product development and when introducing new products to the marketplace.

For software companies, the OSS communities and adopting their ways of working are promising - lead users.
Conflicting motivations – OSS vs. Commercial

An apt division of labor, knowledge and decision power is needed to build **trust and reciprocity** between the stakeholders.

This is influenced by how the community is built and managed: the **socio-technical infrastructure** it is supported by and the **practices** that are employed in its governance.
Research has been called for understanding:

• **How** relationships in between companies and their “un-paid employees” can form.\(^1\)

• **Why** do companies enter these relationships.\(^5\)

• **What** principles, processes\(^9\) and forms of control\(^10\) take place in their governance.
Single case study

Descriptive

Exploratory
Mixed methods

Industry context

2 years
A Post-Nokia startup (est. 2011)

Smartphone product
- Crowdfunding  
  Jul 2013
- Delivered 24\textsuperscript{th}  
  Dec 2013
- 137 countries

Sailfish OS – a prototype
- 1.0.1.12  
  Dec 27\textsuperscript{th} 2013
- 1.0.3.8  
  Jan 31\textsuperscript{st} 2014
- 1.0.4.20  
  Mar 17\textsuperscript{th} 2014
Company values

Unique user experience
Security, transparency, full control over hardware and data

“We want to create an innovation platform for ideas, opportunities and openness.”
Company values

Unique user experience
Security, transparency, full control over hardware and data

“We want to create an innovation platform for ideas, opportunities and openness.”
Hybrid Environment

A mix of open and proprietary
Sailfish Operating System

Linux kernel: Hardware specific adaptation
Sailfish Operating System

Core OS:
System essentials, management of software and personal information, security

Linux kernel: Hardware specific adaptation

Application platform:
Mobility, sensors graphics and web
Sailfish Operating System

**Basic applications:** Settings, contacts, camera, application store

**Middleware and user interface:**
Power management, performance optimizations, multitasking, gestures

**OS core:**
System essentials, management of software and personal information, security

**Application platform:**
Mobility, sensors graphics and web

**Linux kernel:** Hardware specific adaptation
Sailfish Operating System

Basic applications: Settings, contacts, camera, application store

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Collaboration models

jolla
Sailfish

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Collaboration models
Collaboration models
Collaboration models
Research questions

1. How can an open community aid the development of proprietary software?

2. How can a company initiate such a relationship?

3. How can a company manage the collaboration?
Research design:

Company
- Semi-structured interviews
- Face to face, email

Customer community members
- Interview of a moderator
- Surveys on demographics and motivation of members

Realized activities
- Forum data mining
- Freely available documents
Research design:

2013
- Launch: Registered users, activity
- January: QM / RPM

2014
- Keyword and interaction analysis
- Demographics
- June: QM, moderator
- Motivation survey 1, N=192

2015
- Revisiting user profiles and activity
- March: RPM
- Motivation survey 2, N=101
- Revisiting, revisiting, revisiting

Company
- Semi-structured interviews
- Face to face, email

Customer community members
- Interview of a moderator
- Surveys on demographics and motivation of members

Realized activities
- Forum data mining
- Freely available documents
Intermediary results
Creative, self-organizing and autonomous.
Clear purpose
**Activeness of the community**

"The first evening we had hundreds of people logged in and contributing"

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**Table 1: Data items in the customer community content data samples**

<table>
<thead>
<tr>
<th>Sample</th>
<th>February 2014</th>
<th>November 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of messages</td>
<td>2 473</td>
<td>13 332</td>
</tr>
<tr>
<td>Keywords in the content</td>
<td>1 151</td>
<td>10 577</td>
</tr>
<tr>
<td>User profile records</td>
<td>2 716</td>
<td>8 449</td>
</tr>
</tbody>
</table>
Ideas, questions, defect reports

The extent of the testing activities could not have been achieved without the help of the customers.
I am motivated to use the Together online community because...

- 49% of respondents strongly agree that they get help and support from the community.
- 71% of respondents strongly agree that they want to make the smartphone better for themselves.
- 61% of respondents strongly agree that they want to help the company to succeed.
- 32% of respondents strongly agree that helping other smartphone owners is rewarding.
- 35% of respondents strongly agree that creating new ideas inspires them.
- 30% of respondents strongly agree that it challenges them to learn new things.
- 9% of respondents strongly agree that it is fun.
- 6% of respondents strongly agree that they want to showcase their expertise to Jolla Ltd.
- 3% of respondents strongly agree that they want to gain recognition from other users.

- 6% of respondents strongly disagree that they get help and support from the community.
- 17% of respondents strongly disagree that they want to make the smartphone better for themselves.
- 25% of respondents strongly disagree that they want to help the company to succeed.
- 5% of respondents strongly disagree that helping other smartphone owners is rewarding.
- 10% of respondents strongly disagree that creating new ideas inspires them.
- 14% of respondents strongly disagree that it challenges them to learn new things.
- 10% of respondents strongly disagree that it is fun.
- 17% of respondents strongly disagree that they want to showcase their expertise to Jolla Ltd.
- 35% of respondents strongly disagree that they want to gain recognition from other users.

Strongly agree | Strongly disagree
--- | ---
I get help and support from the community | 6%
I want to make the smartphone better for myself | 17%
I want to help the company to succeed | 25%
Helping other smartphone owners is rewarding | 5%
Creating new ideas inspires me | 10%
It challenges me to learn new things | 14%
It is fun. | 10%
I want to showcase my expertise to Jolla Ltd. | 6%
I want to gain recognition from other users | 35%
Motivation

I am motivated to use the Together online community because...

- I get help and support from the community
- I want to make the smartphone better for myself
- I want to help the company to succeed
- Helping other smartphone owners is rewarding
- Creating new ideas inspires me
- It challenges me to learn new things
- It is fun.
- I want to showcase my expertise to Jolla Ltd.
- I want to gain recognition from other users
“I believe in an open community that is intrinsically motivated to work together for the benefit of all.”

“I love the idea to exit from iOS, Windows and especially Android world: with Sailfish we’re talking about real open source, freedom and the close contact between us users and the company giving us the possibility to do something new, unlike and interesting.”
Finally: Lessons learned
RQ1: How can an open community aid the development of proprietary software?
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Complementing R&D
- Requirements engineering
- Post release testing
- Release planning
- Feasibility of ideas

Allowing continuous experimentation
- Strategy – company values

Customer support
RQ2: How can a company initiate such a relationship?

Purpose
People
Platform
RQ2: How can a company initiate such a relationship?

1. Commitment to a product
2. Exclusivity
3. Matching values
4. Low barrier of communication with top executives
   - Man on the inside
RQ3: How can a company manage the collaboration?
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Post-release

- No promises
- No opinions
- Postum notifications
- Release notes
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“Early” opt-in
Post-release
RQ3: How can a company manage the collaboration?

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RQ3: How can a company manage the collaboration?

C-beta
“Early” opt-in
Post-release

No promises
No opinions
Postum notifications
Release notes
RQ3: How can a company manage the collaboration?

Knowledge
Access
Decision making
power

C-beta
“Early” opt-in
Post-release
RQ3: How can a company manage the collaboration?

C-beta
“Early” opt-in
Post-release
To conclude

The challenges lie in creating and sustaining a balance between the

*open and the proprietary, public and private, autonomy and governed.*

While *overt openness* may risk the competitive advantage of a company, leaving too much behind *closed boundaries* can create unnecessary friction in between the company and its open community.
Limitations

Learnings are directional to similar market introductions where a new product relies on OSS software and a large up front investment has already been made by the customer.
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Transferability
1. Single case
2. Descriptive
3. History of the software and the people

Validity of the research design
1. Methodologically fragmented
2. Data sampling representative of only the most active contributors, not the whole customer population

Internal validity
1. Researcher bias – at time a solo effort
Questions?
Thank you

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“Leaving the requirements open: Case studies in Hybrid OSS environments”

http://tinyurl.com/hannas-dissertation