Single-Vendor Open Source at the Crossroads

Dirk Riehle
Friedrich-Alexander University Erlangen-Nürnberg

2019-03-13 – OSLS 2019 – California, U.S.A
Professorship of Open Source Software

- Professor of Computer Science
  - For software engineering and open source software
  - At the computer science department of the engineering faculty

- Previously held research positions at ...
  - SAP Labs (Silicon Valley) leading the open source research group
  - UBS (Swiss Bank, Zurich) leading the software engineering group

- Previously worked in development at ...
  - Skyva Inc. (supply chain software, Boston) as software architect
  - Bayave GmbH (on-demand business software, Berlin) as CTO
Professorship of Open Source Software

- At the computer science department
  - Also teaches in information systems at FAU
  - Led by Prof. Dr. Dirk Riehle, M.B.A.

- Core research and teaching areas
  - Open source software
    - Governance and license compliance
    - Open source strategies
    - Open source business models
  - Inner source software development
    - Program management, project management
    - Quality assurance and security
    - Transfer pricing and intellectual property
  - Artificial intelligence techniques in applications
Single-Vendor Open Source

• Commercial open source business models
  • Service and support firms
  • Open source distributor firms
  • **Single-vendor open source firms**

• Single-vendor open source firms
  • Exclusively own (key parts of) the software their business is based on
  • Can attract venture capital funding; can have outsize returns
  • Perhaps better be called neo-proprietary software vendors
Terminology Disambiguation

- Single-vendor open source (vendor-owned open source)
  - An open source project exclusively owned (in key pieces) by a particular vendor

- Dual licensing / multi-licensing
  - The practice of licensing a piece of software under two or more licenses

- IP modularity (open core model)
  - The practice of splitting software into modules of different licenses
Three Generations of Single-Vendor Open Source Firms

- The pioneers
  - MySQL, Sleepycat Software, Trolltech

- The second wave / growth of model
  - SugarCRM, Mulesoft, Jaspersoft, etc.

- The current breed (at the crossroads!)
  - MongoDB, Redis Labs, Confluent, etc.

- “Gartner Predicts” (2010)
  - “By 2012, at least 50% of direct commercial revenue attributed to open-source products or services will come from projects under a single vendor’s patronage.” [D10]
Of the listed companies, 34 can be grouped into single-vendor / open core model; of these 14 have exited with aggregate value of $34bn.
Why the Open Source Strategy?

- What is not new
  - Revenue sources

- What is new
  - Everything else (changes)
“Some people spend time to save money, some spend money to save time.”  [M10]
# Revenue Sources of Jaspersoft (2010)

<table>
<thead>
<tr>
<th>Open Source Community</th>
<th>Web Store</th>
<th>Direct Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DOC</td>
<td>LIC</td>
</tr>
<tr>
<td></td>
<td>INC</td>
<td>UPD</td>
</tr>
<tr>
<td></td>
<td>UTIL</td>
<td>UTIL</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enterprise Customers</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>ISV/OEM</th>
<th>Web Store</th>
<th>Direct Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LIC</td>
<td>LIC</td>
</tr>
<tr>
<td></td>
<td>DOC</td>
<td>UPD</td>
</tr>
<tr>
<td></td>
<td>TRN</td>
<td>UTIL</td>
</tr>
<tr>
<td></td>
<td>24x7</td>
<td>24x7</td>
</tr>
</tbody>
</table>

**Revenue Sources**

- **DOC**: Documentation
- **INC**: Incident-based support
- **UTIL**: Utilities
- **LIC**: Commercial license
- **UPD**: Update service
- **TRN**: Training
- **24x7**: 24x7 hot-line
Whole product

Basic product

Usage rights

- **Software (core product)**
  - Core software
  - Additional software (extensions + plug-ins, tools and utilities, integrations)

- **Pricing of usage rights**
  - Quantity: User, machine, time, …
  - Duration: Perpetual, time-limited, …
  - Structured: Initial license fee, regular maintenance fee

Guarantees (“insurance”)

- **Pricing of guarantees**
  - By damage: Loss of business, fines received
  - Structured: Levels / bands, formula

Pricing of training

- **In-house training**
- **Off-site training**

Pricing of consulting

- **Technical implementation services**
- **Strategic solution consulting**

Pricing of consulting

- **Fixed fee**
- **Time and materials**

Complementary materials

- **Documentation**
- **Training materials**

Self-help services

- **Forums, mailing lists**
- **Help and chat agents**
- **On-line tutorials**

Support services

- **Hot-line support**
- **On-site servicing**

Pricing of support services (SLAs)

- **By availability:** Incident-based, 9x5, 24x7
- **By quality:** First-level, second-level, third-level

Guarantees (“insurance”)

- **Fitness for use, certification**
- **Indemnification**

Pricing of guarantees

- By damage: Loss of business, fines received
- Structured: Levels / bands, formula

Consulting

- **Technical implementation services**
- **Strategic solution consulting**

Pricing of consulting

- **Fixed fee**
- **Time and materials**

Software (core product)

- Core software
- Additional software (extensions + plug-ins, tools and utilities, integrations)

Operations

- **Provision of SaaS (managed service)**

Pricing of operations

- Quantity: Users, resources, …
- Duration: Always time-limited
- Structured: Set-up, subscription
Impact of Open Sourcing on Business Functions

- Marketing
  - Get help from open source community

- Business development
  - Identify partner opportunities faster / better / cheaper

- Product management
  - Learn from users, identify market opportunities
  - Build a superior product faster

- Software development
  - Build a product faster at lower cost
  - Recruit better faster

...
## Cost Structure of a Software Vendor [C12]

<table>
<thead>
<tr>
<th>Category</th>
<th>2011 ($m)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subscription and Support</td>
<td>$1.551</td>
<td>94%</td>
</tr>
<tr>
<td>Professional Services etc.</td>
<td>$106</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Total Revenues</strong></td>
<td>$1.657</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Cost of Revenues</strong></td>
<td>$324</td>
<td>20%</td>
</tr>
<tr>
<td>Subscription and Support</td>
<td>$208</td>
<td>13%</td>
</tr>
<tr>
<td>Professional Services etc.</td>
<td>$116</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Total Operating Costs</strong></td>
<td>$1.236</td>
<td>74%</td>
</tr>
</tbody>
</table>

**Gross Profit (and Gross Margin)**: $1.333 (80%)

**Operating Profit (and Operating Margin)**: $97 (6%)
Commercial Open Source Sales Funnel

- Download
- Install
- Use
- Lead
- Prospect
- Sale

Customer
Commercial Open Source Sales Process Illustrated

1. Market product
2. Provide open source
3. Track users
4. Connect users of organization
5. Engage in comp. sales
6. Generate leads from behavior
7. Identify champion
8. Make sales call
9. Win Sale!
Intellectual Property Management

- Intellectual property rights imperative
  - “Always act in such a way that you, and only you, possess the right to provide the open source project under a license of your choice.” [R09]

- Use reciprocal license to keep competition away
  - Almost all single-vendor-owned commercial open source is provided under a reciprocal license, typically the AGPLv3

- Use contributor agreement to maintain ownership
  - Almost all single-vendor open source firms require copyright transfer for any contributions to maintain full IP ownership
Community Management

- Community management
  - Is a business function tasked with
  - Creating, growing, and maintaining
  - A **self-sustaining** open source community
  - Around the vendor’s products

- Community manager role
  - Is a role (but often also a full-time position)
  - Tasked with community management
  - Challenged by community scalability

- Community management tasks
  - **Create community**
    - Pull members on board
    - Make members return, stay
  - **Grow community**
    - Lead community to help each other
    - Enable self-sustaining growth
  - **Manage community**
    - Maintain community peace
    - Facilitate community benefits
## Community and Revenue Proportions [1]

<table>
<thead>
<tr>
<th>Community proportions</th>
<th>100-10000x</th>
<th>10-500x</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passive Users</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active Customers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Employees</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenue proportions</th>
<th>Non-paying Users</th>
<th>0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Webstore Sales</td>
<td></td>
<td>0-1%</td>
</tr>
<tr>
<td>Enterprise Sales</td>
<td></td>
<td>99-100%</td>
</tr>
</tbody>
</table>

[1] Anno 2010
Key Challenges of Product Management

• Product definition
  • Maximize the incentive for non-paying users to become paying customers
  • While not creating crippleware and alienating the open source community
  • And minimizing the opening for other firms to compete using your product

• Maintaining goodwill
  • Be forthcoming and predictable
  • Over the full product life-cycle
At the Crossroads

• By observed behavior, the AGPLv3 does not keep cloud competition away any longer
  • In particular, large cloud providers are providing single-vendor open source as a packaged product
  • It appears to be silent agreement of lawyers that the AGPLv3 has no bite for this use case

• In reaction to this competition, single-vendor open source firms changed their licenses
  • The new licenses are trying to prevent the aforementioned competition
  • So far, the new licenses are arguably not open source licenses

• This created a crisis of goodwill for the single-vendor open source firms
  • If not with customers, then at least with the open source community at large
  • This threatens the benefits of the open source strategy for the firm
References


Credits and License

• Original version
  • © 2012-2019 Dirk Riehle, all rights reserved

• Contributions
  • ...