CSC-630

## A Different Approach to Open Source Software Monetization

In recent years, the use of open source software has taken off in popularity due to its potential as the more efficient way to develop software. The essay *The Cathedral and the Bazaar* by Eric Raymond discusses how the development model of open source software is better suited for the way humans interact. As of 2015, 78% of companies run some, if not all of their operations with open source software, and "93 percent said their organization's use of open source increased or remained the same in the past year." These statistics forecast a bright future for open source, as the trend has continued into the current year. However, the same survey found that "more than 50 percent are not satisfied with their ability to understand known security vulnerabilities in open-source components, and only 17 percent plan to monitor open source code for security vulnerabilities."<sup>2</sup> Although open source software often produces results on par with proprietary software--or at least good enough results that the majority of companies are using it--the fact that anyone can contribute at any time may have an effect on customer satisfaction and trust. Proprietary software that comes from credible companies will always be trusted by those who are able to pay for them. Therefore, in order for open source companies to succeed in the corporate arena, it is important that they mix in proprietary components that are built for and marketed towards enterprise customers.

<sup>&</sup>lt;sup>1</sup> "Tracking the explosive growth of open-source software,"

https://techcrunch.com/2017/04/07/tracking-the-explosive-growth-of-open-source-software/

<sup>&</sup>lt;sup>2</sup> "It's an open-source world."

http://www.zdnet.com/article/its-an-open-source-world-78-percent-of-companies-run-open-source-software/

Business models of open source companies are varied, and while open source software is not inherently conducive to monetization, there exist models that take advantage of the open source model's ability to facilitate the development of a community around a project. These models may not be as profitable as the traditional proprietary software model, but the fact that they put emphasis on the community surrounding the software promotes collaboration and interaction with the user base from which potential customers will come. The traditional way of monetizing an open source software project is by offering support services for a fee. This is a model that has been used by many companies, but it has its flaws. Namely, it may disincentivize innovation of software.<sup>3</sup> If all of the bugs and issues in a piece of software are ironed out, then the need for customer support is reduced. A newer business model that attempts to solve this issue is the 3 P's model. The 3 P's are Project, Product, and Profit. In the Project phase, an open source project is conceived, and a vibrant and healthy community is built up around it. This phase focuses on building a strong developer base and user base for the software by establishing the brand of the company as the central focus. The Product phase focuses on creating a monetizable version of the software. In order to monetize the project, the company must determine the needs of the customer, and continually innovate in order to meet these needs by expanding the feature set of the open source project as well as expanding the product with proprietary addons. "At the end of the project phase, an open company might be 80% services and 20% product. By the end of the product phase, this should flip." The third and final phase, the Profit phase, involves marketing the developed product to a core customer base. The roadmap that each company takes to achieving profit is vastly different than traditional

<sup>&</sup>lt;sup>3</sup> "Open Adoption

proprietary models and varies for each company. The proprietary add-ons, services, and products surrounding the original open source project should strategically scale the business and convert a subset of users into buyers.<sup>4</sup> There are various business models that open source companies use, but the 3 P's model is the current way to maintain healthy profit margins while also emphasizing a strong open source community.

Cloudera is an example of a company that uses the 3 P's business model. Their core open source software project is the Apache Hadoop distribution, a platform for scalable and distributed processing of large datasets.<sup>5</sup> <sup>6</sup> Based on this platform, Cloudera also has a number of proprietary products that complement their central open source project, the first of the 3 P's. Some examples include Cloudera Analytic DB, Cloudera Operational DB, and Cloudera Data Science & Engineering. Cloudera offers the possibility of hosting databases in the cloud or in on-site data centers, which gives customers a lot of flexibility when determining how Cloudera's product will fit their needs. This flexible proprietary model is the crux of Cloudera's product, the second of the 3 P's. For the third phase, profit, Cloudera pushes their platform to companies that require big data analysis and IoT platforms, among other data-driven operations that security, financial, or media companies might require.<sup>7</sup> In addition to the proprietary database platforms that Cloudera offers, it also markets proprietary add-ons to its Hadoop distribution known collectively as the "Enterprise Data Hub." Some of the add-ons are open source, but like other

https://www.forbes.com/sites/siliconangle/2013/12/19/hadoop-pure-play-business-models-explained/#27d787c57bce

<sup>&</sup>lt;sup>4</sup> "The Rise of OPEN Innovation,"

 $<sup>\</sup>frac{\text{https://medium.com/accel-insights/the-rise-of-open-innovation-the-3p-s-for-building-a-durable-open-software-company-3bc6e0ec6fa7}{\text{200}}$ 

<sup>&</sup>lt;sup>5</sup> "Apache Hadoop," http://hadoop.apache.org/

<sup>&</sup>lt;sup>6</sup> "Hadoop Pure-Play Business Models Explained,"

https://www.forbes.com/sites/siliconangle/2013/12/19/hadoop-pure-play-business-models-explained/#27d787c57bce

<sup>&</sup>lt;sup>7</sup> Cloudera, https://www.cloudera.com

<sup>&</sup>lt;sup>8</sup> "Hadoop Pure-Play Business Models Explained"

open-source companies, Cloudera offers support for these services at an additional charge.

Although Cloudera's foundation is open source, the business model it uses focuses on completely proprietary products. Cloudera is an example of a company that has achieved the 20%--80% distribution: its revenue stream comes mainly from its products and is supplemented slightly by its support services, not the other way around.

Anaconda is another company that has an open source distribution. In this case, it is a Python distribution tailored for data science, as its foundation. Much like Cloudera's Hadoop distribution, Anaconda's Python data science distribution is built around existing open source software, with the exception of the *conda* package manager. The product that Anaconda offers is similar to Cloudera's in that it is essentially an enterprise platform for its distribution. Anaconda's website is made to sell its enterprise platform, which allows for easy collaboration, deployment, and scalability of its platform, all of which sound very similar to Cloudera's product. 10 The "Anaconda Cloud" is aggressively marketed; even the website's logo has the word "cloud" in it. 11 Anaconda also offers a lower-tier "Anaconda Support" product, which is the open-source python distribution with paid support on top of it. Like Cloudera, Anaconda has gone through the development process laid out by the 3 P's model. The company built a community around their Python data science distribution, and used it to market an enterprise edition that is proprietary. Cloudera and Anaconda both use this model, and the adoption of the 3 P's model among newer open source companies shows that proprietary software is still necessary to be profitable and valued in the corporate community today.

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<sup>&</sup>lt;sup>9</sup> Anaconda Cloud, https://www.anaconda.com/what-is-anaconda/

<sup>&</sup>lt;sup>10</sup> Anaconda Cloud, https://www.anaconda.com/enterprise/

<sup>11</sup> Anaconda Cloud, https://www.anaconda.org/

A counterexample to this model is Red Hat, which is one of the only companies to survive the first generation of open source and reach "venture scale." Unlike Cloudera and Anaconda, Red Hat focuses on monetization through subscription to support services for their open source products, which is what the first generation of open source companies tried, and failed, to do. Contrary to newer open source companies, Red Hat's selling point is that its software is made "the open source way" and it is not distributed in "monolithic" packages with "licensing and upgrade fees." Anaconda and Cloudera openly incorporate proprietary software products into their open source projects, while Red Hat prides itself on avoiding the 3 P's model. Red Hat instead markets the value of its subscription to support services for its open source software that is just as good as enterprise software. Additionally, Red Hat's software is fundamentally different from Cloudera and Anaconda: it is an operating system based on Linux, which inherently requires more support due to the complexity of the software. Linux is a well-maintained project as well, which increases customer confidence in the software and support services offered by Red Hat.

Open source software has the potential to be as renowned and widely-used as proprietary software, but proprietary software will not be phased out anytime soon because some aspects of it are crucial to the operations of almost all companies. Microsoft Office and the Adobe software suite are a few examples of such software. Open source alternatives exist, but customers are willing to pay for a better user experience and friendliness that open source software sometimes lacks. The main benefit of using open source software is the community of supporters that forms

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<sup>12 &</sup>quot;The Rise of OPEN Innovation,"

https://medium.com/accel-insights/the-rise-of-open-innovation-the-3p-s-for-building-a-durable-open-software-company-3bc6e0ec6fa7

<sup>13</sup> Red Hat, https://www.redhat.com/en/about/value-of-subscription

around the project, and the ability to market proprietary software to this community. Open source software sometimes lacks in user experience because it is intended for those who care less about aesthetics and more about functionality. The 3 P's model is successful because it offers advantages for those who support open source as well as those who want the user experience and support of proprietary software.

## Works Cited

"About Red Hat." *Red Hat*, www.redhat.com/en/about/value-of-subscription. Accessed 18 Jan. 2018.

Anaconda Cloud. www.anaconda.org/.

"Apache Hadoop." *The Apache Software Foundation*, hadoop.apache.org/. Accessed 18 Jan. 2018.

Cloudera. www.cloudera.com. Accessed 18 Jan. 2018.

Flomenberg, Jake. "Open Adoption Software." *Medium*, medium.com/accel-insights/open-adoption-software-2016-year-in-review-c32ec03eed80. Accessed 18 Jan. 2018.

---. "The Rise of OPEN Innovation." *Medium*, medium.com/accel-insights/the-rise-of-open-innovation-the-3p-s-for-building-a-durable-open-so ftware-company-3bc6e0ec6fa7.

Accessed 18 Jan. 2018.

Furrier, John. "Hadoop Pure-Play Business Models Explained." *Forbes*, www.forbes.com/sites/siliconangle/2013/12/19/hadoop-pure-play-business-models-explained/#27d787c57bce. Accessed 18 Jan. 2018.

Thakker, Dharmesh, et al. "Tracking the explosive growth of open-source software." *TechCrunch*,

techcrunch.com/2017/04/07/tracking-the-explosive-growth-of-open-source-software/. Accessed 18 Jan. 2018.

Vaughan-Nichols, Steven J. "It's an open-source world." *ZDNet*, www.zdnet.com/article/its-an-open-source-world-78-percent-of-companies-run-open-source-software/. Accessed 18 Jan. 2018.