

# Open vs. Closed Source

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## Understanding Open Source and the Enterprise

Open source is far more than “free software.” It describes a development culture — and way of doing business — that has changed the playing field for software in recent years. While the practice of sharing source code at no cost for the sake of collaboration has been around for decades, it is within the past decade that it has carved out a niche for itself in mainstream IT. Well-known adopters of open source include established and security conscious organizations like NASA, government agencies, Google, Yahoo, Facebook and Amazon. Liferay alone counts several of the world’s leading banking institutions, the United Nations, NASA, major universities, and IT giants such as Cisco systems on our list of clientele.

## Open Source and the Enterprise

This adoption has resulted in a crop of innovative products on the market, highlighting flexibility and cost savings. However, just as with proprietary software, the open source projects that fare best within corporate environments are those developed by fully trustworthy companies and dedicated teams. While still chosen for its significant cost savings, the more established open source vendors also offer impressive levels of security and insurance. Enterprise-friendly subscription and support packages add value to the software itself and include packaging, distribution, product guarantees, additional rights, services, indemnification and more.

## Direct Benefits

### **SHORT- AND LONG-TERM FREEDOM**

The most significant benefit of open source software is not only the freedom it provides in terms of pricing, but also the flexibility afforded to technical staffs to design an IT stack and portfolio most effective for their needs. This translates into direct benefits, including short- and long-term cost savings, as well as measurably lowered risk for customers and consumers.

In the short term, open source requires zero or lower initial licensing costs. IT also often offers cheaper professional services thanks to the accessibility of product information from documentation to code. This enables the free market to learn about an open source product and offer services that increase competition, thus guaranteeing fair prices.

Open source software consumers are also able to curb vendor lock-in and the significant costs of purchasing additional software down the road. Open source coding is marked by an adherence to standards. Hence, the majority of OSS products are compatible with a multitude of other products abiding by similar industry standards, both open and closed source and regardless of vendor. This is in contrast to closed source products, of which compatibility with other products is, by design, limited to technologies from the same vendor, thus forcing customers into costly purchases of entire product suites and specific integrations. Understandably, this causes increases (often significant) in the total cost of a project rather than giving users the freedom to select products based on features, preferences and performance.

#### **MAINTENANCE SAVINGS**

Another key benefit of using open source software is the savings on maintenance. Again, interoperability of the product plays a key role. In particular, open source software's flexibility allows it to work with less powerful hardware, which allows users to prolong the life of older hardware while retaining performance. Additionally, reduced need for regular upgrades and longer uptimes minimize the need for expensive system administrators.

#### **AUDITABILITY**

Open source means that you have the ability to guarantee that there is no undesired code within the software (e.g. spyware, virus protection, etc.). Even if you cannot personally audit the code, you can most likely hire others to do it for you. In the worst-case scenario there are chances that many others have done it for you. This is truer for larger and more active (healthier) open source communities.

#### **LOWER RISKS**

Availability of source code provides greater continuity and security against potential phase-out of products due to financial collapse of vendors or change in support for particular products in their portfolios. The openness of OSS code ensures that a product will live on through the community that has grown up around it.

## **Indirect Benefits**

#### **USER ORIENTED**

Open source communities foster a culture of collaboration and ownership that encourages the input of their users. Far more than proprietary products, open source products receive and incorporate much more feedback on how a product should improve. Because of this, any user can participate in an open source product's development and affect the direction and evolution of the product.

Developers have a direct channel to users, which leads to products that are much more user-oriented and have fewer unnecessary features. As a result, open source products are very lean, while some proprietary products can become bloated with features that are unnecessary or actually less in demand.

#### **STANDARDS AND INTEROPERABILITY**

Open source products are known to provide much better support for standards than proprietary products. This is not necessarily true of all open source projects, but the dynamics of open source development make it easier, or even mandatory to support standards, so the reality is that most open source products are standards based.

#### **EXTENSIBILITY AND ADAPTABILITY**

Open source products recognize from Day One the need to adapt the product to user needs. Products can be customized by modifying the source code, but that is a path that leads to very high maintenance costs, so as a result users and developers push towards adding more built-in extensibility — the more extensible, the easier it is to meet end user requirements at significantly lower costs.

#### **SECURITY**

It is a well-known fact among security experts that obscurity (i.e. hiding information or code) leads to security vulnerabilities. In contrast, open source code is visible for anyone to see, leading to more eyes looking for potential vulnerabilities to be fixed.

It is important to evaluate the ability of an open source community and or its service providers to respond quickly to found vulnerabilities. It is worth noting that open source communities fix security vulnerabilities twice as quickly as commercial software vendors do, according to a study by Veracode.

#### **RELIABILITY AND STABILITY**

When compared to closed source vendors, open source software is also recognized as being more responsive to fixing product defects. The availability of the source code allows for easy identification, access to, and addressing of bugs by the community, leading to speedy fixes wherever possible. This can be done ad hoc within an organization until the publishers of the open source product issue the official fix or they have the flexibility of choosing to keep their own fix.

# How Open Source Works

## Open Source Ecosystems and the Benefits of a Healthy Community

A community refers to an ecosystem of users, developers, companies, customers, and others that communicate and collaborate to improve an open source project. An open source project with a healthy community is able to grow at a much faster speed than one which does not have a healthy community, and much more than a proprietary product with the same amount of paid resources.

### Did you know?

Liferay's community formed in 2001 and includes over 150,000 members from around the world, spanning all industries.

## Evaluating an Open Source Project

Despite all the benefits an open source development methodology and culture offers, not all open source projects are created equal. When evaluating an open source project, key criteria should include:

- Project goals (to ensure long-term viability) - What are the goals of the project leaders? Are their plans with the product long term? Are those plans in accordance with the investment that I will make?
- Project evolution - How has the project evolved over time? Is it being actively maintained and developed?
- Maturity - For how long has the project been around?
- Adoption - Who is using the product? How many people/companies/organizations? Are they similar to me?
- Backing by a trustworthy company or set of companies - Look for open source projects that are supported by credible companies. You may require support or professional services in the future.
- Activity of the community - A more active community expands the benefits highlighted in the previous section.

## Moving Forward

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## About Liferay

Liferay, Inc., is a worldwide leader in open-source enterprise technologies and is one of the most mature open source companies on the market. Liferay continually strives to imbue its development methodologies and business philosophies with the spirit of openness and innovation on which it was founded.

Liferay Portal, the company's flagship product, began as an open source project in 2001 and today counts a community of more than 150,000 members and more than 500,000 deployments worldwide. Liferay is a leading open source enterprise platform and companies around the world rely on the technology for its rapid development capabilities, impressive scalability, proven reliability and open source savings. Today, two versions of the platform are available: Liferay Digital Experience Platform (DXP) and Liferay Community Edition (CE). Liferay DXP is available through a professional subscription that provides support services, legal assurances and other benefits for enterprises. Liferay CE is free for download and remains the open source project attracting activity from our vibrant global community.



Liferay makes software that helps companies create digital experiences on web, mobile and connected devices. Our platform is open source, which makes it more reliable, innovative and secure. We try to leave a positive mark on the world through business and technology. Hundreds of organizations in financial services, healthcare, government, insurance, retail, manufacturing and multiple other industries use Liferay. Visit us at [liferay.com](https://liferay.com).

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