Liferay Buyer's Guide

Table of Contents

Executive Summary

Enterprises are increasingly evaluating their corporate infrastructures to see how they may benefit from open source. This has been driven by a combination of tangible business needs for competition in today's web-centric business environment and the recognized limitations of proprietary technologies in being able to meet these needs. While several key infrastructure pieces are still supported by expensive and often operationally "heavy" platforms, open source use has become popular for components residing within the presentation layer, notably surrounding portals, content and collaboration functionality.

Notably, when evaluating such solutions that directly impact organization productivity and processes, several topics have been top of mind: social collaboration and networking (and how it impacts the traditional EAI use case), rich interfaces, RESTful and Web architectures, and the empowerment of end users are just a few. Enterprises have also been ever more cognizant of the need to balance total costs against time to productivity while ensuring extremely high reliability.

Once simply viewed as free software, open source products are now enjoying accelerated adoption within the enterprise, thanks to four key factors: the maturity of open source products today; the innovation offered by community- and collaboration-driven development methodologies; the wide availability of services and support for open source products that are comparable to, if not better than, those available for their proprietary competitors; and the promised reductions in the total true cost of ownership.

Innovations

Historically, proprietary products have succeeded by innovating faster and marketing better than their competition. However, with market consolidation, the growth of industry "giants" that dominated specific markets and the recent slowdown of the global economy, proprietary software vendors are now building their product roadmaps against an ever-shrinking pool of competitors, thus resulting in declining innovation.

Conversely, open source products develop in a highly competitive ecosystem in which only the best products win. Those that foster the fastest learning curves and deliver the most improved productivity with the most innovative and compelling features gain popularity and adoption while others do not. The public and community-centric nature of the open source ethos has also fostered a unique merit-based environment in which only the most motivated and talented developers thrive and receive recognition for their contributions.

Maturity

In the past, the term "open source" was widely associated with lower costs while enterprise software was understood to be scalable, reliable and available with mission critical support and an established partner ecosystem. The reality is, however, that today's open source leaders are contending with and outperforming commercial competitors in mission critical, high-scalability use cases. Open source has become a relevant and strategic part of platform planning.

To fulfill a growing demand for simpler and more fiscally-viable options for the masses, open source development has accelerated at an impressive rate, not only matching the features of expensive proprietary products, but oftentimes offering them in a lighter-weight and more flexible form.

Support and Services

With this rapid innovation, influential technical and business ecosystems have grown up around the most successful and in-demand open source products. Typically, these open source products are headed by a core team (the original creators and other stakeholders) that takes the lead on product strategy and coordinate the aggregation and refinement of contributions from the community. With oversight on product roadmap, feature requests and market need, these same leaders are able to respond to demand by building highly capable support and services units, often pulling from the large pool of proven talent from the community itself.

Thanks to the global nature of open source development, these support and services teams start up on a global scale, providing rapid and expert responses from the product's developers rather than from call center employees with little depth of knowledge about a product.

True Cost

More than ever, proprietary product vendors are employing the concept of "product chaining" in their development, whereby one product necessitates the use of another product from the same company.

These vendor lock-in strategies have perpetuated the dominance of a few key players, which have consequently kept complex and expensive pricing an uncontested norm.

However, as open source vendors matured and rose in importance within the enterprise, they began to innovate software business and pricing models as well. The enterprise software market has been impacted by offers of flexible pricing options such as annual subscriptions, lower cap-ex pricing and unlimited use pricing.

As a whole, open source players offer reductions in initial licensing costs, lower support fees and training costs, and greater ease of development, thanks to the use of open standards and newer technologies.

Resources

This document and the accompanying Liferay Buyer's Guide Checklist provide decision makers a list of tools for evaluating future purchases for their infrastructure.

1. Business Primer — an overview of the major issues affecting the portal, content and collaboration market.
2. Buyer's Checklist — a worksheet for evaluating each infrastructure layer.
3. Liferay Evaluation Guide
4. Industry References and Glossary

Business Primer: Enterprise Portals, Content and Collaboration

Enterprises are increasingly turning to portal, content and collaboration products to enhance their infrastructures with new organizationally pervasive services. This combination of functionality, when executed well, can provide far-reaching impact on an organization and its processes.

Portals

Portals have grown to satisfy multiple demands within an enterprise such as business integration, user personalization, role-based content delivery, content management, mobility and collaboration. However, in doing so, many portal implementations run the risk of becoming overly complex and expensive as they require additional integration with other applications to offer the extent of needed functionality.

To mitigate costs and complexity, newer portal players must offer more out-of-the-box capabilities in high demand functional areas such as content management and collaboration. With fewer costs and less time needed for integration and custom feature development, users can focus their energy on more strategic efforts like business logic and solution design.

Content

In recent years, content management strategies have trended towards the decentralization of content repositories. While there is understood need for a single, controlled system, today's multi-departmental and multi-regional enterprise also requires the flexibility of allowing different business units to 1) create and manage their own content and 2) define approval processes within their team or organization.

New software must provide innovative means of meeting this for agility with features such as delegated content management and authorization, while still allowing all end users to access decentralized, group-created content from a single interface.

Collaboration

Collaboration continues to see new innovations in services and methodologies. Most are variances on how information can be contributed, found, shared and repurposed. A now familiar branch of web-based collaboration is social networking, which, when implemented in line with enterprise and organizational policies, creates a new paradigm for collaborative services.

Subsequently, today's enterprise software products must allow an organization to define its own social "network" (with end user defined groups and roles within) that can be constrained or augmented by formal organizational policy (e.g., adding a company business unit to a social group or disallowing end users with specific roles to share data outside their organizational level).

The addition of collaborative capabilities to portals allows a new dynamic for web development. For example, an employee can see a new posting from the Engineering department about a new product launch. The employee could then quickly add new content for customers using the built-in content management system (CMS), check the schedule for the project in the forums section, add a new discussion about marketing activities for the launch and set up tasks or events in the group calendars. Allowing users to accomplish all these activities within the same system defines a new standard for website development where formal content and end user driven content and activities are combined.

Trends: Increasing Business Value While Reducing Costs and Risks

Enterprise software must be reliable, simplify and streamline development processes, and curb start-up and long-term costs while providing innovative new features to end users. While a winning combination of these criteria is rare, all should be reviewed when evaluating portal, content and collaboration technologies that can significantly affect overall organization productivity and the achievement of business goals.

Development & Product Simplification

Development tools and methods are affecting web application delivery. Understandably, the market favors simpler tools and methodologies conducive to rich user experience and provide ease of extensibility and integration with other technologies.

The simplicity of a software product ensures lower costs, higher reliability and increasing ability to meet growth strategies. Instead of complex, monolithic systems, enterprises seek products that are ideally both lightweight and feature-rich. Historically, the term "lightweight" was used synonymously with "simplicity" to describe products that have a smaller installation size and are faster to download and easier to install but offer fewer capabilities. However, with the open source market's use of newer and faster development tools, frameworks and components, today's enterprises have access to products that allows them to quickly evolve with business needs while remaining lightweight, with built-in expansion mechanisms, like microkernel architecture and plugins.

Unification of Presentation Strategies

There is continual growth of new applications and services within an enterprise. A truly effective portal infrastructure should allow new features and services to be continually added into the existing infrastructure. It must provide authentication, authorization and role-based content delivery (RBCD). RBCD defines that each person accessing the portal sees and has access to only the content that he or she is authorized to view. It is what permits an enterprise to offer one unified view without compromising content security or user experience. It also improves user productivity, reduces software maintenance costs across applications and increases the reuse of code, content and policies.

A unified presentation layer using portals also allows for the creation of "microsites" whereby a single portal instance can host www.company.com as well as my.company.com, partner.company.com, and employees.company.com. Additionally, multiple portals can be deployed across a portal fabric in which each portal can leverage a common set of data, content, application services, identity services and portlets.

Unification of Content, Portals and the Application Platform

In the past, portal software was used for only a portion of the web experience (e.g., an employee portal or dashboard) alongside a number of other disparate products performing other functions.

Application platforms were used to build individual applications (e.g., using an application server to build a trouble ticket automation application integrating to an existing system). The simplification of software has led to a new strategy to unify infrastructures and technologies.

Unification of Departmental and Enterprise-Wide Software

Enterprise-wide projects and departmental projects are often supported by different sets of software. For example, many companies use an IBM, Oracle or BEA portal for enterprise-wide implementations and use SharePoint® at the departmental level. Likewise, they will leverage major content repositories for enterprise-wide content while leveraging open source repositories for the departmental requirements.

Quite significantly, recent trends show corporations looking to service both enterprise-wide solutions and departmental solutions with one product to allow for code and feature reuse and to share the costs of unlimited licensing across a larger pool of users.

Unification of Developer Strategies and Technologies

Developer technology changes have also fractured enterprise software. For many years, Microsoft and Java technologies have contended for favor. Now, developers are faced with an ever-growing list of technologies and development languages to choose from. Java developers can choose between: Spring and EJB, SOAP and REST, Java and PHP/RUBY, DOJO Toolkit and Microsoft Web Wizard, and maybe even Eclipse and Dreamweaver. IT teams make these choices when planning their application infrastructure, albeit with the understanding that choosing one technology may exclude it from innovations available in others.

However, because portals aggregate content at the presentation layer, they allow multiple technologies to be used in the application layer, thereby giving an enterprise access to the benefits of each. Products like Liferay also allow the various web technologies in different programming languages to be aggregated by a single presentation layer to the end user. Rather than force a development team to choose some technologies over others, unification via a portal interface opens up new possibilities for development.

Opportunities & Growth: The Future of Web Content and Application Delivery

New Capabilities and Development

Today's enterprise must consider the extensibility and long-term viability of the IT investments being made. Not only should a solution address present-day business pain points, it should also evolve with the needs of the enterprise to equip it for future growth. This may include custom development, scaling to accommodate growing user bases or the addition of new functionality.

Market demands for this type of exceptional business agility and flexibility have pushed product development teams to take a more modular approach to software design. Notably, the open source players have been able to embrace and lead this approach, leveraging their use of open standards and an ease of customization that is distinctively fostered by open source development methodologies. More notably, portal products, faced with the challenge of aggregating existing content and now dealing with future needs, must offer an array of options conducive to growth.

Productivity and User Empowerment Roles and Authorizations

Platforms such as Liferay allow users to build applications that are role-aware. Infrastructures leveraging these aspects have seen great improvement of end user productivity. The growing trend is to allow end users greater control in building and sharing content and applications.

Where content was once available only after being created by web designers with special permissions, end users can now create content on their own with blogs, wiki or other self-publishing methods.

They can find, download or upload documents or other content. Individuals can even build forms-based applications and define who can access or view results.

Portals provide a great platform for enabling both role-based content delivery (you have access to apps/content based on your role within the system) and social networking. Applications can be:

1. Static (everyone will see the same data, e.g., a calendar of events on cnn.com)
2. Personalized (each individual will see data unique to themselves, e.g., a personal calendar)
3. Role-based (a group will all see the same data, e.g., a workgroup calendar)
4. Socially aware (similar to role-based while allowing the end user to define the group and roles within that group)

As more static, personalized, role-based and socially aware applications are added to the portal, the productivity of the end users grows exponentially. In the future, end users will gain even more power and productivity through the ability to customize or define new applications for their network.

Workgroups, Teams, and Organizations

Applications address different data, business logic, and levels of authorization and personalization. Classic applications are built with a static business logic connected to data available to anonymous users (e.g., a website or web page like Amazon.com) or authenticated users (e.g., Amazon.com once logged-in).

New applications can now be specialized given a user's roles (i.e., the ability to grant additional features or access to managers or administrators) and can extend such rights to an entire enterprise and all its different users. Users can be granted access to applications, features and content within applications based on their roles (customer, partner, employee, manager, administrator).

Additionally, these applications can be defined within the context of a user's social network, which is a set of groups defined by an end user. The user can define a group and then define applications available to this group. The user can also integrate its network with a formal identity policy. For example, other users may not make changes or invite others to this work group unless they have been given a formal role as a community leader.

Application Development

As the power of end users grows, developers must build applications with them in mind. Hence, portals that can support the addition of applications have become a platform of choice for enabling future end user capabilities. Portals also provide a set of services that can be used to build these new capabilities and portlets.

For example, “presence” can be pulled into portlets to allow them to know the online status of users; and the “RSS” functionality is one that can be embedded in portlets like blogs. A good portal that can leverage open source technologies, like Liferay, allows for an added degree of flexibility during the application development process, supporting various tools and programming languages such as PHP, Ruby and OpenSSO.

Open source software in general has also been responsible for significant advancements to the development process through technologies like OSGi, Spring, AJAX, Ruby, Groovy, PHP and REST; tools like Eclipse and Netbeans; and new innovative tools based on social activity and human workflow (i.e., allowing end users to define a form and an approval process for each form submitted, such as an expense reporting tool).

Liferay’s Alloy UI is a great example of a new open source product built on others. It is a UI framework that combines the best of CSS, HTML and JavaScript. While open source players are able to move and innovate quickly, larger heavyweight portal players are not supporting their products in the same way and have fallen behind.

New Cost Savings

FLEXIBLE PRICING OPTIONS

The growth of open source has noticeably changed the competitive landscape. Flexible pricing options available from many open source vendors are improving initial project and annual recurring costs.

Subscription pricing, CAPEX Perpetual, Unlimited and other pricing models have reduced annual costs as well as the costs required to add new open source projects into an existing budget.

OPEN SOURCE INVESTMENT AND COMMUNITY PARTICIPATION

Open Source vendors promise cost savings but also increased input from those that invest in their products. Leveraging applications built from open source allows companies to take part in the products’ communities. Enterprises should look to influence roadmaps/feature decisions as well as standards support, integrations, migration toolkits and partnering strategies. Training, documentation, forums, wiki content and other ancillary information is also available for enterprises to use as well as contribute.

New Expectations

With the maturity of lighter-weight enterprise portals, infrastructures are trending toward a single web presentation standard that:

- supports both enterprise-wide and departmental applications
- supports both web and Java development
- supports and simplifies both SOAP and REST for integration with external processes, while combining user services at the presentation layer across multiple deployments (e.g., a single page from a SOAP or RESTful web service; search across multiple content stores; the leveraging of gadgets and widgets across multiple portal instances)
- easily integrates with proprietary software, legacy systems and content stores
- connects to multiple content stores (internal and external alike) with cross-repository search mechanisms
- integrates new mashups with leading web social services (e.g., Google, Twitter, Salesforce.com)
- includes basic web content management and collaboration services
- includes social networking and workflow capabilities

A single effective standard allows an enterprise to support departmental deployments alongside centralized services.It reduces costs and expands the reuse of third party products and customized solutions across the enterprise.

The standard leverage must also include several key features that accelerate the benefits of any content widgets, gadgets or applications developed. These include:

- web content management
- role-based content delivery
- integration with existing identity management systems
- social networking and enterprise-wide collaboration
- user-driven communities and content

With these new portal capabilities, enterprises are then able to effectively power external websites, leveraging web and enterprise content alongside portlets, gadgets and widgets built from SOAP/REST services.

Portals will also be used to build presentation layer architectures or "Portal Fabrics" where business and presentation layer logic are separated, and where end users are granted greater capabilities to build new content, define the networks in which they operate, and build new applications.

Combined, these capabilities will allow a wide level of use across an enterprise while adding new capabilities to end users to increase their productivity while greatly reducing complexity and costs.

Solutions: Top Reasons Enterprises are Choosing Liferay

For many companies looking for a lightweight and feature-rich platform to meet their enterprise needs, their evaluations of vendors have led them to Liferay. As a flexible, Java-based web development platform with a core set of services out of the box, Liferay meets some of today's pressing enterprise demands. These include solutions for portal, web content management, document management, application integration, content workflow and social collaboration.

Liferay's appeal stems from the open source platform's adherence to industry standards, freedom from vendor lock in and support for a broad set of solutions including lightweight, rich UI websites and highly secure, mission-critical applications in industries such as government and financial services.

Key Business Benefits

SMART INVESTMENT

Users get the most flexible and dynamic technology at the lowest TCO and highest ROI. Liferay comes with a rich set of developer tools and frameworks, and hundreds of ready-made applications available through Liferay Marketplace. We provide you with many resources to accomplish what you need to do (web publishing, collaboration, social networking, administration, etc.).

Moreover, as Liferay is the only enterprise portal leader on the market with no software or hardware agenda, you are not bound to using a particular IT stack and are able to invest in only what you need for the life of your project.

EASY ADOPTION

The product is lightweight and can be installed quickly in any IT environment. An award-winning user interface, familiar desktop conveniences and easy navigation make the Liferay platform extremely simple to use and adopt by all users in your organization.

AGILITY FOR THE FUTURE

Liferay evolves with your organization. If you require new functionality, tools can be added with just a few clicks. For example, an intranet built on Liferay can evolve into an extranet that reaches outside partners. An organization powering a website with Liferay can easily add social features to capitalize on the power of its online community.

Product Differentiators

FLEXIBLE AND AGILE PLATFORM

Liferay is a lightweight SOA platform with support for web services, industry standards (JSR-286, JSF-314, etc.), multiple programming languages (e.g., Ruby, PHP, Python) and a hierarchical system of communities and organizations. Liferay also has its own Social API that provides the essential elements and framework for enabling real-time communication and social networking within an enterprise.

SERVICES, APPLICATIONS, AND TOOLS

Liferay offers out-of-the-box apps for content management, collaboration, social networking, administration and developer tools at no additional cost. Additional apps can be downloaded from Liferay Marketplace (liferay.com/marketplace) where users can find tools and other add-ons contributed by Liferay's over 180,000 person open source community.

READY FOR MISSION CRITICAL APPLICATIONS

- Highly scalable, supporting more than 27,000 concurrent users with mean login times under 200ms
- Real-world performance of millions of users, page views and documents
- Clusterable configuration for high availability
- Implements top ten OWASP recommended security practices
- Options for Terracotta, Oracle RAC and other scalability solutions
- Deployable to public and private clouds and available as SaaS

Global Liferay Ecosystem of Developers, Users and Partners

BUSINESS COMMUNITY

Created in 2000, Liferay has since become the de facto standard for open source portals in the enterprise. The company offers enterprise subscription and support, public and private training, and consulting and implementation services with offices around the world. Liferay, Inc. also boasts a thriving business network of certified partners and resellers on six continents.

DEVELOPER COMMUNITY

Participants in the community include the Liferay staff and board of governance, volunteer committers and contributors, and other partners and users. The board of governance establishes and enforces community rules while coordinating and implementing decisions that affect the entire community. Committers are allowed to directly contribute code into Liferay source code while contributors' code passes through a review and approval process before it is added to the product. Partners are able to work with the Liferay community for the development of ancillary products available to Liferay customers such as services, integrations and plugins.

- Over 180,000 community members
- 15,000 active forum participants
- Largest single portal knowledge base with over 300,000 forum posts
- Estimated 500,000 implementations around the world

Industry Acclaim

Liferay has been the recipient of many awards and industry recognition, including:

- Leader in Gartner's Magic Quadrant for Digital Experience Platforms
- InfoWorld's Best of Open Source Software (BOSSIE) Award for Best Portal
- Memberships in multiple committees for major industry standards such as JCP (JSR-286, JSR-314, JSR-362), OASIS (CMIS, WSRP, WEMI), OSGi Alliance, and OpenSocial

Open Source Leadership

Not only do Liferay's technologies comply with all major industry standards, but the company also helps to define new ones:

Liferay is compliant with all key industry standards (e.g., JSR-286, JSF-314, JSR-170, WSRP, JBI) and participated as a member of the "Portlet 2 .0" specification committee. It is also a founding member of Open Source For America (OSFA), a collaborative effort to raise awareness in the U.S. Federal Government about the benefits of open source software.

Case Studies

Liferay is an active part of operations in organizations across all industries worldwide. Among an estimated 500,000 Liferay deployments are marquee clients and users including:

- **The GLOBE Program** — used Liferay to develop a new, modern and collaborative environment for The Global Learning and Observations to Benefit the Environment (GLOBE) Program, a worldwide hands-on science and education program sponsored by NASA and NSF and in coordination with the Department of State and NOAA. The new website supports 30,000 sites and 35,000 registered accounts from over 100 countries.
- **World Vision** — used Liferay to power KnowledgeBase, a collaboration platform that has revolutionized the way its international team of relief and humanitarian workers correspond and communicate.
- **Cisco Systems** — chose Liferay to create The Cisco Developer Community Portal, an online collaborative environment in which developers can easily locate resources for their solutions, assist each other in developing solutions and reach out to Cisco resources for assistance. This portal uses Liferay's built-in tools, including wikis, blogs, message boards and social networking capabilities like activity tracking and network building.

Read these user stories and more at liferay.com/stories.

Moving Forward

Download the Free Buyer's Guide Checklist

We understand the importance of lining up your team's specific needs with the available platforms out there. Now that you've read our Buyer's Guide, get Liferay's free Buyer's Guide Checklist as the next step for evaluating portal, content and collaboration solutions. Visit: liferay.com/get-checklist.

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.

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