

There is a new business imperative within IT departments. IT has always been expected to “do more with less,” but in the past it has been more of a goal than a reality. Typically, projects would absorb six and seven-figure price tags by completion. Integration with existing infrastructure was never a priority like today; this is now a must-have for business and IT, not only due to wide-spread cost cutting, but also to address applications’ time-to-market requirements.

The introduction of open source into enterprise IT is not a new initiative. Some areas of open source have become mainstream but as you move “up the stack” into enterprise applications, most IT shops still rely heavily on proprietary and legacy technology. This paper will provide best practices to integrate open source and commercial software for a blended approach that meets business demands – in terms of integration, functionality, timing and control, at an appropriate price point for these cost-cutting times.

From Philosophy to Mandate: Cost Savings as a Key Criteria for IT Software Selection

There are two general approaches to selecting enterprise software: “top down” and “bottom up”. The “top down” approach typically consists of a line of business or CIO tasked with the responsibility to deliver functionality that is tied to a business metric. These decision makers are less interested in the selected software package, but rather the end result. Given their lack of intimate product knowledge, they instead seek a strong and solid “partnership” with the vendor providing the software. This includes outstanding customer support, a guaranteed path for updates and upgrades, and other contractual obligations.

The “bottom up” approach consists of a developer or team of developers evaluating several software packages and self-selecting the “best” option to solve the business problem. For this constituency, flexibility, speed and control are the biggest drivers. The evaluation typically consists of a download of several different packages, and a small “proof of concept” that highlights the features or functionality that are required. Support and a strong vendor relationship may be important, but it is almost always secondary to product quality and functionality match.

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Today, both of these constituents are being told to purchase software in a different way. Cost is an absolute driver, as is time-to-market. This translates to a priority requirement to integrate with existing legacy systems. This is tougher on business managers, who see fresh and new ideas as an opportunity to start over, rather than improve on what may exist today. Developers too typically had their integration needs trumped by critical business requirements.

The end result? A larger set of compromises is made now to balance business goals with integration demands, to enable the most functionality in the shortest time.

These two drivers are completely changing the face of IT software selection:

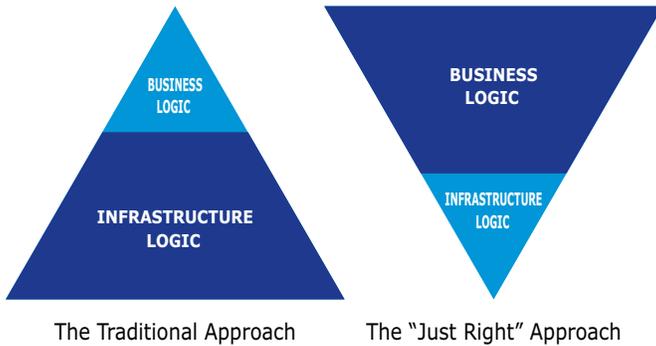
- A. *Lower total budget to achieve business goals*
- B. *Simplified integration to improve ROI and time-to-market*

Businesses have become acutely aware of the overall cost to implement new software – from hardware and networking to software licensing and professional services. They do not want the majority of their budget spent on non-core integration functions, so this critical piece has to be a relatively small part of the overall budget. Yet companies tend to spend much more than anticipated on infrastructure code – the glue that makes everything work together.

In fact, organizations spend as much as 65% of their IT development efforts creating and maintaining this infrastructure logic. This effort does not add any value to the business or application per se, but is required to get it to run. The less time spent on this, the quicker the ROI.

The Ultimate Goal: Build Smarter

The ultimate goal, as depicted in the diagram below, is to 'build smarter' – that is to minimize the amount of infrastructure integration coding necessary and focus precious IT resources on the development of the logic that uniquely addresses the requirements of the business.



Given that much of the existing legacy in IT is made up of proprietary software, the "integration tier" must be as open as possible and if the back-end is open too, even better. Today, most IT departments prefer access to the source code to achieve integration benefits. APIs and web services often do not provide the level of integration with legacy systems that is required.

These business and technical imperatives have led the drive towards open source software, which has emerged over the past five years. FOSS (free and open source software) has been hailed as the solution to all of these problems – a low cost way to bring new functionality into an enterprise. However, the "top down" approach that is typical for purchasing software has limited the growth and effectiveness of open source software. While developers adore open source software and have become a core market, business leaders still want a trusted partner they can lean on to provide support, upgrades and take full responsibility for the product lifecycle.

Pros and Cons of Commercial and Open Source

These new customer imperatives are causing a shift in the market and vendor community. It's clear that open source is not "free," but the ROI makes it a very attractive option for many organizations. Yet, there are still many valuable and important benefits of traditional commercial software. Key areas for consideration include:

1. Acquisition cost – Traditional software companies typically employ a license plus maintenance scheme for software licensing. The license fee recovers the cost of developing the software and the annual maintenance allows the company

to provide customer support and ongoing enhancements and updates. With open source software, the "community" takes primary responsibility for the development and testing of the software. Consequently, that cost is much lower. The support and updates costs still apply, but any solution that lowers and/or eliminates that upfront development cost is compelling.

2. Security - Providing a secure environment where authentication and authorization are properly addressed is essential when embarking on a new IT initiative. However, most enterprise applications have their own repository for this information, so sharing credentials between applications is a challenge. There have been improvements in this area, with "security service" offerings and corporate databases (such as LDAP and Active Directory) to serve as a central repository for entitlements. Application vendors should ideally provide these capabilities directly in their products, rather than having their own security scheme. One benefit of open source is direct integration with an existing security infrastructure, since it can be done in the source code if absolutely necessary. It may not be ideal, but provides a powerful option!

3. Customer Support – Most customers want a "throat to choke" when making an enterprise software selection, although developers don't rank this as high a priority as business groups. Both open source and commercial vendors provide various levels of support. However, one main benefit of open source is the myriad support options that exist through the community. Even if the vendor itself doesn't have an answer, there are organized places to go to find additional help. Of course, there is no guarantee that you'll get any help at all, which is a drawback of the community.

4. Learning Curve / Education – Both open source and commercial vendors offer a plethora of options for education. Commercial offerings tend to be quite formal and open source options tend to be less structured, although some of the larger open source vendors do offer classroom training. There is much more of a "roll up the sleeves" approach to open source, and training is generally performed by outside consultants on an ad-hoc basis.

5. Integration – This is the most important consideration and unfortunately the most often overlooked. Here open source provides a distinct advantage to commercial technologies. Open source provides the same integration capabilities (APIs, Web Services, etc) in addition to source code access, which offers a new and powerful mechanism. This benefit cannot be overlooked when making a critical IT acquisition decision.

Case Study: How IEEE Leverages Both Commercial and Open Source Solutions

The IEEE (Institute of Electrical and Electronics Engineers) is the world's largest technical professional society. With 375,000 members in 160 countries, there is a massive and distributed group of people looking for relevant information from the 38 societies that make up the non-profit. In fact, www.ieee.org is one of the world's most heavily trafficked sites.

One of the larger eCommerce groups within the IEEE wanted to revamp their website and tie it more closely to their content. The current system required business users to create content and then send it to IT, which would "cook it" into the appropriate format in their database so it could be displayed on their website. The process was heavily manual and inefficient; for example, simple typos could take weeks to fix. IEEE was using a commercial portal product and an enterprise content management system from another vendor to store the content. Integration between the two vendors' products would not be trivial and required additional licenses to cover extra usage on the CMS.

IEEE started investigating open source CMS options to see if there was a quicker and more cost effective means to achieve their goals. They ran into two issues: first, they did not have the bandwidth to evaluate and support the CMS on their own, and many of the open source options did not have any pre-sales support to assist them. Second, the business had not decided yet if open source was a good option for the organization overall, and the legal team was deep in review / development of an enterprise-wide open source "strategy."

A few weeks into their evaluation, they were introduced to Bluenog ICE – a commercial product that is built on open source projects. The Bluenog team was able to assist IEEE in an initial evaluation and proof of concept of the technology, showing them quickly how the integration would work. (Bluenog had already built integration with the portal technology IEEE was using, so the effort was seamless.) In addition, the licensing for ICE was similar to that of a commercial software product, with the exception that Bluenog provided the ICE source code as well as pointers to the underlying projects. This provided access to the open source community and additional support.

Bluenog was also able to provide onsite training, to quickly bring the IEEE team up to speed. Finally, the cost to acquire the software was significantly less than acquiring additional licenses of the existing CMS; the integration costs were also low.

This "blended" model addressed all of IEEE's needs in finding the right partner for a new initiative. As a result, the process was quick - from product evaluation to legal / finance review and purchasing.

Conclusion

The IT industry moves quickly, but in an evolutionary rather than revolutionary way. The latest evolution is to take the best of what commercial software and open source models offer and combine them to deliver business and technical value. Integration has become the top priority for IT and the business, whether they recognize it as such, so keeping these costs down and flexibility high are paramount to any project's success.

When making critical IT decisions, one must consider important infrastructure issues such as integration and security, and weigh them highly alongside feature / functionality and support. Leverage open source software for its openness, flexibility and adaptability – and its ability to integrate not only with other open source products, but with commercial products as well. This technology flexibility enables better and quicker business decisions, providing the value to stay ahead of competition.

About Bluenog

Bluenog is an enterprise software and solutions company. Our flagship product, Bluenog ICE, is an Integrated Collaborative Environment of content management, portal, and business intelligence software. It eliminates application silos, reduces total cost of ownership and accelerates application development. Leading organizations rely on Bluenog ICE, a commercial solution built on open source CMS, open source portal and open source BI projects, to build and deploy Rich Internet Applications (RIA) and manage dynamic website content at a fraction of the cost of traditional alternatives. Bluenog Solutions Group meets our customers' unique challenges by combining commercial and open source software into pragmatic solutions. Headquartered in Piscataway, N.J., Bluenog is also a Red Hat, Oracle and Actuate partner. For more information, visit www.bluenog.com.