COMPUTERWORLD

🖨 **Print Article**   ⊠ **Close Window**

4 reasons companies say yes to open source

Open source isn't just about saving money -- enterprises are adopting it to develop applications faster, with higher quality components.

Howard Baldwin

January 6, 2014 (Computerworld)

When individual developers think of open source, they think "free." And with good cause: Who in their right mind wouldn't be interested in technology that they can get at no cost and use with few licensing restrictions?

When companies think of open source, these days they think "business agility," a quality they increasingly value above all others in the fast-changing marketplace.

The ability to create new applications quickly, reliably and economically is drawing businesses big and small to open source and emboldening them to use it for ever-larger projects, IT practitioners say.

Which is likely why open source's popularity is booming (with a few holdouts). According to the Forrester Research report "Development Landscape: 2013," 76% of developers have used open-source technology "at some level," says Jeffrey Hammond, a Forrester analyst specializing in application development and delivery.

Here are four key reasons why organizations of all sizes are taking open source seriously.

Open source keeps costs down

Cost savings may be only part of open source's allure, but it's still a big part, no matter what size the organization. "How can Netflix charge as little as $8 per month for its service?" Hammond asks. "Because everything is built on open-source software. They focused on content, not building an operating system or a testing framework."

"It's like using Spring, JBoss or Drupal for content management," Hammond says. "Companies

get the 'Lego blocks' for free, so they can spend their time and resources building what they want in particular." Enterprises have always customized packaged software such as ERP applications, except now, with open source, that customization is less expensive.

Indeed, in some cases, open source is helping to bring back custom development of applications, an option that has decreased in popularity in the past 10 years or so as the use of commercial applications and software-as-a-service offerings gained ground.

Taking on some custom development work in order to save money appealed to Carestream Health. A $2.5 billion provider of dental and medical imaging systems with 8,000 employees, Rochester, N.Y.-based Carestream wanted to consolidate the data from its worldwide manufacturing facilities into a single product life-cycle management (PLM) application to reduce new product development and manufacturing time by routing information more efficiently.

Open source holdouts

Though many developers -- and an increasing number of enterprises -- are bullish on open source these days, not everyone is on board.

A Forrester survey from the fourth quarter of 2011 found that developers who declined to use open-source tools -- specifically, integration tools -- primarily shied away because they worried about support (a concern cited by 71% of the respondents) and the lack of technical skills to manage open-source efforts (an issue for 42% of the respondents). Respondents also mentioned concerns about security and licensing to a lesser extent.

"We wanted consistent management of product-related information across our global company footprint," says David G. Sherburne, director of global R&D effectiveness and engineering IT at Carestream. "With a modern platform in place that could be built upon into the future, we were expecting a 5% productivity gain through the integration of existing point solutions and the elimination of manual process steps."

Carestream chose Aras, an Andover, Mass.-based PLM vendor that uses an open-source model to encourage its customers to develop and share new components with one another. Aras had "the best functionality for a reasonable total cost," says Sherburne. "It didn't have some of the functionality we needed, so we knew we'd have to do some extra development, but when we completed that, we knew we could deploy it globally from a fixed-cost perspective."

There were no upfront capital licenses costs, which allowed Carestream to move forward without having to purchase and inventory licenses. "The subscription model allowed us to enter into the

PLM project and focus on proper implementation," says Sherburne. "It provided a fixed-cost platform that can be enhanced over time and scaled to allow more collaborative access without continued cost outlays."

As projected, Carestream came out ahead: Its ongoing costs for approximately 1,500 users (1,000 internal, 500 suppliers) when the software is fully deployed are at "the low end of six figures," says Sherburne, as opposed to "millions of dollars upfront" for a packaged application, not including ongoing maintenance, he says.

Big businesses aren't the only organizations that benefit from open source's cost structure. The economics mean that smaller entities with niche software requirements can get what they need in a cost-effective package.

Teri Wiss, owner of Development Is Child's Play, a Cupertino, Calif.-based children's occupational therapy practice, had been looking for several years for an application that would handle scheduling and billing for her staff of 16 full- and part-time employees.

Over the course of several years, Wiss evaluated a variety of healthcare-oriented software packages, but none offered the specific functionality she was after. Few SaaS applications met her needs because of the uniqueness of her specialty, and those that might have were too expensive, she says.

Wiss finally decided to grow her own, turning to an open-source developer whose one-time fee was about the same as the cost of one year of access to some of the SaaS offerings she'd looked at. "I was concerned because I didn't speak 'computer' well enough to tell someone what I wanted. But [the consultant] said to forget what he did, and just tell him the way I work," Wiss relates. (See "Open Source Bails Out Small Business" for details.)

Open source improves quality

Open source fans have long contended that the methodology produces better software. Their reasoning: If code is flawed, the developer community can identify and address the problem quickly, where a single coder might plod on unawares, at least for a while.

That quality appeals to Bank of America. "We have a broader range of choice when it comes to high-quality software," says Peter Richards, the bank's managing director of global banking in New York. "There is a consequential

> **There is a consequential benefit [to open source] from both a reliability and a financial perspective.**
>
> Peter Richards, Managing Director Of Global Banking, Bank Of America

benefit from both a reliability and a financial perspective."

The bank integrates open-source components into custom-developed applications on a regular basis, Richards says -- but only after they're certified. "We go through a process of ensuring that they're appropriate for use within the bank's development environment," he says.

Asked if it's surprising for such a large company to use open source, Richards cites Linux's path to widespread acceptance in commercial organizations. In the beginning, he explains, enterprises worried that Linux was a hobbyist's operating system, not one that a big corporation could depend on. But over the years, "the number of people who support Linux through peer review have made it into one of the better operating systems for corporations," Richards says.

"The quality of open-source code for development comes because of the number of people who are able to contribute, review and test it," he asserts. "That means it's a solid piece of code." That development structure also ties back into cost: "If you had to pay for that yourself, you'd end up with enormous costs because you'd have to do testing and code review yourself," Richards adds. "That's one of [open source's] big advantages: quality at a reasonable cost."

Open source delivers business agility

Not to be confused with agile development, business agility is the ability to react to marketplace demands quickly. Open source provides this to developers and businesses alike by speeding up the pace of software development.

Ron Pitt, the developer who worked with Development Is Child's Play's Wiss, is a partner with software consultancy LevelHead Solutions in Poway, Calif. If he needs new code for a project, he downloads it in minutes rather than developing it himself. "Sure, some of it's buggy, but I'd rather spend 15 minutes debugging it than writing it from scratch in 15 hours," Pitt says.

Businesses likewise benefit from open source's ability to let them react quickly. For one thing, companies that use open software code aren't tied to vendors' timelines for commercial application upgrades. "If you have to wait for vendors to make the changes you want, it affects the pace at which your company can innovate," says Mike Milinkovich, executive director of Ottawa-based Eclipse, an open-source community for individuals and organizations focused on tools originally launched by IBM for Java.

Madhu Nutakki, vice president of digital presence at Oakland, Calif.-based healthcare provider Kaiser Permanente, concurs that open source brings value in the form of flexibility.

Kaiser Permanente has been using the

[GitHub](#) source code control system since 2011. "It was built by developers for releasing code in an expedited way. It gives us more flexibility when we release updates more frequently," says Nutakki. (Note that while GitHub also works with proprietary development tools, Kaiser uses it primarily for open source deployment.)

> **[Open source] gives us more flexibility when we release updates more frequently.**
>
> Madhu Nutakki, VP, Kaiser Permanente

"We started using GitHub because our paradigm changed to a faster release model," Nutakki explains. The healthcare provider's increasing push into mobile means that it's now serving customers who have higher expectations for frequent updates. "We used to build large applications with a release cycle of every six months. Over the last two years, we do releases more quickly -- monthly, quarterly and even faster," he says. "With other products we were using, it took much longer to do a build. With GitHub, it takes an hour."

Forrester analyst Hammond confirms that open source's speed advantage is making it more popular in enterprise IT development. "If you ask a developer how they're going to handle a specific project, they can respond that they don't have to buy specialized hardware, because they can run it on Linux. They can use an open-source development framework, and they can develop what someone needs specifically."

Open source also brings a lot of "elasticity" to the process of spinning up new resources, Hammond says. "You don't have to ask 'Do I have a license?' or 'Do I have to buy more software?'" he says. That's why there's a high correlation between [cloud](#)-based and open-source software, he points out -- both provide a scalability and flexibility that companies haven't had in the past.

Open source mitigates business risk

Another, perhaps unsung, benefit to using open-source tools, and thereby reducing dependence on a single or multiple vendors, is that the open-source option may reduce business risk. Milinkovich notes that Eclipse came into being when the company that made [TOPCASED](#), a development tool for embedded systems, was acquired. "The developer was acquired and stopped working on it," he says, so the companies that used it and loved it, notably Airbus, banded together to create Eclipse to continue supporting it.

Vendors come and go, and commercial priorities change, whereas a community's focus is more constant. "The openness and transparency of open source mitigates a lot of risk," says Milinkovich. "Whether a company is big or small, it'll stop developing code if it's no longer

commercially viable, and you no longer have access to the source code and repositories. If you can actually get a vibrant community built up around your code, it's much more resilient than a strictly commercial enterprise."

Gerald Pfeiffer, director of product management for Nuremberg-based SUSE, which offers enterprise Linux, believes that open source is thriving for all these reasons.

"People are reaping cost benefits by using open source, but that's not the No. 1 priority. It's also the avoidance of lock-in, the ability to customize, the ability to have a better feel of what you're paying for. It's the combination of all that," Pfeiffer says. "You're sharing development costs with other people, so you get more diversity and more independence than from a single vendor."

Open source bails out small business

At Development Is Child's Play, a Cupertino, Calif.-based children's occupational therapy practice, owner Teri Wiss had been looking for several years for an application that would handle scheduling and billing for her business.

She used Google Calendar so that if one parent cancelled an appointment, other parents could quickly see newly available slots -- but she also had to synchronize that calendar with a paper-based calendar that the therapists used. For the sake of efficiency and accuracy, she needed an electronic application.

She investigated options that addressed billing but not scheduling, accommodated sole practitioners instead of multiple practitioners, or focused on tracking medical issues not germane to occupational therapy. Some software was customizable but not user-friendly. Wiss marveled that, even in the midst of Silicon Valley, "I couldn't find something I liked at a price I could afford."

Finally, Wiss was introduced to Ron Pitt, a Poway, Calif.-based consultant. He understood her frustration. "When you have a small business like hers, it's hard to commit to thousands of dollars upfront and then monthly when your income fluctuates," says Pitt. He agreed to custom-build an application for Wiss using Linux, Apache, MySQL, PHP, and the NetBeans IDE. The cost: $5,000 plus a few hundred dollars for hosting and backup each month, about the same as an annual fee for a SaaS application.

Pitt retains the rights to the code so he can create another application for another occupational therapist if he wants. He says he was able to charge just $5,000 because the code is "free, modular and the tools are robust. It's good, solid software engineering."

*Frequent contributor **Howard Baldwin** last wrote for* Computerworld *about [how to get a job in financial IT](#).*

This article, "[4 Reasons Companies Say Yes to Open Source](#)," was originally published on [Computerworld.com](#).