A GOVERNMENT-FRIENDLY FORM OF OPEN SOURCE

A new survey shows that enterprise open source software is firmly entrenched in commercial computing environments. The Red Hat-sponsored research found that nearly 70 percent of 950 global IT leaders surveyed view enterprise open source as very important or extremely important to their infrastructure software strategies. What's more, almost 60 percent of respondents said they expect to increase their use of enterprise open source over the next 12 months.

Adoption figures like these, along with the recent flurry of acquisitions and investments in the open source market, have the industry press declaring open source has gone mainstream. Maybe they're right: Fifteen years ago, who would have thought that Microsoft, whose former CEO famously described the open source Linux operating system as "a cancer," would one day pay $7.5 billion to acquire GitHub, the world's largest open source development community?

It seems clear that open source is on a hot streak in the commercial sector. But what about state and local government?

Public agencies may not be deploying open source as fast as private industry, says Phil Bertolini, co-director of e.Republic's Center for Digital Government (CDG). But the model makes sense for states and localities as they modernize — particularly enterprise open source, which wraps business-friendly services around open source software.

"If you think back to the start of open source, it was something you kind of took a flyer on. There was minimal government use because of the risk," says Bertolini, who was CIO and deputy county executive for Oakland County, Mich., before joining CDG in September. "But over time the landscape has changed where you can license it now and buy support for it."

As its name implies, enterprise open source includes features and services tailored to the needs of larger organizations, such as predictable upgrade cycles, software certification programs, vendor support, service level agreements and stronger security measures. Features like these make enterprise open source more attractive to state and local government CIOs who are making large IT investments, securing sprawling computing environments and supporting expansive user groups.

"Enterprise open source starts to work more like the software they're used to, but the cost model is very different," says Bertolini.

Safe for Government

As open source becomes safer and easier for agencies to adopt, its use in government is poised to grow, driven by the same forces pushing its popularity in the private sector.
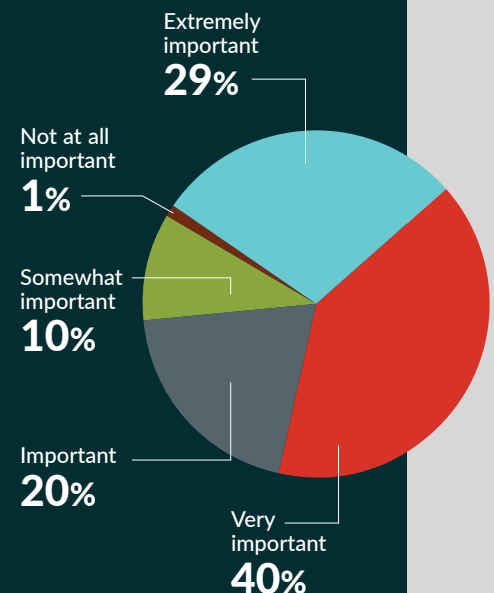
Open source is tied to hot technology trends like DevOps, hybrid cloud and multi-cloud. The flexibility and lightweight nature of open source software makes it a natural for DevOps, where development and IT operations teams work together to shorten application development life cycles and continuously improve features. And open source container technologies, which enable IT teams to move self-contained apps between clouds or from onsite data centers to the cloud, are becoming key building blocks for hybrid and multi-cloud strategies.

Although these trends are new to the government space, they won't be for long. CDG surveys of state and local IT leaders show growing interest in hybrid cloud, as well as DevOps and other agile software development techniques.
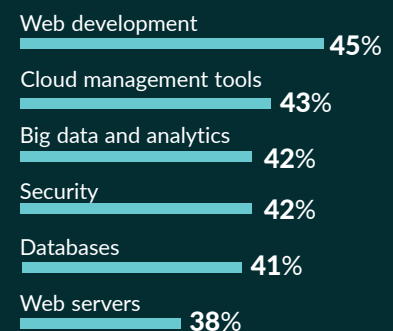
"Open source is part and parcel of what this new IT will look like over the

long term," says Bertolini. "It represents a shift in mindset, a shift in philosophy."

Affordability is another big driver for open source adoption — and it could be a crucial factor for state and local governments as they modernize. Enterprise open source isn't free, but it continues to have a cost advantage over traditional proprietary solutions, says Bertolini, making it an attractive option for budget-strapped agencies.

"When you get away from the big cities and counties and look at mid-size jurisdictions," he says, "they're going to have to look at open source to survive — just because of the cost difference."

Growing Activity

There have been several significant efforts to kickstart government adoption of open source over the past few years. The federal government unveiled an open source policy in 2016, along with a website — code.gov — to house sharable open source code developed by agencies. The state of California launched a similar effort last December, spearheaded by the state's Government Operations Agency. The initiative includes a Code California website to promote open source adoption. The site hosts statewide open source policies and is intended to become a repository for reusable code.

California officials say use of open source applications will improve security and interoperability of state systems, facilitate technology collaboration among state agencies and eliminate vendor lock-in.

In addition, attendees at a 2018 state-sponsored Code California forum were optimistic that growing open source adoption would improve relationships between agencies and software companies. Instead of paying for software, agencies will pay for support, leading to ongoing conversations between government customers and vendors, said Marc Jones, in-house counsel and compliance engineer at open source company CivicActions.

"It's not just sign the contract and see you next year," he said.[1]

Open source concepts already have reshaped the software industry in other ways, adds Bertolini, pointing to the rise of open platform software products. Open platforms aren't necessarily open source, but they incorporate some of its characteristics. For instance, they include published and fully documented external application programming interfaces (APIs) that let developers add new functionality and facilitate integration with third-party applications.

"This allows applications to be crowdsourced within these platforms," Bertolini says. "I think that's something we're going to see more of."

Open Source Options

Growing industry activity around enterprise open source means government agencies have more options than ever as they explore these solutions. Everything from web and application servers to content management systems and big data platforms can be acquired from enterprise open source providers.

As they move in this direction, governments will need to overcome hurdles associated with the adoption of any non-traditional solution model. Leadership must be sold on the approach; legal teams need to be satisfied on risk mitigation; and users must be coaxed through changes.

"It's similar to what we went though with cloud," Bertolini notes.

But enterprise open source makes the transition more attractive to public-sector IT leaders by reducing risk and uncertainty, while delivering lower costs and other open source benefits.

A 2019 REPORT SPONSORED BY RED HAT SHOWS GROWING ADOPTION OF OPEN SOURCE IN ENTERPRISES WORLDWIDE.

How important is open source to your enterprise infrastructure software strategy?

Extremely important
29%

Not at all important
1%

Somewhat important
10%

Important
20%

Very important
40%

How are you using open source?

Web development **45%**

Cloud management tools **43%**

Big data and analytics **42%**

Security **42%**

Databases **41%**

Web servers **38%**

Source: 2019 State of Enterprise Open Source report