

# Malcolm Jackson

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*By Michael J. Keegan*

## Leveraging Information Technology to Enhance Mission Effectiveness



The U.S. Environmental Protection Agency (EPA) relies on information and technology to carry out its mission—it depends on the availability of and access to timely and reliable information and on the technology that makes it all happen. Both are strategic assets to an agency that understands managing these resources efficiently and effectively is essential to its success. In fact, it was the 19th largest federal civilian agency in terms of IT spending in FY 2010, with a budget of \$466 million.

“EPA’s IT investments,” says Malcolm Jackson, assistant administrator, Office of Environmental Information, and EPA’s chief information officer, “are focused on supporting the agency’s mission to protect human health and to safeguard the natural environment—air, water, and land.” Jackson leads the office that has as its charge identifying and implementing innovative information technology and information management solutions that strengthen EPA’s ability to achieve its goals. It works to ensure the quality of EPA’s information and the efficiency and reliability of its technology, data collection, exchange efforts, and services while managing IT capital investments.

Jackson identifies a host of key priorities that frame his vision for EPA’s IT strategy. Coming from the private sector, Jackson wants to run IT like a business. “First, you have to understand the business process and what you’re trying to accomplish. You get that business process in place and you marry the technology to it,” declares Jackson. Along with this priority, he also emphasizes delivering high-quality services to his EPA colleagues, strengthening internal and external partnerships, finding the right talent, and most of all establishing a clear

strategic direction for IT across the agency. “IT strategy at a federal level is more challenging than in the private sector. The funding model in government makes it far more challenging, so I wanted to build a roadmap for the future that takes into account this funding model and aligns it with what we’re trying to accomplish as an agency,” says Jackson.

Making his vision a reality certainly presents challenges, but it also offers opportunities to transform how EPA uses IT. “We’re an enabler,” Jackson explains. “You can have leading technologies, but we don’t lead with technology in terms of solving problems.” This insight informs his leadership approach. “We’re moving away from where technology is today to where it’s going. We want to march toward that horizon now, so we’re making very strategic decisions that are pragmatic in nature and aligned with where we need to take the agency.” This involves maximizing IT investments, ensuring decisions are mission-focused and cost-justified. These investments can range from new citizen-facing services to systems that help government employees perform their jobs more effectively. “I want to make sure that the taxpayers know that we’re spending their money in the most appropriate manner,” explains Jackson. “We’ve instituted an IT governance model that ensures we’re investing monies in the most appropriate manner without duplication. This governance model spans across the entire agency; it enables us to have transparency, input, and collaboration around our investments.” For example, Jackson embraced the Office of Management and Budget’s TechStat process. He partnered with Barbara Bennett, EPA’s chief financial officer, to review all major IT investments. “We wanted to ask probing questions, be more collaborative, and challenge people to view things from a One-EPA or agency-wide perspective. I’m comfortable where we are, but there are opportunities to continue to do better and realize better outcomes.”



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The success of this One-EPA approach rests on collaboration across the enterprise. “We want to build things once and use [them] many times,” Jackson outlines, “we want to be able to share data, best practices, and collaborate across the agency in a way that will maximize our investments and provide better services and products.” For Jackson, doing this right also involves forging strong partnerships beyond the federal government. “Public-private partnerships,” acknowledges Jackson, “are critical to our success. Coming from the private sector, I know the benefits they bring.” These partnerships act as incubators for new ways IT can be done in the federal government, whether through data consolidation and virtualization, cloud computing, or combating ever-evolving cyber threats.

Jackson admits EPA doesn’t have the number of data centers that many other federal agencies have, so EPA sought to optimize the number of locations storing servers. “There were multiple server rooms on a particular campus,” explains Jackson. “We reduced those numbers. Think of it as moving servers to one physical location, then leveraging one set of resources to support that location.” He also details how EPA has 70% of its IT environment virtualized. “We have a goal to do even more in this area. It helps us with our green computing efforts by optimizing energy use. It also enables us to make that next step toward cloud services.” EPA has a private cloud, which according to Jackson, allows his agency to leverage common services across the enterprise such as configuration management, log management, and resource monitoring. “In fact, we’re moving our IT helpdesk to the cloud—one common helpdesk service will be offered across the entire agency from our private cloud.” Jackson admits the bigger question involves the concerns around use of a so-called public cloud. “There’s certain information we may not be comfortable putting on a public cloud at this point. This topic is going to evolve over time. Where we are today won’t be where we are two years from now. We’re taking a pragmatic approach to the cloud. We will provide guidance and direction to our EPA colleagues on what should go to the public cloud as well as continue to make advancements in this area.”

Jackson recognizes that no amount of innovation matters or makes a difference unless IT environment and critical infrastructure are protected and secured. “Everything else we do, we can see it and plan for it, but given the pace of technology, cyber threats bring uncertainty. I don’t know when it’s going to happen or how it’s going to happen, but I’ve got to be able to respond to it. We want to make sure that we provide protection and have a response model that supports what we’re trying to accomplish at EPA.” He emphasizes that cybersecurity is everyone’s responsibility. “We want to make sure that our employees are aware, educated, and able to assist us in protecting our assets” says Jackson.

The proliferation of mobile devices will only accelerate this new cyber reality. “We’re moving in the direction technology is going. We’re not going where technology happens to be today, because by the time you deploy it, it’s already old,” declares Jackson. To that end, he is pursuing a mobile-first policy, which means if EPA develops an application it will be designed as a web-enabled mobile application first. “Opportunities exist for us to do even better, learn more, receive feedback, and incorporate that feedback into the work we do to meet our agency’s mission.” ■

To learn more about EPA’s Office of Environmental Information, go to [www.epa.gov/aboutepa/oei.html](http://www.epa.gov/aboutepa/oei.html).



To hear *The Business of Government Hour’s* interview with Malcolm Jackson, go to the Center’s website at [www.businessofgovernment.org](http://www.businessofgovernment.org).



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