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Is Public Finance Ready to Rely on Blockchain Technology?

Governments often contend with many issues when attempting to link public dollars to real-world outcomes captured by data in disparate systems. EY claims its OpsChain Public Finance Manager will reduce those struggles.

The stewardship of public dollars is a challenge as old as government itself, but nascent technologies are coming into the space with the intention of streamlining it. Blockchain-enabled tools are one such example.

The OpsChain Public Finance Manager (PFM), a new blockchain-based tool from Ernst & Young, is designed to allow governments to "focus more directly on the things that matter," said Mark MacDonald, EY global public finance management leader.

The potential of this tool lies in helping governments track the "financial integrity of the way public money is spent" and the related outcomes that are achieved, MacDonald said. Essentially, the PFM promises to enhance the ability of governments to see how public dollars are connected to actual results, which should support further decision-making.

"In simple terms, it's the integration between a financial view and non-financial view that can really help public managers manage more effectively, public budgeters budget more effectively, and ultimately it's about trying to advance that cause of 'better finance, better government,'" MacDonald said.

The PFM is based on the EY Ops Chain, which is a blockchain platform that entered its second generation earlier this year. According to EY, this platform can "support up to 20 million transactions per day on private networks" and has reportedly led to efficiency gains of more than 90 percent in certain cases.

Most governments utilize an enterprise resource planning (ERP) system to keep up with public funds. MacDonald said those systems are generally well understood, but he suggested a critical piece of the organizational puzzle is missing when it comes to linking ERP data to outcome data in other systems.

"The question becomes when I have an opportunity to try and connect financial data and information to another system that perhaps has my non-financial information in it, how easily am I able to do that?" MacDonald said.

Mike Mucha, deputy executive director of the Government Finance Officers Association, said his organization helps governments prepare and procure ERP systems, so he understands the challenge that MacDonald refers to. Mucha cited an example involving a school district. A district will have its financial data in one system (ERP), but student performance data will be stored in a student information system (SIS).

"If you're trying to calculate like an academic ROI … you need to basically, through some sort of

third-party tool or some sort of third tool, correlate your spending on various programs with the academic return that you're getting out of your student data system," Mucha said.

Additionally, MacDonald said governments often deal with a "complicated array" of contractors, partners and not-for-profits in delivering public services. The chances of these external agents being on the government's ERP system are essentially zero, which creates a "hard organizational interface to try to overcome." The blockchain component can help manage this kind of chaos, almost acting as an "ERP across ERPs."

Another challenge is simply the idea of the government running multiple systems itself. Almost no organization runs just one ERP system, Mucha said. Then there's the fact that public entities frequently house their own information even though those entities might need to work together for the common good. Although Mucha admits that he doesn't know anything about the EY tool, he can imagine great potential for public entities wishing to work together.

"From a business intelligence perspective, you might want to pool that information together … so if you had an ERP across ERPs, then you could conceivably use data from each one of those individual entity's ERP system in sort of a shared resource," Mucha said.

MacDonald stressed that the blockchain aspect of the PFM is not "technology for technology's sake." Rather, the blockchain platform presents a logical opportunity for technology to address long-standing business challenges within the complexity of a government system.

"It [blockchain] has the ability to work at that network level across organizational boundaries, across different authorities, and so forth," MacDonald said.

According to EY, the PFM has been tested by multiple governments around the world. MacDonald would not reveal all of those governments due to concerns related to privacy and confidentiality. It is public knowledge, however, that Toronto has tested the tool, but Toronto's chief financial officer Heather Taylor could not be reached for further comment.

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