

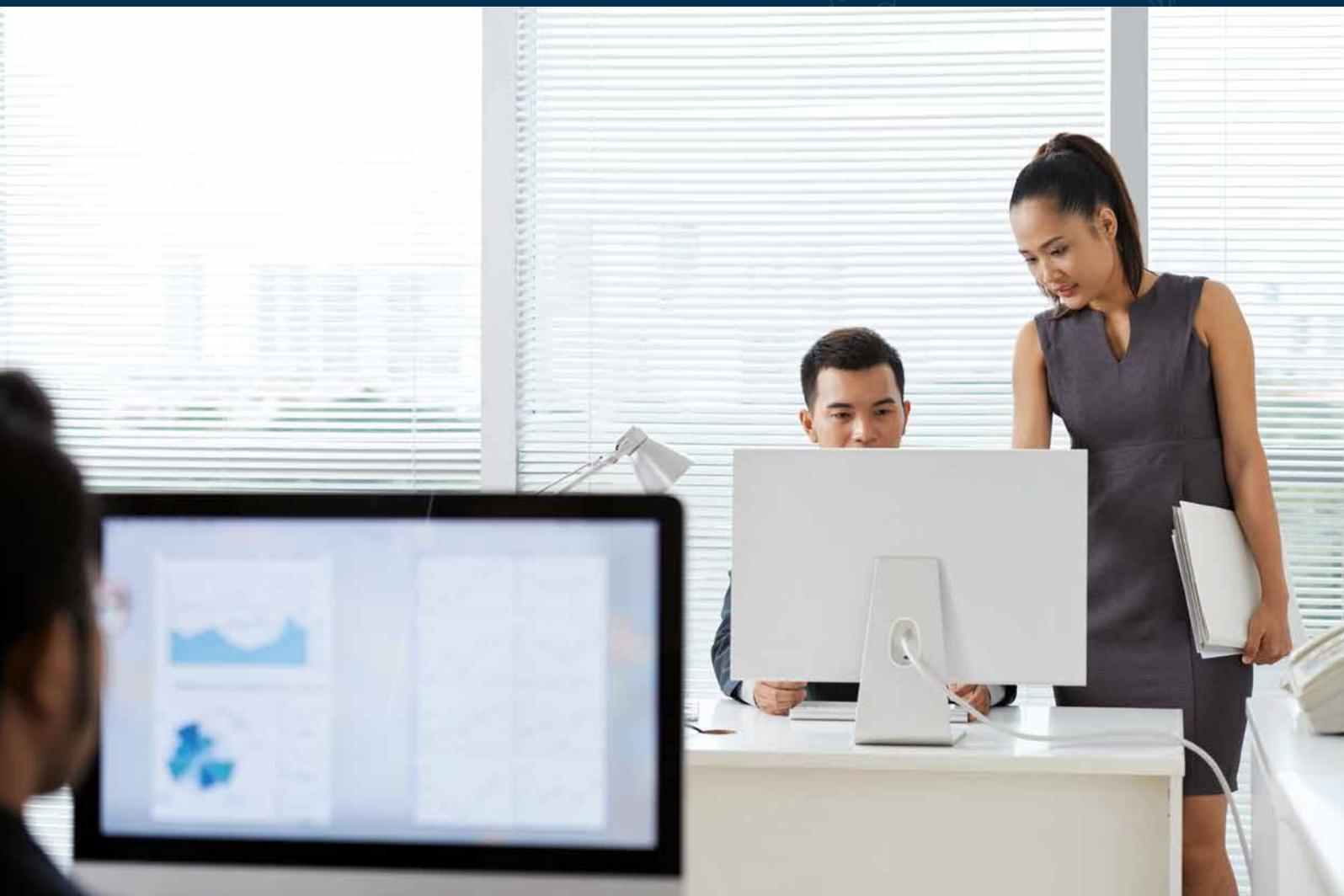
# IMPROVING PUBLIC SECTOR PERFORMANCE

THROUGH INNOVATION AND  
INTER-AGENCY COORDINATION



## CASE STUDY FROM THE GLOBAL REPORT

# Giving Government Units Access to Financial Data in a Cost-Efficient Way: Indonesia's Online Monitoring Financial Management Information System



## CASE STUDY 8

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### Overview

When Indonesia upgraded its financial management information system (FMIS), the Ministry of Finance (MOF) was set to drastically improve the efficiency, transparency, and accountability of its public financial management. However, the new system was not going to provide immediate benefits to line ministries and agencies, which relied on data from stand-alone systems to make their own reports. To address the problem, the MOF developed an online monitoring system, which extracts data from the FMIS and transforms it into various data sets and reports. Those data sets and reports are then uploaded to a web-based platform, allowing ministries, agencies, and other stakeholders to monitor the budget implementation process and produce their own reports as needed. The online monitoring system has given more than 100,000 government officials access to relevant data, and has the potential to reduce the time spent reconciling transactions and generating reports.

### Introduction

In 2014, when Indonesia began piloting its new FMIS (called *Sistem Perbendaharaan dan Anggaran Negara*, or SPAN), officials foresaw a major impending challenge. SPAN, which was set to streamline the country's financial management systems, was only going to be accessible to around 4,000 staff at the MOF and its more than 200 treasury offices around the country. Spending units of line ministries, which relied on financial data from treasury offices, were not going to get access to the new system. "At the time, it was very difficult for spending units or ministries to get the data and information they needed," said Sudarto, the Director for Treasury Technology and Information Systems, who was the project director for SPAN. For example, to get information on the process of budget disbursements, officials from spending units of line ministries "had to physically come to treasury offices to ask about the status of a payment or to find out other information," Sudarto said.



#### INDONESIA

POPULATION (July 2017 est.)<sup>1</sup>  
**260.581 million**

GDP PER CAPITA (current US\$)<sup>2</sup>  
**3,570.30**

INCOME GROUP<sup>3</sup>  
**Lower middle income**

GOVERNMENT EFFECTIVENESS<sup>4</sup>  
**53.4%**

<sup>1</sup>CIA World Factbook, <sup>2</sup>World Bank (2016),  
<sup>3</sup>World Bank (2016), <sup>4</sup>World Bank (2016)

The SPAN system promised to radically improve the efficiency of the government’s financial transactions by creating one central financial management database to replace the myriad of different systems the government used at the time. The government had been working on procuring and developing SPAN, with support from the World Bank, since 2004. LG CNS Co., Ltd, a multinational information technology subsidiary of South Korea-based LG Corporation, won the contract to develop and implement SPAN using Oracle E-Business Suite, a “Commercial Off-the-Shelf” system that would allow the government to report and track its budget realization in real time.

Access to SPAN was to be limited to around 4,000 employees of the MOF and its treasury offices, as granting all spending units access to the system was prohibitively expensive. “We have more than 24,000 spending units across Indonesia and each [Oracle] license could cost around US\$1,500 per user,” Sudarto said. “It was too expensive for us.” Instead, those spending units would use stand-alone in-house applications developed by the MOF to upload their financial transactions.

To monitor the budget implementation process, or to develop financial reports for line ministries and the central government, the MOF had to reconcile data and investigate information discrepancies between the stand-alone applications and the MOF’s own systems. Ideally, spending units around the country would be able to access the data from the SPAN system relevant to them, reducing the need for data reconciliation and avoiding the risk of information discrepancies between SPAN and the stand-alone applications. While the SPAN system was still being developed, the MOF got to work to find a cost-efficient solution.

## Response

The government had procured new servers to cope with the new Oracle-designed system, leaving it with several high-capacity servers from its old system that could be used for other purposes after the SPAN system went live. The MOF decided to use the old servers to manage data extracted from SPAN. That way, spending units could get access to SPAN data quickly and easily without disrupting the operation of the SPAN system itself.

To avoid putting too much stress on the SPAN system, the MOF decided to extract only essential data in real time, and extract other data during hours when fewer people were using SPAN. “If we extracted data all the time, it would affect the performance of SPAN,” said Sudarto. “So we extract data based on the users’ needs. For example, spending units don’t need financial reports in real time; it is no problem for them to receive them the next day. So we extract that data at midnight when the load of the system is very low.”

While SPAN was in its development, testing, and pilot preparation phases, the MOF developed an open-source, web-based application platform to monitor transactions and other information processed by SPAN and store the extracted data. The government called the new system “Online-Monitoring SPAN” or OM-SPAN. OM-SPAN could be accessed by line ministries, spending units, and other authorized users anytime, anywhere, using any electronic device capable of accessing the internet. As well as a website, the MOF developed an OM-SPAN mobile application using open source software.

SPAN was officially launched by President Joko Widodo in April 2015. OM-SPAN was launched simultaneously. Users of the new OM-SPAN system included the President’s Office, the MOF, line ministries and agencies, sub-national governments, the central bank, and commercial banks. Each user was granted a different level of access to the system based on the information relevant to their work.

The enhanced accessibility addressed the following requirements of the line ministries and agencies: transaction monitoring and analysis, more detailed and accurate state budget financial information, transaction audits, and managerial reports.

### Examples of OM-SPAN functions include:

- Budget execution/realization transactions
- Contract and supplier registration transactions
- Invoice payment transactions
- State revenue transactions
- Cash management

Officials of line ministries and agencies could log in and quickly retrieve data from the OM-SPAN system, significantly reducing the time it took them to access

information. For example, officials could check online to see if payments were approved and received by the beneficiaries. “Previously, there was a lot of waiting around,” said Sudarto. “Now, there is no need to wait. Spending units can submit requests and then go back to their offices and get all the information they need through OM-SPAN.”

The OM-SPAN system was designed to be intuitive, and most line ministry officials required little training to use the system. “People learned very quickly how to use OM-SPAN,” said Sudarto. “We had small trainings at local treasury offices for spending units, and also invited line ministry staff for trainings to learn about the information they could get from OM-SPAN.” The MOF also created videos explaining how to use the OM-SPAN website and mobile application, and uploaded them to Youtube. If an official had difficulty accessing information, he or she could use a chat function within the mobile application to get live support from a treasury official.

Some government officials, however, preferred to stick to the old system of visiting treasury offices rather than using OM-SPAN. “Our offices are mostly in cities, and there are many spending units in rural areas,” said Sudarto. “Some people from those offices like to make visits to the city. We explain to them that they could use OM-SPAN instead, but they still like to come. It is something we can’t avoid at the moment... But I believe that culture will change over time. In fact, we are already noticing that treasury offices are becoming quieter.”

In April 2017, the functionality of OM-SPAN was extended to also capture spending data of some transfer funds at the sub-national level. The new function was in addition to its main purpose of extracting and transforming data from the SPAN system. Every year, the Indonesian government made unconditional transfers to sub-national governments through its “General Allocation Fund” as well as transfers for specific purposes through its “Special Allocation Fund (Dana Alokasi Khusus, or DAK)” and other types of funds, including its “Village Fund.” The DAK and village fund resources were distributed to more than 500 district governments, which in turn distributed funds to local government spending units (in the case of the DAK), and over 74,000 villages (in the case of the village fund). Previously, the reports on the DAK and village fund utilization were made

through the regular reporting mechanism of the district government. However, it was difficult and costly to collect the reports since many districts did not submit the reports on a timely basis. Beginning in June 2017, the central government required district governments to report on what local governments spent on the DAK and village funds through the OM-SPAN system and linked the system with the fund withdrawal process. The MOF would not release funds without a report being submitted.

Utilization of DAK and village funds was not reported transaction by transaction, but rather by output. For example, if a village was given funds to build a road, they would report where and how long the road is, but would not report the inputs, such as how much they paid to the workers or suppliers. The new data collection function of OM-SPAN created a link between sub-national governments’ spending and central government spending, and allowed the central government a broader snapshot of how DAK and village funds were being spent. “The central government needs to know the output of the village fund,” said Sudarto. “We have 74,000 villages, and the village fund is very large. Now, we can see all that information through OM-SPAN.”

## Reflections

The introduction of OM-SPAN widened the benefits of Indonesia’s new financial management information system and reduced the need for constant phone calls, fax messages, and in-person visits to track financial transactions. The OM-SPAN system provided line ministries and other authorized users with real-time information on transaction data through an easy-to-use platform. “Now, you can access OM-SPAN from our mobile app, as long as you have an internet connection, and a username and password,” said Sudarto. “It is very simple and easy to use.”

The new system was particularly helpful for line ministries and agencies, which previously had difficulties getting timely and accurate financial information from their spending units. “OM-SPAN had a big impact on the ministries,” said Rinaldi, the project manager for OM-SPAN. “Before, ministers had to wait for the spending units to submit reports. Now ministers can directly check the performance

of their spending units, resulting in better policy decisions.”

The President’s Office used the OM-SPAN system to track the budget implementation of the entire government using a dashboard interface. Such monitoring from the top could potentially help the government to better manage the budget. For example, the Indonesian government previously had been slow to disburse funds, concentrating spending at the end of the fiscal year. With increased monitoring in real time, the President’s Office could potentially identify any lagging areas early, and push ministers to accelerate the budget execution.

While the procurement, development, and implementation of the SPAN system cost a total of US\$57 million (US\$42 million funded by a World Bank loan and US\$15 million from the Indonesian government), the OM-SPAN system cost less than US\$1 million for in-house development and some additional Oracle database licenses, according to Sudarto. “OM-SPAN now has more than 100,000 users, so it was very cost effective,” he said.

The system has the potential to create large cost

savings for the Indonesian government, though as of 2018 the actual amount of savings has not been measured. If all government units used the OM-SPAN data, the government could save tens of millions of dollars per year in internal communication, printing, and transportation costs (from reduced visits to MOF offices). “Previously, spending units had to make so many reports, but now, headquarters can get that information directly from OM-SPAN,” said Sudarto. “Sometimes spending units had to visit Jakarta [Indonesia’s capital] to submit those reports, but not anymore... We can save a lot of time and money from OM-SPAN, in terms of time saved from making reports, and transportation costs.” The government could also potentially optimize human resources by shifting existing staff from clerical into analytical roles.

OM-SPAN is just one of a series of public financial management reforms in Indonesia. As of 2018, the government is in the process of introducing several new reforms, including an in-house developed cloud-based financial information system for users of all line ministries and spending units that will be interfaced to SPAN.

## Success Drivers

**Indonesia’s** OM-SPAN reform to improve accessibility of budget execution data reflects **three** of the five key dimensions for successful public sector innovation.

The OM-SPAN system strengthened **institutional capacity** within MOF and across the government. Instead of spending hours reconciling information and compiling reports, government officials could access much of the data they needed directly from the OM-SPAN website or the mobile application. By reducing the time cost to access core financial data and create reports, the OM-SPAN system meant line ministries and other government organizations had more time to focus on their primary functions. The President’s Office gained improved capacity to track budget implementation and more detailed information on how specific grants allocated to local governments were being spent.

Increased **transparency** of data via the OM-SPAN system increased the accountability of spending units for how they use their budget. Officials could easily look up spending or transaction data they were authorized to access in almost real time. Local government spending also became more transparent, as district governments had to report the outputs of the Special Allocation Fund (DAK) and village funds through the OM-SPAN system.

**Technology** initiatives were the building blocks for creating OM-SPAN. First, the introduction of SPAN, Indonesia’s new Oracle-based FMIS system, brought a modernized technology platform to the country’s finance ministry. Using existing servers to extract and transform data from SPAN to create OM-SPAN was another adaptive innovation. Finally, developing a new website and mobile application using open source software was a low-cost way to create an easy-to-use system for government officials to access the data and reports they needed.