



DIGITAL TRANSFORMATION BOOSTS POLICE FORCE'S EFFICIENCY AND TRANSPARENCY

An innovative cloud solution gives the São Paulo Military Police a modern system built for future growth

The Military Police of the State of São Paulo (PMESP) faced an important mission: to improve the financial management of this century-old organization. The large police force provides services to the population and is accountable to them. The focus of this transformation was technology and innovation.

Intensifying the use of technology is a constant at PMESP, an institution created in 1831 and currently the largest security force in Brazil and the third largest in Latin America, with more than 80,000 police officers.

In 2020, for example, it pioneered the installation of body cameras on the uniforms of its officers.



Technology is a vector for evolving public security, whether in the direct fight against crime or in supporting the administrative part with better use of resources."

Major Fabiano de Souza Pereira

Major Fabiano de Souza Pereira, from the Systems Development Division of the Technology Board at PMESP, clarifies the scope of the corporation's challenge: "For most companies, it's simple to locate an invoice when it's time to manage accounts, but for us it was extremely challenging. Capgemini has helped us automate the process, making it much more accurate."

The corporation worked first on its financial management tool, COFIN (Budget and Financial Control), to solve two critical problems.

First, travel expense reports were filled out on paper by police officers and then entered into the system, and these then flowed through a lengthy approvals process with the commanders.

A second bottleneck was tracking and accounting for the movement of assets, such as vehicles, ammunition, weapons, vests, computers, furniture, and others. These records had been entered one-by-one into the system.

This meant that when a vehicle was moved to another city, for example, it took about 30 days for the accounting process to update the record in COFIN.

This legacy system tracked goods worth more than one billion Brazilian Reals, and the manual processes were subject to typing errors, information mismatch, and lack of traceability and data integration.

It was a challenge to do book closing and annual inventory accurately. Asset management also became complex since, without accurate data, it was more difficult to map the assets and plan purchases for each battalion.

As a result, the police ended up wasting time and energy on these bureaucratic activities.

Testing the feasibility

Guided by an innovation mindset, PMESP launched a Proof of Concept project to verify the feasibility of technological improvement of COFIN, working with Capgemini, a technology partner since 2011.

Together with AWS, Capgemini participated in the PoC, developing an app for police officers to fill out their travel expense reports via their cell phone, directly in the cloud.

With the app, officers can access requests, follow-ups, and approvals from any location.

This automation eliminated several steps and optimized the process as a whole. The project was well received and encouraged the PMESP to explore additional cloud implementations.



The cloud-based solution, developed by Capgemini and AWS, reduces the repetitive manual work of paper-based expense reports and multiplies the traceability of assets in real time, minimizing errors and delays.

In addition, the management of public resources becomes more effective and transparent with better budget forecasting, which avoids unnecessary purchases and frequent budget reviews.

An important factor was the integration of the new cloud solution with the Secretariat of Finance's system. Also, cybersecurity concerns, including improper access, data leakage and other threats, were addressed, according to Lieutenant Colonel Menezes.

"The cloud provides great security for developing a government solution. We haven't had any incidents that could threaten data security."

**Lieutenant Colonel
Menezes**



Cloud migration

Based on those results, PMESP decided to migrate its legacy, on-premises system to a current and robust technology – the cloud.

The differences between these two models are striking. The on-premises system used local servers for data processing, and had limited storage capacity and restricted access, increasing costs.

The cloud environment, on the other hand, offers flexibility in several aspects: it does not require physical space, information can be accessed from anywhere. The cloud solution was also relatively inexpensive to implement and maintenance costs have been reasonable.

At PMESP, cloud technology enabled the creation of new tools and features in COFIN, ensuring scalability and high performance. “We are in a new era, which demands new ways of working. Cloud technology is simply the path forward,” Menezes concludes.



Really knowing the needs of PMESP was decisive in ...the finance area, so that we could form the teams properly and allocate efforts to achieve results that would meet or exceed the terms and expected quality levels.”

Jean Lau,
Capgemini Sales Executive



The AWS cloud brings the right elasticity to the varied demands of PMESP usage, as well as ensuring the resilience and security necessary for the performance of the COFIN system. Through this, PMESP gains automation and cyber protection, as well as resilience in its operation.”

Paulo Cunha,
Head of Public Sector of AWS

Expectations

Efficiency and expenditure results are still coming in, but the expectation is that processes will become simpler and more agile, and will be completed with fewer errors. The improvements should also be reflected in the user experience of the system, according to Major Pereira: "This project in the area of finance directly impacts hundreds of police officers in charge of financial or logistical actions, and, indirectly, impacts the entire police force." Another expectation is that the solution will help standardize internal processes and good practices in the 200 battalions distributed throughout the State of São Paulo.

From there, it will be possible to have performance indicators that allow for anticipating the resolution of problems, improving the quality of services provided to the population.

With greater automation and the use of qualified data in the financial area, there will also be gains in terms of transparency, a fundamental aspect in a public institution.

The COFIN improvement project highlights the corporation's growing need and interest in using technology in search of operational efficiency, with greater fluidity and agility in administrative processes.

These are the biggest gains of the project, because they allow the police force to spend less time with bureaucratic activities and channel efforts towards citizen safety.

Challenge in the pandemic

The development of the COFIN improvement project began in 2020, at the most critical moment of the COVID-19 pandemic in Brazil, with the Capgemini team working from home.

Despite the challenges of remote work, completely new for PMESP, the project continued with productivity and delivery above expectations.

Major Pereira highlights another important point in this regard: "To develop software nowadays, people are in and out of companies all the time. Therefore, Capgemini's ability to retain talent on the project ensured high productivity from start to finish. This is the result of a lot of engagement and maturity on the part of the Capgemini team."



The partnership in digital transformation with this project for the Military Police of São Paulo not only directly impacts the corporation's goals, but also all of us as citizens of the state."

Maurício Matias,
Public Sector Leader at Capgemini.





Cultural change

Digital transformation isn't just about technology, it's about people. Therefore, culture is an important pillar of this type of change.

Teams need new knowledge and leadership support, as the arrival of a new project often generates fears and myths, especially that of being "replaced by a machine."

The PMESP technology group works to make the team aware that cloud technology will not eliminate jobs, but will allow tasks to be carried out more efficiently.

Future vision

The cloud system is already assisting the corporate finance department's budgeting and forecasting, and it was designed with support for cutting-edge innovations. For example, PMESP and Capgemini tested a virtual personal assistant which employs AI, taking advantage of Amazon Alexa's voice technology, to deliver analyses and projections of financial data.

"It was the first AI experiment by PMESP," says Lieutenant Colonel Menezes, who has also studied using it in the COFIN system of the São Paulo police.

"In addition to involving the concept of AI in financial forecasts and material consumption, with the voice interface, this solution can be used on the front line, as the police officer can ask the assistant to locate the license plate of a suspicious car while the officer is in the street, for example.

Partnering with AWS

The development of the software with cloud infrastructure for COFIN was done by the Capgemini team together with AWS, using agile methods and with continuous deliveries.



With this solution, the virtual assistant is able to report on material consumption over the last month or year, for example. Furthermore, with the execution of demand forecasting algorithms, you can define a consumption expectation for a period of five years."

Jean Lau, Capgemini

GOALS:

- Financial control of travel expenses
- Accounting control of assets (vehicles, weapons, furniture, etc.)

SOLUTION ADOPTED:

- Migration from legacy on-premises system to cloud solution
- Modernization of functions

DEVELOPMENT PARTNER:

AWS

BENEFITS:

- Process automation, accounting registration, and asset traceability in real time
- Error reduction
- Optimization of back-office processes

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