

Removing capital constraints from

government IT modernization



A federal law enforcement agency was in a precarious position of not being able to meet the agency's mission due to a number of system outages. They were looking to modernize, because they were not able to retain resources with skills to manage the aging equipment and they did not have enough money in their budget to cover the costs of upgrading all the hardware.

Industry

- Federal government

Challenge

- Complete revamp of network and voice infrastructure and replace EOL equipment

Solution

- GOCO to COCO model shift, saving government \$30 million in up-front costs to refresh hardware

Overview

Federal law enforcement agencies play a vital role in securing the homeland and protecting its citizens. When antiquated technologies and infrastructure impede those missions and put citizens at risk, the private sector offers creative solutions to difficult problems.

For one such agency, revamping its infrastructure would require a \$30 million capital investment. That prospect was daunting as it is difficult to fit such needs into the federal budget cycle.

They needed a domestic partner with investment capital, tremendous network technology and program management expertise. That partner needed to keep the legacy systems running while at the same time building a new infrastructure. The agency needed a provider as committed to the mission as they were because flexibility would be needed at every step of the process. Lumen helped this law enforcement agency move from a Government Owned, Contractor Operated (GOCO) model to a Contractor Owned, Contractor Operated (COCO) model for its networking infrastructure needs.

Challenge: Completely revamp the network with no government capital outlay

The capital investment by a contractor was an absolute necessity because the infrastructure was not upgradeable in place. With workforce turnover, the agency had only two engineers to manage the system for a 15,000-person workforce. Outages occurred regularly and the phone system could not implement up-to-date cybersecurity measures because of the mismatch of technologies.

The agency needed an entirely new infrastructure, but they needed a new contracting model to go with it. They needed someone who could provide Infrastructure and Capital as a Service. Lumen instituted a multi-phase program to shift the agency from a GOCO model to a COCO model. The crux of that transition was a \$30 million capital investment by Lumen to completely redesign the network.

Solution: GOCO to COCO transformation with a trusted partner and the latest technology

The first operational step involved Lumen stepping in to take over the operation of the old voice system. That required an extensive audit, surveying all equipment in many offices. Analog phones led to PBXes in closets and voice-data integration was simply not possible, reducing the ease of collaboration across offices. A network traffic study underscored the patchwork quilt nature of the network. It was underbuilt in some spots, overbuilt in others and had many points of failure.

Results and future plans: Expanding to more offices, adding WAN capability

The GOCO to COCO transition saved the agency \$30 million in capital expense. In addition, by revamping the network, shifting away from a difficult to maintain obsolete voice system and using a managed services approach, the agency is also saving \$8 million in operating expense over the life of the current contract.

With the capital investment in new infrastructure, the Virginia headquarters and field offices moved to Metro Ethernet as their backbone network. WiFi provided connectivity within offices and campuses, with Cisco routers that were part of Lumen's investment. Voice systems migrated from TDM to Managed VoIP. Lumen supplied a dedicated team and dedicated on-site Network Operations Center (NOC) to manage the ultimate solution. Security monitoring is done by agency staff, though Lumen personnel aid in monitoring any data coming into the network from outside the Lumen infrastructure.

The GOCO to COCO model was augmented with a unique solution for Uninterruptable Power Supplies (UPS) addressing an issue Lumen architects discovered in up-front due diligence. To avoid more capital outlays, Lumen created a UPS as a Service model.

With Lumen managing the network, agency staff are able to focus on enforcing the nation's laws. By proactively managing the network, Lumen staff can address issues before they impact bandwidth or functionality. Lumen worked with the agency and its staff to understand personnel needs in their daily work. The results of that effort were three sets of Service Level Agreements (SLAs) that spanned system-level considerations – network availability and restoral, voice availability and restoral – and incorporated user-driven SLAs such as next day delivery of replacement equipment in the event of problems with phones or other equipment.

The core infrastructure is now in place. Lumen will also upgrade equipment as new technology is available. The agency hopes to expand beyond Virginia to its many field offices across the nation. This will likely mean WAN capability must be added to the infrastructure.