



Teaching agencies to modernize

The U.S. Air Force provides a model for organizations that want to modernize across the enterprise



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THE U.S. AIR Force's Air and Space Operations Centers are responsible for command and control of all the service's air and space operations across the globe. When the Air Force wanted to modernize aspects of its AOCs, we brought them to Silicon Valley to explore commercial best practices, specifically regarding agile development.

Working with Pivotal Labs, airmen took a series of workshops to learn how to create cloud-based applications. They also learned about avoiding vendor lock-in and partnering with vendors on an ongoing basis. The first solution they created was an application to replace a manual process for managing refueling tankers at the Combined Air Operations Center in Qatar.

At the time, airmen were relying on spreadsheets, a whiteboard and their math skills to maintain a complicated air refueling schedule. The Air Force team replaced that time-consuming process with a modern, cloud-native application that runs the necessary algorithms and analytics to accurately predict refueling needs.

Scaling and operating with agility

From the minute the app was implemented, the Air Force started saving nearly \$1 million a week in fuel alone. Additionally, it took only four months from the moment the Air Force personnel landed in Silicon Valley until the app was deployed.

Not only did the Air Force choose to build the app in an agile manner, but officials took advantage of modern, scale-out capacity by deploying the app on a hyperconverged infrastructure. That allows

the IT team to simply add another node when it reaches capacity.

Based on the success of the tanker refueling app, the Air Force created a unit called Kessel Run that will apply its new modernization strategies to the development of other software-based weapon systems. Developers are also exploring the use of machine learning to gain even more efficiencies from the applications they build. When algorithms run in the background, logisticians can

focus on higher-value activities, such as evaluating the quality of the algorithm and ensuring that the application supports the Air Force's overall mission.

3 keys to modernization success

Based on the Air Force's experience, agencies should keep three key considerations in mind as they seek to modernize. First, they should identify small programs that roll up into a broader strategy and tackle modernization in





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logical, simple ways. They can build on their success while making progress toward a larger goal.

Second, agencies should modernize their infrastructures in part by using scale-out strategies. That approach allows agencies to reduce the total operational costs of modernizing the infrastructure while creating a platform that supports incremental projects.

Third, agencies must remember that cloud is an operating model, not a destination. The goal is not simply to move to a public cloud service provider but to operate with cloud-like efficiency. Strategies should focus on deploying efficient and effective IT in today’s world, with cloud as one element.

Given the rapid changes that technology and the world are undergoing,

IT modernization is an absolute imperative. As the Air Force so clearly demonstrated, we must modernize to meet the needs of our country and continue our leadership role on the global stage. ■

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