

CUSTOMER SUCCESS STORY

State Army National Guard Organization Implements Technology as the Cornerstone for More Efficient Facilities Management

The Organization

Military installations the world over must successfully plan, contract, monitor and manage their facilities construction and maintenance. The Construction and Facilities Management Office (CFMO) at the Army National Guard is no different. In seeking a more efficient way to successfully manage its processes, track required documents, and capture as-built infrastructure records, the Guard sought a best-in-class solution.

The Challenge

Maintaining and accessing project and infrastructure data was challenging. Not all the records at the Guard were available electronically nor were they centrally located. It was often difficult for the CFMO staff to access critical information in a timely manner and often that data was not reliable. In addition to the challenges associated with finding project data quickly, the office leader had to rely on others whenever he needed to retrieve drawings. Furthermore, with Guard staff always prepared to support their active duty counterparts, key personnel can often be deployed leaving gaps in institutional knowledge necessary for the CFMO office's daily operations. The team realized that a different process was needed to increase efficiency, improve audit compliance, and create a single point of reference for project information. Without well documented processes and a centralized management system, standards were difficult to enforce, revisions to projects and documents were difficult to track, and resources were stretched.

The CFMO staff engaged with an outside firm to analyze their procedures and bring continuity to accurate as-built records all contained within an easily accessible central repository. The consulting team approached the engagement in two phases. The first stage was workflow and process mapping, followed by data development and information sharing work.

Capturing Organizational Best Practices with Process Mapping

The process mapping effort has been valuable for several reasons. The process map clearly outlines Army National Guard best practices and captures what the team must do to meet regulatory requirements. Together with process mapping, documentation was produced which clearly provides instruction for any new or existing Guard staff. Staff members have clear standard operating procedures. By illustrating the team's work, the process mapping exercise has set the stage for continuous process improvement.

Another benefit of the process map is that it forms the foundation for the digital data management solution. The CFMO team wanted to ensure that the new project database was aligned with the organization's processes. While the group has adopted new approaches to storing and managing data, the digital data management solution has not altered any of the team's underlying processes. Alignment between the database and organizational processes ensures that the right information is captured. An advantage of the resulting database is that it includes configuration management information, as well as the digital documents.



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Data Development and Visualization

The second stage of the project was laser scanning facilities and converting them to 3D models. These models provide highly accurate, as-built information about the facilities and are augmented with additional information, such as the amount of money spent on buildings, percent completion of projects, square footage reports, room composition, and more. Since 3D models provide line-of-sight information, they have the potential to be leveraged in emergency response situations.

These models have also been integrated with a web-based visualization tool. It is possible for authorized Construction and Facilities Management Office users to view a map of the State, zoom in on a specific Army National Guard facility, click to bring up 3D maps of the facility, and look at specific rooms.

This organization envisions sharing this tool with all Army National Guard sites within its jurisdiction. Each site employs a facility manager that works with the Construction and Facilities Management Office. If facility managers had access to documents online through the mapping tool, it would save time for the team. A longer term vision is to link the visualization tool to building controls which would enable facility managers to monitor and control heating, air conditioning, security, and more from mobile devices.

Using a Central Database to Store and Share Project Information

The project information system saves time for team members and puts greater control in the hands of users. If city officials need to schedule a facility or retrieve existing lease agreements, this data can be searched for and accessed through an online search. The database saves time for everyone – staff members are not interrupted to assist, and those in need are able to access the data as needed.

Storing project information in digital form and in a centralized database also reduces the risk of lost or damaged paper drawings. Recently, an external audit was conducted on the Environmental Department of The Construction and Facilities Management Office. The Environmental Department's program is based on ISO 14000 standards which includes data management requirements. The audit resulted in a positive finding since all documents residing with the Environmental Department were archived and accessible through the database.

Conclusion

Executive leadership sees the process mapping, database, and visualization effort as a good foundation for future work that the Construction and Facilities Management Office may do as part of the Army Communities of Excellence initiative. This program assesses the dimensions of installation management based on the tenets of the Malcolm Baldrige Performance Excellence Program. According to Executive leadership, "the expertise, innovation, and technology that IMAGINiT Technologies has provided has proven to be the cornerstone for establishing a process that will improve the function of the Construction and Facilities Management Office from multiple perspectives to include data management, audit compliance, and information integrity."

About IMAGINiT Technologies

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