



# Philadelphia Int'l Upgrades its Asset Management System

BY JODI RICHARDS

 When Philadelphia International (PHL) wanted to upgrade its asset management system to a more robust tool, the project team talked with personnel at other airports about their experiences. As the Pennsylvania airport continues to deploy its upgrade, PHL Enterprise Asset Manager Milton Robinson is sharing his department's experience to help other airports reap similar benefits.



MILTON ROBINSON

In 2015, PHL was using an earlier version of IBM's Maximo asset management system. It was hosted on-site, antiquated, had limited functionality and was no longer supported, notes Robinson. Personnel could close out work orders and generate some reports, but the system was no longer effective and did not provide cost savings to the airport. "There were no updates for it, and we knew what we were doing was not really sufficient," Robinson explains. "We

needed a better tool for our maintenance department and decided to go ahead and invest in another system."

Ultimately, the airport selected Electronic Data Inc. to configure and implement an updated version of the Maximo system. "When we went out to look for a new system, we weren't set on using Maximo again," Robinson relates. However, the new, more robust cloud-based system provides the reliability, redundancy and updates the airport requires, and it's user friendly, he adds.

"Maximo provides a platform for [PHL] to manage their assets, asset lifecycle, work management, maintenance planning, inventory management and tie into their procurement processes and even support processes in airport operations as well—all from one platform," explains Scott Yates, chief operating officer at Electronic Data Inc.



SCOTT YATES



## FACTS&FIGURES

**Project:** Asset Management System Upgrade

**Location:** Philadelphia Int'l Airport

**Cost:** Undisclosed

**Timeline:** Operations module launched in Oct. 2018; work management in June 2018; inventory management in Feb. 2018

**Future Deployments:** Safety management system; preventative maintenance; job plans; scheduling; payroll

**System:** Maximo, by IBM

**Implemented By:** Electronic Data Inc.

**Maximo Host:** Projotech

**Mobile Software:** DataSplice

**Key Benefits:** Increased reliability, redundancy & reporting functions; more user-friendly for staff



As airport assets become more sophisticated, the skill set necessary to maintain them increases, Yates relates. And, as the workforce ages, there is a significant amount of “tribal knowledge” that leaves the organization when older experienced workers retire. “There’s definitely a heavier dependence on trying to utilize information systems to bridge that gap and capture some of that knowledge during staff turnover,” he explains. Enterprise asset management systems also allow an organization to do more with less, adds Yates.

Previously, PHL’s asset and facilities management processes were heavily paper-based, which limited the ability to perform higher level reporting and analytics. “Maximo will provide PHL the foundation to standardize processes across the airport, as well as allow for comparison analytics and a basis for continuous improvement so they can continue to get more sophisticated with their asset management practices,” Yates predicts.

### Customer Service Implications

A key component of PHL’s overall operating philosophy is enhancing the customer experience; and a big part of doing so is ensuring that the facility is running at an optimal level. Tracking assets and work orders helps the airport stay on top of maintenance and replacements.

“Passengers have enough stress,” says Robinson. “We try to make them as comfortable as possible.”

“Customer experience is a huge element of facilities and asset management at an airport,” agrees Yates. Beyond providing a positive customer experience, airports have an obligation to maintain efficient operations to minimize impact on the throughput of passengers and maximize revenue, he adds. “Enterprise asset management plays a key role in that.”

As of mid-September, PHL had fully deployed three modules of the updated Maximo system: inventory process, work order management and shift highlights, which includes incidents or emergencies. “Emergencies are all coded differently, so we use [Maximo] for capturing that information and reporting from the operations department,” Robinson explains.

Per its usual routine, Electronic Data Inc. began at PHL with a preconfigured version of Maximo. “This allows us to come through the door with a set of best practice processes in industry data standards,” says Yates. “It’s basically a starting point for any organization that’s going to embark on this journey.”

The standard deployment process begins with a workshop period when implementers evaluate current processes and procedures to learn how the program can be tweaked or adjusted to best fit an airport’s specific needs. Next is a development cycle, when the configured system is demonstrated to users as changes are made so they can provide feedback. “It’s a very hands-on process with the airport to make sure they are ultimately getting something that is going to meet their needs,” says Yates.

Robinson describes the workshop process as invaluable. To fully leverage it, PHL included frontline staff and supervisors who described what they do on a daily basis. Electronic Data Inc. then matched up those “user stories” with how Maximo could help PHL and tailored the system accordingly.

This collaboration also facilitates the organizational change management process, because users begin to assess the preparedness of their organization and end-user community, adds Yates.

One of the most intensive parts of the project is identifying, collecting, cleaning and loading data into the system. “A system is only as good as the data that you’re putting into it,” Yates advises. Loading data and asset information is an ongoing process, as is transferring departments onto the upgraded system.

### New Capabilities

Tracking inventory through Maximo allows PHL to carefully monitor supplies-on-hand and their value, Robinson notes. Because all inventory has an associated cost, the airport operates its storeroom with debit/credit transactions. “Whatever department needs an item, we charge it to their cost center,” Robinson explains.

Because the airport integrated geographic information system (GIS) technology into its new Maximo system, users can pinpoint an exact location and write a work order for a specific issue. This capability is especially handy for airfield inspections, Robinson relates. “We have all of our airfield lighting, signage, taxiways and runways on GIS in Maximo.”

A similar system is used for terminal work orders. “An airport is an expansive facility, so having the ability for someone to drop a pin on a map where a problem is and have a craft group or technician responding to that problem know the exact location is incredibly powerful,” Yates says.

Thanks to software from DataSplice, PHL personnel are able to use mobile devices like iPads and smartphones with the Maximo system. Technicians can receive work orders on a mobile device

and track their work time and other project details. For inventory management, the software includes barcode scanning, which helps reduce human error.

PHL leverages the reporting features of Maximo to generate updates for the finance department and upper management. This allows executives to closely monitor work orders, to ensure they are being closed in an efficient manner, and to determine how many work orders are proactive versus reactive.

“We’re trying to swing the pendulum from being a reactive airport to a proactive airport,” says Robinson. “That way, we catch things before the passengers are affected. We don’t want to run systems to failure.”

Asset management reports also provide valuable information that helps justify costs to airport stakeholders, including the city council and airlines.

### Implementation Challenges

At PHL, the Maximo upgrade has come with a steep learning curve for users. “Many employees were used to turning wrenches and getting the work completed,” explains Robinson. “Now, we’re putting a mobile device in their hand to record and capture their work.”

Detailed training before, during and after the deployment was critical. “You prep them and give them information; however, when it hits, it’s still a totally different thing,” he observes. “So we try to be there on-site to help get them going.”

Managing the transition is a challenge for many organizations, Yates acknowledges. “You’re taking a workforce that is used to doing things on paper, and switching it to technology.” Offering users hands-on assistance in the field helps tremendously, he says.

At the same time, Robinson notes that it’s important to let employees know that the new asset management system is not “Big Brother” looking over their shoulder. He stresses that it’s a platform to give upper management a better view of how departments operate and for individual employees and departments to receive credit for work performed. For example, if a backlog of repairs is occurring because of staffing issues or lack of parts, it’s important for that information to be relayed to supervisors who can address the problems.

Yates suggests focusing on the overall benefits to the organization, which ultimately translate back to the individuals. He urges airports to be open and communicative with end-users, sharing reports and metrics the system produces. “That

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shows that the data is not being reported at the individual or employee-specific level and shows the direct benefit to the organization,” he explains.

Finding time for system training was another challenge at PHL. The sheer number of system users (about 300), a complicated array of holidays/vacations, and unexpected work projects made coordinating a training schedule difficult, notes Robinson.

On the technology front, Yates encourages airports to make sure they have the proper infrastructure to support the Maximo system. For example, technicians working underground or far from the main terminal need reliable internet connectivity. “If users are frustrated when trying to use the device or get data synched up back to the system, adoption is going to be very hard,” he warns.

## Lessons Learned

Robinson has three specific suggestions to airports implementing an asset management system: develop a change management strategy that includes a communication plan; establish a manageable scope of work; and be as thorough as possible when gathering information and requirements to tailor the system.

Right-sizing the scope of work is particularly important, he stresses. “You want something that’s manageable.” That’s why PHL is deploying its new system in carefully planned phases.

While it might sound tempting to implement a new system all at once, Robinson and his team knew that would not be the best approach for PHL. “This is a huge overhaul for a lot of different people, and it’s going to be a change in management for a lot of departments,” he explains. “Take it in phases. If you try to do it all at once, the risk of failure is very high.”

At PHL, the Maximo deployment is an ongoing process. In early October, staff was working to launch the Part 139 module, which will help track and report airfield inspections. “We have to make sure that it is ready for the FAA to approve and make sure that our operations officers are comfortable with it,” Robinson remarks. “All of the data that we’re collecting from inspections of the airfield has to mimic what we’re currently doing now or be better.”



*The storeroom team receives training on how to use the new mobile software for inventory control.*

As departments acclimate to the new system, more modules and capabilities will be rolled out. Moving forward, PHL plans to integrate its safety management system, preventative maintenance, job plans, scheduling and even payroll into Maximo. Robinson’s team is also in the process of upgrading its procurement system, which will then be integrated into the Maximo system. ✈️



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- Asset Life Cycle Management Process Review
- Maintenance Planning & Best Practices Standards
- Full Maximo EAM Implementation
- Mobile Deployment for Inspections, Work and Inventory
- GIS / BIM Asset Data and Maximo Integration
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