Comprehensive Asset Management in Federal Government:

Improving operations, management, maintenance and compliance

The Challenges of an Aging Infrastructure

From Veterans Affairs (VA) hospitals and national parks to weapons systems and highways, the work of the federal government depends on the availability of mission-critical assets. Yet limited funding and scarce manpower have made this infrastructure difficult to manage. According to the American Society of Civil Engineers (ASCE), approximately $3.6 trillion needs to be invested in the nation's public infrastructure by 2020 to improve its current physical condition.[1]

The federal government depends on public infrastructure to protect the health, safety and welfare of citizens. With an inter-connected landscape of highways, railroads, ports and bridges, a crumbling dam, or poorly maintained or unused federal facility can have a devastating economic impact. Without the necessary investment, the ASCE predicts 1.9 billion gallons of gasoline will be wasted annually on traffic congestion and automobile repairs. Aging infrastructure can also drive up the cost of electricity, and the cost of delivering basic services and consumer goods. And finally, the high costs associated with aging infrastructure can increase the vulnerability of mission-critical assets such as military equipment and supplies.

To address these challenges and accountability requirements, the federal government and contractors are increasingly turning to comprehensive enterprise asset management (EAM) software. Beyond the basics of keeping tabs on physical infrastructure, EAM technology is now helping resource-challenged government agencies make smarter and faster decisions around operations management, comprehensive maintenance planning and scheduling, risk reduction and compliance.

Many Points of EAM Impact

There are many areas where EAM software can deliver strategic value to a federal agency with responsibilities for public infrastructure. These include:

1. Targeted maintenance, repairs and improvements
2. Increased transparency and accountability
3. Operational insight driven by predictive analytics
4. An empowered mobile workforce
5. Holistic view of property ownership, stewardship, location and status
6. Minimized risk and enhanced compliance with governmental, environmental and safety regulations

1. Targeted Maintenance, Repairs and Improvements

With multiple projects vying for limited funds, the federal government and contractors need to find a way to assign manpower and allocate budget to places where these resources will be the most effective. The first step involves taking an inventory of assets and determining each item's condition and physical attributes. Once this detailed information has been gathered via EAM software, targeted maintenance can deliver several key benefits:

- More precise scheduling of preventive, corrective or predictive maintenance through a comprehensive examination of a public infrastructure's physical condition.
- Better utilization of limited manpower and materials resources since resources are allocated on an as-needed basis.
- Improved targeting by letting agents know precisely where investments are being made and where they are still needed.
- The ability to easily tweak or replace targeted maintenance-plans as government infrastructure needs evolve.

2. Increased Transparency and Accountability

Given today's aging government infrastructure, keeping tabs on which assets require immediate attention, which have fallen through the cracks and which repairs are already underway is a bit of a juggling act. Fortunately, EAM software can ease the burden by providing unprecedented transparency. Workers can track what's being done, monitor the ongoing condition of various assets and ensure the proper level of maintenance is delivered.

In addition to providing a singular view of multiple projects, EAM technology can also be combined with other systems for a more holistic approach to asset management. For example,

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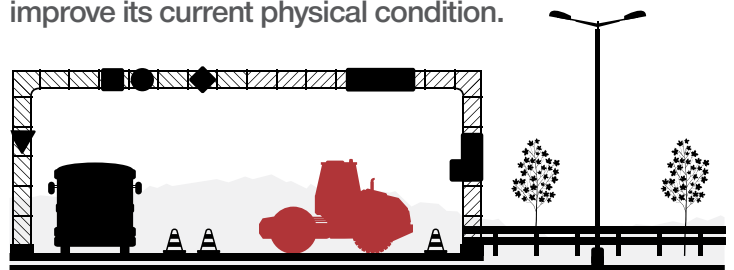
integrating resource scheduling, planning and other work order systems with procurement, accounting and asset management data can not only provide a snapshot of infrastructure requirements, but real-time insight into maintenance costs, regulatory compliance and safety conditions. This results in a high level of responsiveness to mission-critical goals.

Greater transparency can also enhance customer service systems. Consider, for example, federal healthcare facilities. In the past, requests for facility improvement would be entered into the system with no real way of knowing where they stood in queue. However, by integrating an EAM system with a record of patients served and anticipated need, VA and Department of Defense (DoD) hospitals could gain a more comprehensive view of facility upgrades, scheduling and associated costs.

3. Operational Insight Driven by Predictive Analytics

Determining what must be done today to preserve public infrastructure tomorrow is a critical part of any maintenance improvement program. Luckily, achieving reliability-centered maintenance is made easier with EAM software.

Thanks to the Internet of Things movement, today's interconnected devices, systems and sensors generate copious amounts of data. By populating an EAM system with this information, federal agencies' operational staff can gain better insight into the precise level of predictive maintenance needed now, and what issues are likely to arise in the weeks, months or years to come.

Using this decision matrix, workers can then determine whether to schedule certain repairs or replace an asset altogether, as well as demonstrate how decisions are made and the dollar value of these decisions.

4. An Empowered Mobile Workforce

Mobile technology is proving to be a huge boon to public agency productivity. In fact, according to a recent study, mobile tools can improve productivity by as much as 45 percent. If mobile adoption rates in government were to double to 70 percent, additional value generated (in terms of government output) could exceed $50 billion annually.[2]

The right EAM tools can help agencies achieve increased productivity by enabling workers to gather information on assets remotely via work orders. Once inspections are completed in the field, findings are entered directly into the system for real-time updates on maintenance requirements and scheduled repairs.

Workers save time by no longer having to make trips back and forth to the office to enter information into a desktop computer.

At the same time, all workers receive real-time updates on critical decisions. And because mobile EAM tools let officials work the way they want, when they want, job satisfaction increases.

5. Holistic View of Property Ownership, Stewardship, Location and Status

Federal government agencies and contractors need to more closely monitor service levels for each type of asset, as well as the cost of these services. EAM software can help by providing greater visibility into present and future maintenance activities. This insight allows those responsible for the assets, and in turn their agencies, to better manage assets while creating an electronic trail — a digital record of the most critical assets and recommended levels of repair and replacement. Instantly, the entire decision-making process around targeted maintenance is made clear for everyone to see. The federal government is better able to justify and explain priorities in asset management while ensuring more strategic decision-making and workplace collaboration.

6. Minimized Risk and Enhanced Compliance with Governmental, Environmental and Safety Regulations

Many governments are now utilizing their EAM system to more precisely evaluate the risk and consequences of failure for critical infrastructure assets, and target their limited available investment dollars towards capital improvements that minimize risk. This not only improves the protection of federal property and facilities, military bases, supplies and equipment, and other systems, but also prevents loss of business opportunities and provides support for continued revitalization and economic expansion. In addition, it lays the foundation for a more sustainable, resilient government.

EAM software can minimize these risks by enabling federal agencies to make smarter and faster decisions around predictive maintenance, damage prevention and mitigation, and more secure public service delivery. Targeted maintenance, increased transparency, predictive powers, a mobile workforce, enhanced service delivery and minimized risk — they are all important outcomes of a comprehensive EAM system.

Endnotes

1. www.infrastructurereportcard.org
2. http://dupress.com/articles/gov-on-the-go