white paper

The Benefits of Integrated Enterprise Asset Management

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We Optimize Your Supply Chain
Introduction

Effective maintenance of your operation has always been a challenge. It’s not easy to keep something so complex running smoothly and cost-effectively. Managing work processes, organizing inspections, maintaining inventories, optimizing preventive maintenance — all while keeping downtime to a minimum (which is to say, no downtime at all).

This is why Enterprise Asset Management (EAM) systems have become invaluable assets to maintenance departments everywhere. EAM systems are toolsets specifically designed and developed for maintenance departments to help maximize the productivity and reliability of your operation. With EAM integrated into your operation, you have a focal point for all things maintenance and a systematic solution that returns cost by reducing breakdowns and extending asset life.

But, again, effective maintenance is a challenge. And while EAM systems bring great benefit by themselves, there is always a desire for more. One possible avenue for increased productivity is integrating EAM systems with other enterprise systems in your facility.

Most operations have one or more systems that track or maintain information related to facility maintenance. For example, an Enterprise Resource Planning (ERP) system may have a complete list of parts used in the facility. In other instances, the other system may have information that can be leveraged. For example, a Geographic Information System (GIS) may track the exact locations of all assets.

This white paper will discuss these systems and their integration with EAM systems. First, it will present in general terms the benefits of your EAM system as a hub for cross-functional interfacing between enterprise software. Then it will discuss in more detail the specific types of systems.
The Benefits of Integrated Enterprise Asset Management

Benefits of Integrated EAM

The idea of leveraging the data among your various enterprise software systems is fairly straightforward — with all that information in digital form it makes sense to integrate so it can be shared. What may be less obvious is how best to accomplish this for your maintenance data.

To clarify, it is important to remember why you use an EAM system: It is the focal point, the hub, of your maintenance work. An EAM provides a central location to organize, schedule, track and report on all assets and processes related to maintaining your facility. So it only makes sense that the EAM system should remain the hub even after integration with other systems. Other systems can provide data for maintenance. Your EAM provides context for maintenance.

Perhaps more importantly, your EAM as the hub means there is one platform with one login and one view for all of your maintenance data. That is, maintenance managers and technicians can benefit from the data of many disparate systems, but only need to understand and use a single system, your EAM. They will never have to perform the same process in multiple systems.

It is possible to integrate your EAM with, say, an ERP system and then have the ERP system be the focal point. This may have some appeal, especially to those not working in maintenance. But even if done well, not having the EAM as the hub can lose the context of the maintenance and diminish the overall impact of an EAM.

In fact, the benefits of an EAM as a hub of integration go beyond maintenance. By design EAM systems provide a view into your facility down to fine detail, so they are the natural go-to for getting facility information. Having the data from other systems integrated with the EAM augments the data and enhances the ability to access overall facility maintenance.
Types of Integrations and Associated Industries

GIS (Geographic Information System)

A GIS is a system designed to capture, store, manipulate, analyze, manage and present spatial or geographical data in order to understand relationships, patterns and trends. For example, *ArcGIS* is a popular GIS application.

**Benefits:** A GIS monitors the physical locations of linear assets and shows this information on a map, sometimes also with video feeds. A GIS provides a visual indication of assets that need attention. Integrating allows your EAM system to capture this data and track it. The EAM can then include this data in the work order process as well as to detect trends such as problem assets that need to be replaced rather than repaired.

**Industries:** EAM integration with GIS is ideal for any system with a very large facility or facilities in multiple locations. Examples include utilities for water and power distribution.
SCADA (Supervisory Control And Data Acquisition)

A SCADA is a system that collects data from various sensors in a facility and sends this data to a central interface. For example, *Ignition* is a popular SCADA application.

**Benefits:** A SCADA system is built around assets in your facility that have sensors that provide operational data. For example, a sensor may detect a vibration indicating a failing bearing or a jam. With a SCADA alone, a technician would see the alert and arrange a work order to fix it. But with integration, the EAM can process the work order automatically. The EAM could also capture the data to detect trends such as situation where required lubrication on multiple occasions that may indicate a more serious problem with the asset.

**Industries:** EAM integration with SCADA systems is suited well for facilities with assets critical to continuous operation. Examples include manufacturing and distribution.

CRM (Customer Relationship Management)

A CRM is a system for managing interactions with current and future customers. It often involves using technology to organize, automate and synchronize sales, marketing, customer service and technical support. For example, *Salesforce* is a popular CRM application.

**Benefits:** A CRM system keeps track of basic customer information like locations, contacts and times/dates of interactions. Integration allows your EAM system to track maintenance-related interactions and connect the information to the customer. Data can then be analyzed to detect customer-specific patterns and to improve service.

**Industries:** EAM integration with a CRM system for companies that use their CRM to track interactions such as maintenance visits. Examples includes equipment or system manufacturers that provide field service or field maintenance to their customers.
**ERP (Enterprise Resource Planning)**

An ERP is business management software — usually a suite of integrated applications — that a company can use to collect, store, manage and interpret data from many business activities, such as manufacturing or service delivery, inventory management and shipping. For example, *SAP* and *NetSuite* are popular ERP applications.

**Benefits:** An ERP system provides a full account of all materials and assets within your facility. If your company has an ERP, it is likely what is used to reorder parts, including parts used in maintenance. Integration brings ERP resources to your EAM system, so, for example, maintenance parts that require replacement can be ordered automatically.

**Industries:** EAM integration with an ERP system works well with any type of industry that uses ERPs. Best examples include large, complex facilities like an assembly plant with a wide variety of parts to maintain.

**PdM/CBM (Predictive Maintenance/Condition-Based Maintenance)**

PdM/CBM is maintenance for when need arises. It is performed after one or more indicators show that equipment is going to fail or that equipment performance is deteriorating.

**Benefits:** A PdM/CBM system is similar to a SCADA system, but even more focused on maintenance, which makes integration with your EAM system a great fit. Knowing when to repair or replace assets can greatly aid in setting maintenance schedules, and integration allows your EAM system to track that data and detect trends.

**Industries:** EAM integration with a PdM/CBM system works best when the facility is highly dependent on consistent operation. Examples include automotive and pharmaceutical manufacturers.
BACnet/Building Systems (Building Automation and Control Networks)

BACnet is a communications protocol for building automation and control networks. BACnet is designed to allow communication of building automation and control systems for applications such as heating, ventilating, and air-conditioning control, lighting control, access control, and fire detection systems and their associated equipment. For example, Delta Controls is a popular BACnet systems application.

Benefits: A BACnet system is similar to a GIS, but the map is graphical interpretation of a building layout showing, for example, HVAC duct work or the ventilation system. Also like a GIS, a BACnet system is good at showing you where a problem exists. Your EAM system can use this data to generate work orders automatically, and make sure technicians have instant access to equipment manuals and all support information.

Industries: EAM integration with a BACnet system works best in larger facilities and ones with multiple buildings. Examples include property management companies and universities.
About Dematic

Dematic is a global engineering company that designs and builds logistics solutions that optimize material and information flow. In addition, Dematic supports solutions and is committed to successful system performance.

As part of that commitment, Dematic offers Dematic Sprocket for developing and deploying Enterprise Asset Management Solutions. Dematic Sprocket is uniquely designed to streamline and automate processes in maintenance management to improve workflow and minimize time and cost required to perform tasks.

Dematic Sprocket goes beyond basic facility maintenance to provide total facility management including inventory control, reporting, preventive maintenance and capital asset management. Dematic Sprocket helps to create competitive, high-performance facilities by making efficient and effective maintenance management possible.

For more information, visit: www.dematic.com/sprocket

If you are interested in learning more about this topic and how we can help, please contact Dematic at (866) 891-4363.