



Technology Viewpoint

# ERP and EAM: Partners for productivity

By Kevin Price and Tracy Smith

## Executive overview

Asset management is increasingly recognized as a technology-empowered methodology, which can boost an organization's productivity, reduce costs, cut energy waste, and encourage the adoption of best business practices. Typically there are two primary routes to approaching physical asset management: using enterprise resource planning (ERP) software or specialized enterprise asset management (EAM) software.

ERP systems offer a large scale consolidated approach to tracking an organization's asset-related processes, while EAM systems provide in-depth, best of breed functionality to monitor, react, and predict the precise performance of assets over their lifetime. Together, they can help organizations boost performance and deliver on their strategic objectives

## Defining ERP and EAM systems

ERP software allows an organization to use a system of integrated applications or modules to manage its activities. ERP is designed to combine all of a company's activities into a single database, eliminating incompatible and duplicate technologies.

EAM, also known as computerized maintenance management systems (CMMS), is a term used to describe software specifically designed to improve asset performance, increase service life, and cut costs across an organization's physical assets, primarily buildings and equipment.

## Let the debate begin: ERP versus EAM

At first glance, choosing an ERP system to manage physical assets looks pretty enticing. There is only one software system to support, which is attractive from a CIO's perspective, and financials are all in one place.

But while ERP is a great fit for financials, manufacturing, supply chain, and CRM applications, to name but a few, extending these capabilities to areas such as asset management can result in disappointment. In many cases, an ERP system offers less functionality and is harder to use for asset management.



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EAM on the other hand is designed specifically to support assets and offers more depth and insight from which to improve operational performance. But historically, the cost and complexity of integrating an EAM system with an ERP system has proved prohibitive.

However, organizations are now beginning to realize that the ERP one-stop shop approach might be short-sighted, and that it is impossible for one software system to optimally serve the needs of the entire organization. It is fundamental that critical functions like asset management get the tools they require, while finance and IT get the consolidation and system simplicity they need.

## Case study: Delek Refining

Delek Refining, a division of Delek US Holdings, operates two oil refineries with a production capacity of more than 140,000 barrels per day. Delek was recently involved in a comprehensive asset management software evaluation and selection process led by Stratum Consulting Partners, a consulting and technology services company.

They compared best-in-breed EAM systems against comparable ERP system modules, focusing on functionality and ease and efficiency of use. Key areas evaluated included system navigation, asset management, work management, planning and scheduling, asset reliability, shutdown coordination, capital project tracking, inventory management, purchasing, vendor management, accounts payable, and reporting.

On a scale of 200 possible points, the evaluation revealed the following scores:

Software	Functionality rating	Ease of use & efficiency rating	Totals
EAM	83	80	163
ERP	77	61	138

Delek chose to go with an Infor® EAM instead of an ERP System to manage their assets. Frank Simmons, Vice President of Delek Refining Best Practices, put it best:

“Asset management is a top priority for us. We rely on our assets to be successful. Therefore, we want the best when it comes to technology tools that can help us accomplish our goals. Tools that offer rich functionality, are easy to use, easy to integrate and don’t break the bank in the process. Infor EAM system met this criteria and was the best choice for us.”

So, for organizations that are serious about improving performance through a more focused approach to asset management, it seems that EAM is the clear winner. Why should anyone choose to manage their assets with anything but an EAM system?

## The whole is greater than the sum of its parts: Integrating ERP and EAM systems

First and foremost, it is complicated. ERP systems normally manage an organization's financials. By using an EAM system, a portion of those financials—those related to asset management activities (e.g., MRO purchasing)—are initiated and tracked in the EAM system. To ensure costs are correctly allocated across the chart of accounts and vendors are paid, cost information must be passed to the ERP system. The two systems must be integrated.

This is where it gets sticky. EAM and ERP system integrations have been historically complex and expensive. Different types of databases, table structures, upgrade issues, and system constraints have added costs and headaches to getting EAM and ERP systems in synch and communicating. The difficulty associated with system integration is the primary reason why some organizations have chosen ERP over EAM when it comes to asset management.

Additionally, many of the past complexities of system integration were not only due to the technologies employed, but also where certain business processes resided. Defining where business process will be executed (i.e., EAM vs. ERP) is a key factor of integration success. If overlooked, it could result in a long, expensive and painful integration experience.

Ultimately, organizations need costs to be at the asset level. Knowing what the organization spends to operate and maintain assets supports informed and educated business decisions. With that said, the most efficient and effective means of capturing asset lifecycle costs is to perform work management (i.e., maintenance and engineering), MRO materials management, and purchasing all in one system. These are integrated functions and ideally should have one system home for their activities, preferably the EAM system.

## Changing technology, changing times

However, times are changing. New developments in technology mean that organizations can deploy new solutions without complex integrations and endless implementations. In particular, Infor's purpose-built lightweight middleware (Infor ION) enables the integration of systems to be simple, fast, and cost effective. With Infor ION, all applications publish in XML (the language of the Internet), and every event or transaction produces an XML document that is published and subscribed to in every application that accesses that document. Essentially, this means that enterprise applications no longer have to rely on huge complex middleware stacks to communicate.

## Two systems: The sum of the whole is truly greater than its parts

Organizations need EAM and ERP systems to work together to fully deliver on their strategic plans. Both ERP and EAM systems serve distinct, specific, and value-added purposes.

EAM systems do a better job of managing physical assets. ERP systems are better at managing financial assets. Bring both systems together with an effective integration strategy underpinned by software such as Infor ION, and they can focus on what they do best. EAM and ERP systems are partners, not competitors, in the ongoing effort to help organizations reduce costs, meet regulatory demands, and boost performance.

## About the authors

Tracy Smith is Delek Refining's Reliability Asset Management System (RAMS) Coordinator. He has more than fifteen years of experience implementing asset management systems for some of the largest organizations in the world. He is a certified and Endorsed Assessor of PAS55 and a member of the US Technical Advisory Group aiding in the development of ISO 55000.

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