



## ISO55000: WHAT INFORMATION SYSTEMS ARE NEEDED?

By Nick Waller, Engagement Manager

This is the first of a series of articles intended to give insight and create discussion about some of the challenges and opportunities involved in adopting ISO 55000 and how to support it with Maximo.



In this article we are trying to answer the question “*What Information Systems are needed to support ISO55000?*” *First, let’s define what we mean by an information system.*

**What is a System?** ISO55000 uses the word “system” in at least three different contexts and I’ve described where Maximo fits inside each.

- **Asset Management System (AMS):** The set of interrelated, or interacting elements of an organisation, to establish policies, objectives and processes for Asset Management. Maximo is one of the elements of the AMS.
- **Asset System:** A set of Assets that interact, or are interrelated. Asset Systems are defined inside Maximo as relationships between Assets and Locations.
- A set of tools including policies, plans, business processes and information **systems** which are integrated to give assurance that the asset management activities will be delivered. Maximo is one of the information systems that needs to be integrated to form the AMS.

The ISO documents state the requirements (ISO 55001) for the AMS and provide guidance (ISO 55002) for their application, but they do not provide much help when selecting which information systems are needed, or how they should be integrated. The rest of this article is about how to fill that gap.

### 1. Document Management

The first information system you need is a Document Management System. ISO55000 requires you to produce and maintain lots of documents – Plans, Strategies, Policies. Once the paperwork is completed and filed, the assessors can check that the documented Asset Management System (AMS) is compliant with the standard and that it is being used by the organisation.

More importantly, most organisations have lots of document or form-based systems where software, e.g. a word processor, is used to produce a document and it’s the document that is stored rather than its information content. Common examples of this in the world of maintenance are:

- Terms and Conditions
- Contracts
- Safety Permits
- Method Statements
- Equipment Manuals
- Site Plans

- Maps
- Diagrams
- Product Datasheets

These documents get referred to by other systems and in documents generated by them. For example, a Work Order for planned maintenance might need to refer to a Contract with an external service provider, a Safety Permit, a Method Statement, and an Equipment Manual, to provide the person carrying out the work the information needed to maintain the Asset safely and in compliance with the AMS. The Maximo server file system can be used as a simple DMS, but it's not designed to be a cross-functional system and version control can be difficult to implement, so integrating Maximo with a designed for purpose system such as Documentum or SharePoint is a better option.

## 2. Asset Information System

The second information system you need is the Asset Information System (AIS). The key requirements are:

- The Asset Portfolio is defined in a **single** information system that covers all asset types, classes and systems
- The AIS is fully **cross-functional**

If your organisation is managing a small number of different asset classes, or a few critical assets, you might be able to hold the Asset Portfolio in a single information system as diagrams or models in a CAD system, or on Maps in a GIS, or possibly using spreadsheets. But, for most organisations there are multiple asset classes to be managed with thousands of assets at hundreds of locations, connected together into complex asset systems.

Every organisation has at least two asset classes, one for physical assets such as production equipment or vehicles, and another for IT assets, including software. Most businesses rely critically on their IT Assets to deliver the product or service direct to the customer, or indirectly to control the processes and equipment which make the products, or provide the service. Maximo is one of very few systems that can meet the requirement to cover all asset types, classes and systems.

The challenge is to make Maximo cross-functional and it's the boundaries between IT and Finance which are often the most difficult to breakdown. IT have their own standards, e.g. ITIL use different terminology and usually have existing Helpdesk and Configuration management systems. IBM's product set offers a converged physical and IT solution in Maximo Asset Management and IBM Control Desk. Both products share the same platform and database are optimised for the needs of the different user communities. An alternative to implementing a converged solution would be to integrate Maximo with the ITAM systems. Maximo facilitates this type of technical integration, but aligning the organisation, policies and processes is still a big challenge. Even if we take IT Assets out of the picture, there is another challenge that makes a **cross functional** AIS difficult to achieve.

## 3. Finance information System

The third information system needed is a Finance Information System (FIS). Often part of an Enterprise Resource Planning system, the FIS is used to manage costs across the business and produce the balance sheet, showing the value of the tangible assets (aka Property Plant and Equipment). The Fixed Asset register in the FIS tracks the capital cost of the assets and is then used to depreciate this value over time. However, there is a problem with this, as the purchase cost of the asset does not reflect either its value to the business, or the Total Cost Of Ownership (TCO). For that information you need to look in the AIS. Whilst it's certainly possible to integrate the AIS and the Fixed Assets register, it's unlikely that the 'as purchased' structure of the capital

assets will match the 'as installed' or 'as maintained' views of the asset hierarchy. The integration actually needs to point the other way. The AIS is intended to be the 'single point of truth' about assets, so it needs to collect and share information about assets with the FIS.

Another asset that most organisations have is their **inventory** of spare parts (consumable and rotatable) maintenance tools and equipment. After labour costs, maintenance inventory and maintenance related purchasing are usually the next biggest cost. In a perfect world, the AIS would be the **single** system used to manage asset & maintenance related inventory and its supply chain, but in the real world, the Purchasing tribe often report into the Finance chief and need to use the Finance/ERP system for procurement. The Inventory tribe often need to serve two masters – Engineering, who would like guaranteed availability of critical spare parts, and Finance, who see Inventory as an investment on which there is no return. The right place for the Inventory Management System to sit is within the AIS, because demand for inventory items is driven by asset utilisation. Maximo provides strong inventory management capabilities and the ability to integrate flexibly with finance and procurement systems.

### The Integration Challenge

All three systems - DMS, AIS and FIS - need to be integrated to enable cross functional working at every level in the organisation. While the boundaries between these systems will be different for each organisation the high level information systems architecture should look the same.

There is no 'off-the shelf' solution available which covers all three system types and all asset classes. The ERP vendors such as SAP and Oracle may claim that their suites can meet all three capabilities, but the reality is that these systems are not asset focussed, not capable of supporting all asset classes and types and are extremely complex and costly to implement. Adopting Maximo as the core of your Asset Information system will enable you to easily integrate with existing document management, IT and Finance systems to provide the 'single source of the truth' that good asset management demands.

### Find out more

ISO55000 provides a strong vision for Asset Management and a unique opportunity to improve your Asset Information Systems. If you have not yet got that vision, you can learn more at the [IAM website](#).

If you would like to learn more about how Vetasi can help you translate your vision for Asset management into reality, please email [enquiries@vetasi.com](mailto:enquiries@vetasi.com) or call 08434 610061.

### Get in touch

I would welcome your feedback on this article. You can email me at [nick.waller@vetasi.com](mailto:nick.waller@vetasi.com) or contact me via LinkedIn: [nickw56](#), or Twitter: [@maximo\\_nick](#)