

ASSET MANAGEMENT SERIES (6)  IN ASSOCIATION WITH THE KPMG COMPETENCE CENTER ASSET MANAGEMENT

LIFECYCLE DELIVERY: MANAGEMENT OF PHYSICAL ASSETS OVER THE ENTIRE LIFECYCLE

After setting out the rules in the Asset Management plan and the specific approach in the decision-making process, it is now time for 'action on the ground'. Lifecycle delivery comprises the activities and procedures for optimum management of the assets over the entire lifecycle (design, purchase, commissioning, tagging and maintenance).



"Lifecycle delivery' is presented in the Management System (see illustration) in the form of a circle," says Daniël Pairon, Global Lead at KPMG Asset Management. "Physical assets are managed over their entire lifecycle. Among other things, we take account of the Total Cost of Ownership in this regard."

THE FOLLOWING ASPECTS ARE COVERED BY LIFECYCLE DELIVERY:

LEGISLATION AND STANDARDS

Most asset-intensive companies are bound by various standards, laws and/or act within a particular regulatory framework. An energy company, for example, operates within the heavily regulated environment of rates stipulated by law. Chemical and pharmaceutical companies, on the other hand, are bound by strict safety guidelines and directives, for instance: this means that certain critical safety valves need to be replaced at fixed times, as prescribed by law.

ACQUISITION OF PHYSICAL ASSETS

How are physical assets acquired? Daniël Pairon: "A very limited number are purchased and installed separately. Most physical assets are project-based and are part of a greater whole. Consider a production line, for example, that is built as a whole. Existing assets are sometimes converted into another type of asset, giving

WAT IS...

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them a different function. An example of this is a water pump that draws water but is transformed into a pump that discharges water. This pump therefore takes on a different operational function. Or you can combine parts of different physical assets to create a new asset, such as parts of testing tools and equipment in a laboratory that together form a new apparatus."

SYSTEMS ENGINEERING

It is important to establish the interaction or interdependency between the different assets. Daniël Pairon: "When physical assets are located behind each other in a production line, it is advisable to describe their mutual relationship. How does one physical asset relate to the next? How are the assets designed? What is the relationship between their performance, maintenance and later dismantling? A good and well-known guide for this in the field of engineering is RAMS (connection between the aspects of Reliability, Availability, Maintainability and Safety). There is also an ISO standard relating to systems engineering, ISO 15288."

CONFIGURATIE MANAGEMENT

How is a physical asset configured, in other words: what are its functional and operational statistics? The number of operating hours of production units of a machine, for example. These figures are then structured according to a procedure and made available. This also includes the software that is either directly linked to or integrated into a physical asset, or is not integrated and is used externally to monitor, follow up and control assets. The relationship between these data and documentation and the software has to be specified in a procedure.

MAINTENANCE DELIVERY

The manner in which physical assets are maintained is recorded in the asset management decision-making model (evaluative, predictive, preventive, etc.) A challenge for many companies is to capture the maintenance data during the maintenance itself, though this is crucial as these data are the basis for better understanding throughout the entire service life. This maintenance information is not stored carefully or at all, often because registration by a maintenance expert is felt to be too restrictive. "So ensure there is a healthy balance with regard to keeping the information about physical assets during the lifecycle: data registration also costs money," says Daniël Pairon.

RELIABILITY ENGINEERING

Dit is een set van tools, technieken en methodes om de goede operationale functie van een asset te garanderen. Deze garanderen de kwaliteitseisen van een asset over een bepaalde gebruikperiode.

ASSET OPERATIONS

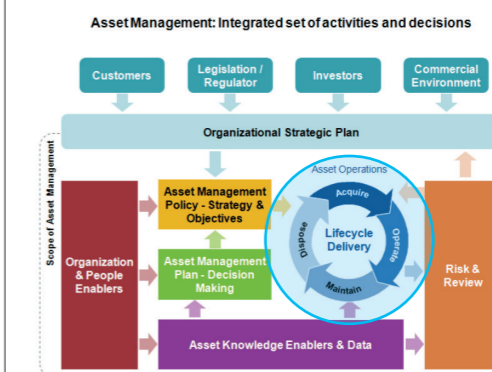
These are the technical rules which enable an asset to function in optimum conditions at all times. These are well controlled in practice.

SHUTDOWN AND OUTAGE MANAGEMENT

A large number of asset-intensive customers not only allocate a large budget to the maintenance and replacement of physical assets, but also on shutdowns. Daniël Pairon: "Shutdowns are planned or, if a malfunction or breakdown occurs, unplanned overhauls of a factory or plant which can sometimes take weeks. Exceeding a shutdown schedule can cost a company millions of



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Asset Management system. This framework visualises the roles, activities and relationships to achieve optimum asset management. (image: Institute for Asset Management)

euros per day. I am in favour of always defining and qualifying the risks in the shutdown procedure, as well as conducting an audit of the shutdown itself. Experience shows that the knowledge gained during a shutdown often disappears if it is not safeguarded. The learning process must therefore be formalised. Asset management ensures operational efficiency and improved effectiveness as well as a reduction in the costs and risks associated with physical assets by enabling a wealth of knowledge and data to be captured."

DECOMMISSIONING

Decommissioning is something that is often ignored or barely considered when purchasing a physical asset. However, decommissioning is also subject to criteria and structured information. Daniël Pairon: "In addition to financial constraints or useful working life, the legal framework also plays a role, as in the case of certain legislation for the chemical sector. Changes in the company's or customers' quality requirements can also be a reason for decommissioning an asset. Other criteria include excessive breakdowns and malfunctions in a physical asset or asset portfolio."

A reliable guide for decommissioning is the value score we have assigned within the value matrix (see article about the decision-making process). If the scores are in the danger zone, there is an obligation to replace the asset from the aspect of asset value creation.

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WHAT'S NEXT?

In a subsequent article, we will take a closer look at financial-technical reporting.



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