



## Enterprise Asset Management

February 2024







## Enterprise asset management

Enterprise asset (lifecycle) management (EAM/EALM) is the management and maintenance of assets owned by an enterprise throughout the entire lifecycle of an asset, from capital planning, procurement, installation, performance, maintenance, compliance, and risk management to asset disposal.

Enterprise asset management (EAM) combines software, systems, and services to help maintain, control, and optimise the quality of operational assets throughout their lifecycles. Enterprise assets are physical and digital resources owned by an organisation that are used to produce goods and services.

Enterprise assets can include anything from factories and machinery to software and intellectual property. Enterprise asset management is an investment that provides substantial and measurable benefits for short-, medium-, and long-term needs and goals.

## Areas of enterprise asset management

- 1  IT asset management (ITAM)
- 2  OT/IoT/IIoT asset management (OTAM)
- 3  Manufacturing asset management (MAM)
- 4  Digital/metaverse asset management (DAM)





# 1. IT asset management (ITAM)

Defined as a set of business practices that incorporate IT assets across the business units within the organisation. It joins the financial, inventory, contractual, and risk management responsibilities to manage the overall lifecycle of these assets, including tactical and strategic decision-making.

IT asset management is an investment that provides substantial and measurable benefits for short-, medium-, and long-term needs and goals.

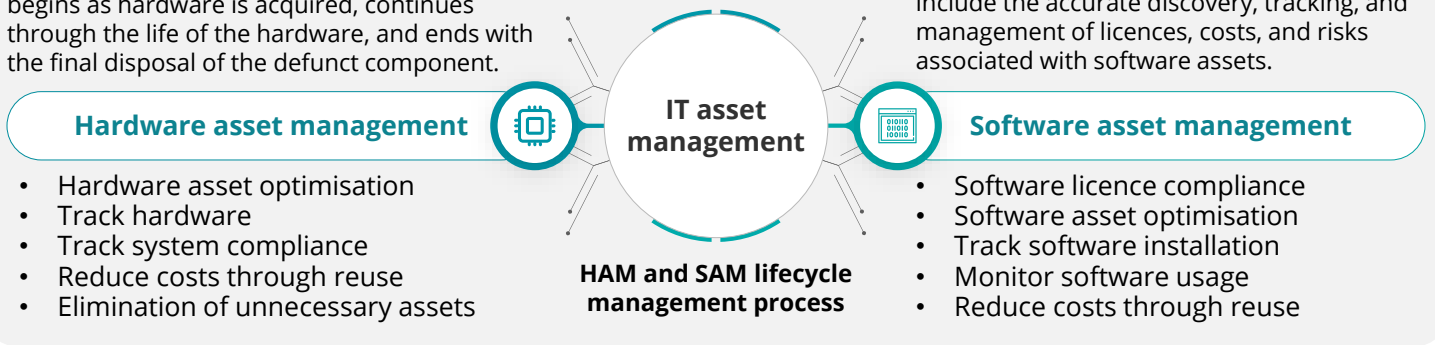
## IT asset lifecycle management overview

IT asset lifecycle management is a core process of ITAM that involves optimising the planning, acquiring, deploying, managing, and retiring or disposal of assets within an organisation. Implementation of these processes can benefit organisations by improving their ability to forecast their needs.

IT asset lifecycle management strives for informed purchasing decisions, proactive resource replenishment, improvement of the quality of IT services, and knowledge of the total cost of ownership of an asset.

HAM focuses exclusively on the physical components of information technology. HAM begins as hardware is acquired, continues through the life of the hardware, and ends with the final disposal of the defunct component.

SAM is inventory management of software assets. Activities within a SAM framework include the accurate discovery, tracking, and management of licences, costs, and risks associated with software assets.

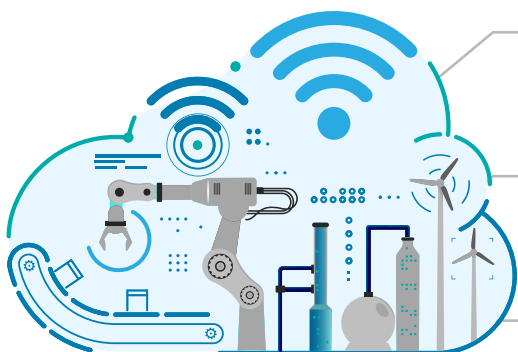


# 2. OT/IoT/IloT asset management

OT devices are physical or virtual devices and systems that are used in industrial processes and critical infrastructure. OT assets include a wide range of equipment, such as industrial control systems, sensors, actuators, programmable logic controllers (PLCs), human-machine interfaces (HMIs), and supervisory control and data acquisition (SCADA) systems, among others.

Internet of Things (IoT) assets are physical devices that are connected to the internet and can transmit data and receive commands over a network. These devices include a wide range of consumer and industrial products such as smart home devices, wearable technology, and sensors used in manufacturing and logistics.

Industrial Internet of Things (IIoT) incorporates technologies such as machine learning, machine-to-machine (M2M) communication, sensor data, big data, etc.



### Safety

OT asset management helps ensure safety if an unintended or unauthorised change occurs in a device or system.

### Compliance

Helps in preparing for future compliance regulations that could affect your industry

### Security

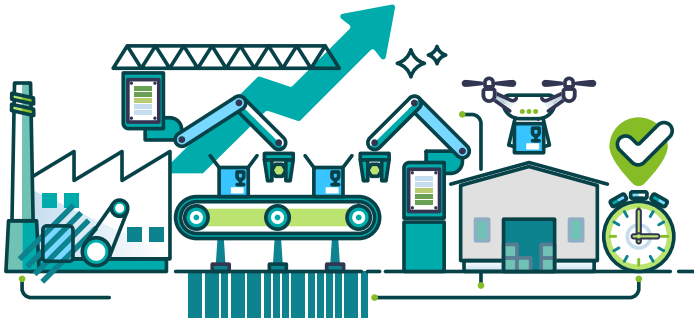
Accurate asset data and security baselines are the foundation of a strong cybersecurity programme.



### 3. Manufacturing asset management (MAM)

Asset management is a general term that is relevant to every vertical. When it's applied to manufacturing or process plants, it's called manufacturing asset management (MAM) or plant asset management (PAM).

Manufacturing asset management is the process of managing and optimising the use of assets within a manufacturing facility or organisation. This includes all physical assets, such as machines, equipment, tools, and infrastructure, as well as intangible assets like software and intellectual property.



- **Track and manage equipment and inventory, including IoT-enabled devices**
- **Effectively schedule maintenance to minimise maintenance and repair costs**
- **Predict and budget for future equipment and maintenance costs**
- **Reduce asset downtime due to equipment maintenance or failures**



### 4. Digital/metaverse asset management (DAM)

A digital asset is generally anything that is created and stored digitally. Digital asset management (DAM) is both a business process and an information management technology that creates a centralised system for organisations to organise and access their media assets.

In the metaverse, digital assets exist as non-fungible tokens (NFTs), which, like cryptocurrencies, are recorded on digital ledgers showing both ownership history and transactions.

#### Digital transformation

Digital asset management systems are providing a more centralised and efficient way to manage assets.

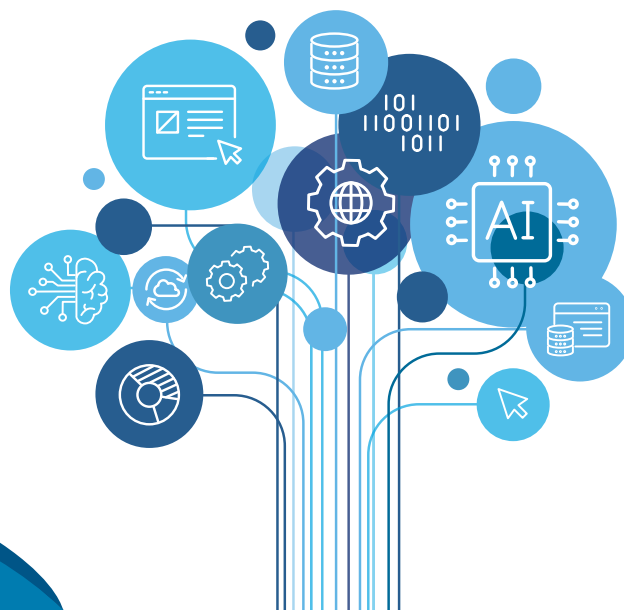
Organisations are working towards the goal of digital transformation, which is using the right technology to maximise revenue while reducing operational costs and improving production agility. "To provide digital asset management, it requires more—good data management, trusted advice, and collaboration with reliable partners are all ingredients to a successful digital solution".

As digitalisation continues to reshape the asset management landscape, those who embrace it will be well-positioned to succeed in the future.

Directories

Cloud storage

Presentations



Graphics

Digital media

PDF documents

## Business challenges



Many workers do not have company-supplied laptops or mobile devices, so they access corporate systems on unapproved devices. This redefines the notion of endpoints and emphasises the need for a centralised, secure virtual desktop environment that can mitigate the risks of unapproved endpoints.



There are several different types of devices connected to the network. The ability to protect them first depends on knowing about their existence and then on what more they need from a security perspective. Poor asset management capabilities may contribute to the inability to detect a breach for extended periods of time if the assets are not inventoried and managed. Cybersecurity frameworks such as NIST 800-53 and others specify requirements for inventory technology assets as well as their relevance or importance to the business.



A business could find itself non-compliant with standards or regulations and not even know it if unknown or unmanaged assets exist on the network.

## Deloitte's offerings

Deloitte offers a range of services that cater to the various aspects of the management of the IT asset lifecycle. The depiction of our end-to-end footprint across the IT asset lifecycle is shown below:

### Current state assessment

- Review existing EAM policies, processes, technology, data, and governance structure
- Gap-analysis report along with recommendations
- Peer-to-peer comparison
- Design EAM policies, processes, and governance structure

### Implementation support

- Design a technical solution as per the business requirements and leading industry practices
- Solution architecture support with accelerators, SME review of solution design documents, and technical architecture review
- Perform technical tool implementation or PMO of end-to-end solution implementation
- Design an ITAM governance structure

### EAM strategy and roadmap

- Identification of the right set of business and operational processes for EAM
- Integration between business and operational processes to maximise outputs
- Future-proof data structure for all existing assets. Framework to build new data structures for upcoming technologies and assets

### EAM governance and support

- Review and recommend process improvement on an ongoing basis
- Asset master data management
- Transactional asset data management
- Data management across interfacing systems
- EAM governance for all lifecycle processes



## Aligning our principles with ISO 55000



### Information Security Standard

1. Improved Financial Performance
2. Managed risk
3. Improved services and output
4. Demonstrated social responsibility
5. Compliance
6. Enhanced reputation
7. Improved organisation sustainability
8. Improved efficiency and effectiveness



### Asset Management Standard ISO/DIS 55000: 2014

8/15 overlapping

4/20 overlapping

CIS20

### Centre for Internet Security



- C1. Inventory and control of enterprise assets
- C2. Inventory of authorised and unauthorised software
- C3. Secure configurations for hardware and software
- C4. Controlled use of administrative privileges
- C5. Incident response management

## Aligning our principles with ISO 27001 and CIS20



### Information Security Standard

- A6. Organisation
- A7. HR security
- A8. Asset management
- A9. Access control
- A12. Operational security
- A14. System acquisition, development, and maintenance
- A15. Supplier relationships
- A18. Compliance



### ITAM Standard ISO19770-1:2017

8/15 overlapping

4/20 overlapping

CIS20

### Centre for Internet Security



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