

# Developing an asset management system for schools and academies

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## Overview

This document aims to outline the cost savings, simplified administration, and improved efficiency your establishment can gain from building an up-to-date and accurate inventory or asset register, and how you can go about doing this.

Financial regulation and other statutory requirements now make accurate and up-to-date asset and equipment inventories a key management function. Whilst academies certainly need to adopt a more stringent financial management approach, state schools are not immune due to the introduction in 2011 of the DFE Schools Financial Value Standard (SFVS) requirements. Particularly relevant requirements include:

- Academies must account fully for assets with capital values typically between £500 and £1000, and these items must be audited yearly as part of financial returns.
- SFVS requires governors to question school managers specifically about disaster recovery plans. This includes making sure that full asset\equipment inventories are maintained, and that insurance cover is adequate.
- The Waste Electrical and Electronic Equipment (WEEE) regulations create a need to maintain an accurate equipment list, and to provide documentary evidence of correct disposal procedures.
- Health and safety regulations require routine testing of portable electronic equipment, and for the results to be documented fully.

It is probably fair to say that the traditional method advocated by many local authorities has been to maintain these records as spreadsheets. Such an approach, whilst very simple in principle, does mean that drilling down through the data to extract management information is a much more complex and time consuming process in practice. Furthermore they are difficult and time-consuming to maintain accurately, and vulnerable to loss or error

## Why computerise?

In many situations, asset and equipment lists already exist in some form, perhaps as a series of spreadsheets; in some form of database. Pulling everything into a single system presents major advantages in management and control by providing a single point from which managers can:

- monitor and track assets
- manage and model costs
- manage maintenance and leases
- manage your vendors and contacts
- enter and update data from a single point
- gain near-instant access to relevant data

If you choose the right asset management system, much of the work involved in recording IT assets can be carried out automatically.

## Getting started

The average school or academy has several thousand assets or pieces of equipment that are candidates for inclusion in an asset register. There may be a temptation to dive straight in, but from our experience, best approach is to take a step back, look at the wider picture, think carefully before acting, and consider the following questions:

- Is it a priority for your establishment to create a computerised asset register?
- Are you driven primarily by the needs of your financial management team to create an asset register for accounting/forecasting purposes?
- Is the priority to build an equipment register for insurance/disaster planning scenarios?
- Is the priority simply to computerise existing asset information held as spreadsheets?

How you answer these questions will determine what kind of system you really need to deliver.

We would also advise that you plan a gradual phased introduction. In this way you will keep the process manageable, and be able to review and evaluate, adapt, and modify it as you move forward.

By default, CSE Asset Manager has a structure based on category type, but can easily adapt to being location-based.

Importantly, and because of its multiple category functionality, it can also offer the best of both worlds. You can designate rooms as asset categories, and then allocate individual assets from different categories as child assets belonging to the room parent.

## Structure



By 'structure' we mean how the data is organised and presented to users of the system.

Flat database structures are difficult to visualise and navigate: their only major advantage is that they are simple. This is where a configurable hierarchical database structure can help. Think of a hierarchy as similar to the structure of a computer drive, where a hierarchy of directories makes it easy to manage your files logically... Using a hierarchy, you can build an asset register structure that meets the needs of your establishment precisely.

CSE Asset Manager is based on an hierarchical SQL database, allowing great flexibility in structure.

It supports any number of levels of hierarchy.

How a database is structured is completely down to individual choice. A structure based on category type has the advantage of grouping similar

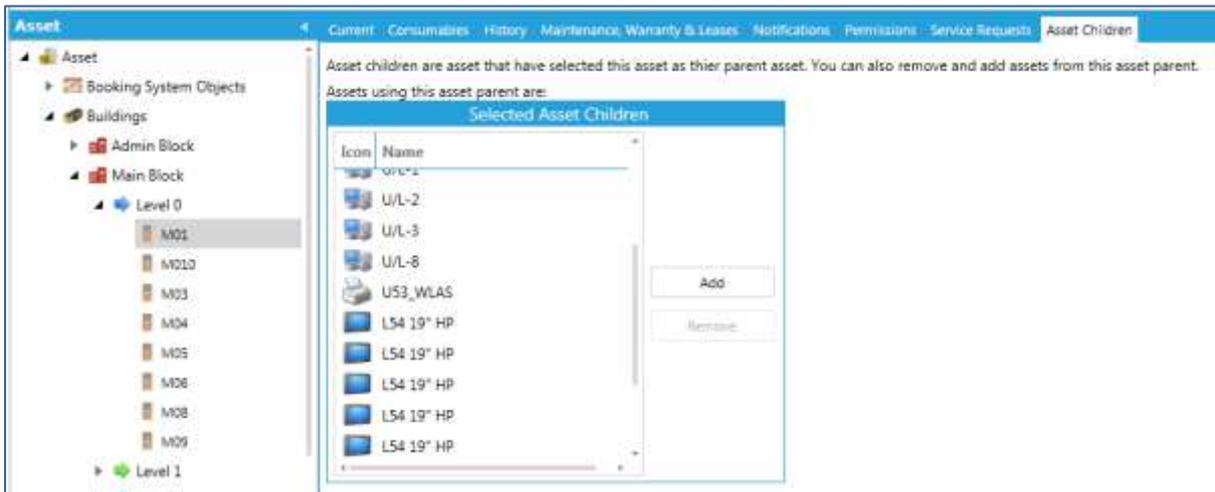


assets together under the same heading (e.g. computer workstations or fire extinguishers). It is particularly useful if you have the flexibility to build a complete hierarchy of asset categories - for example Notebook PCs within Workstations within ICT Equipment - as this will allow you to analyse and manipulate data at a number of levels.

An alternative approach is to build a structure that represents the physical fabric of the establishment: buildings, floors, and rooms. The advantage of structuring your database this way is that it tracks the location of assets accurately within your establishment.

This method can also help to simplify audit processes by providing a clearly defined list of the assets contained within each room.

Both approaches have advantages and disadvantages, and the best solution would probably be a combination of the two which would provide a physical linkage between assets and rooms, but also provide an asset structure that is easier to navigate through being categorised by type.



An additional advantage of this approach would be that you could generate reports based on the contents of a room easily - an important consideration when conducting yearly audits - without compromising the ability to manage all instances of a particular equipment type.

The important consideration remains being able to create an asset structure that works for you: you need to be able to navigate and find individual objects as quickly as possible by whichever method works best at the time. As you can probably see, an asset management system that supports a flexible approach to configuring its hierarchy is important.

## Asset and equipment records

Assets or pieces of equipment are effectively individual objects that you want to maintain information on, and possibly track and account for within your accounting systems. The type of information you need to record about individual assets really depends on the reasons you need an asset register in the first place. If you want to have flexibility and the ability to tailor your asset

register to your exact needs, then the ability to define and add your own custom fields in an asset record is important.

From a purely financial management perspective, the dataset necessary to record relevant information on each asset does not need to be very extensive. It can include fields such as purchase date, purchase price, purchase order number, supplier details, warranty period, maintenance period, and physical details such as location and serial number.

Purchase information (price and date) are important fields, as they provide the basic information needed to manage depreciation. Warranty periods and costs are important if you are interested in modelling total cost of ownership scenarios.

If you also want to record technical details of the assets to help inform your IT support services, the dataset will need to include technical attributes such as MAC and IP addresses.

Software license compliance has become increasingly important over recent years, and your asset register should also be able to provide you with compliance management facilities. Software licenses are often nothing more than an email with attachments containing agreements, license keys or files. Software licenses can be treated as assets in their own right, and your asset register system should allow you to check your site's compliance with your agreements easily. Equally, it makes sense to be aware when software licenses are not being used fully, as it could allow you to identify possible long-term cost savings.

If you have a Microsoft Schools Agreement, your licenses and product keys are accessed via a Microsoft Web portal. The usernames and passwords required to access this are themselves candidates for inclusion as asset fields.

In summary, successful asset and equipment records are all about managing the information that you have about each individual asset in such a way that it can be accessed easily and quickly when the need arises. You also need to be able to create your own custom fields easily, and have the ability to assign them to specific asset categories.

In the case of a software license asset, you should consider creating a field (or fields) that contain file attachments, so you can save emails and licence files or codes directly in the individual software asset record, safely stored and easily accessible when required.

CSE Asset Manager is already populated with a wide variety of pre-build asset fields, but you can easily add your own. Each one can contain one of 17 different data types, such as:

- Single and multi-line text
- Date, date and time, and time period
- Currency (denomination selectable)
- Email address
- Multiple, single, and dropdown choice
- File upload
- Picture
- Barcode
- Web Link
- Contact selector
- SQL Query.

## Automatic discovery systems

We have already touched on being able to record and manage ICT-based assets. Most computerised asset management systems have some capability to scan the network and auto-populate any ICT based assets that they can find.

This can be an important function, as some of your ICT assets will be amongst the most expensive equipment that you have, and will almost certainly need to be recorded and tracked for accounting purposes. Also, some ICT equipment is likely to be in locations that make identification very difficult. For instance much of the schools networking infrastructure will be mounted in cabinets, or even embedded in other devices (for example, hard discs in servers). Being able to scan and audit these types of device automatically from a computer console makes make life a lot easier.

A good automatic discovery system should also be able to monitor your ICT devices. This is an especially useful feature as it can highlight that assets have been modified or changed, for example by monitoring the location of devices and determining whether they have been moved or even stolen.

The best automatic discovery systems should also provide added value to your ICT support and management functions. Being able to drill down into the configuration data and extract useful information such as the individual serial numbers of hard disk drives and memory modules can be a significant time-saver when reporting warranty claims.

## Non-IT assets

Whilst IT assets probably account for a significant proportion of your high-value items, many other types of asset should also be accounted for. It is important to be able to create a system that can handle and enable adequate financial control over these items too, so your systems should be capable of importing them quickly, providing the same facilities to manager them as it does for ICT assets.

The ability to create asset numbers and of bar codes for rapid scanning when carrying out audits is equally important. Creating and maintaining a full asset inventory is an investment for any organisation, and it is therefore vital that the system is both powerful and flexible enough to cope with any eventuality.

CSE Asset Manager's ICT auto-discovery facilities are among the most sophisticated available, with the ability to monitor devices on a regular basis.

Not only can it interrogate a wide variety of devices, but it can also discover internal specification and configuration details.

CSE Asset Manager has a free format input facility that will allow data to be imported without major reformatting.

## Consumables

Consumables can represent significant expenditure for any education establishment, so being able to account for usage and allocation is important, especially when consumables such as projector bulbs can cost several hundred pounds. In many cases, consumables are purchased against a budget and then written off for accounting purposes. However, being able to manage your consumables and to identify how they are being used can provide useful management information.

CSE Asset Manager provides complete stock control and reporting for consumables and, when combined with CSE Service Manager, can provide automatic alerts when devices run low on supplies.

An asset system that accounts for consumable usage and costs would clearly bring additional benefits, such as providing visibility of the day-to-day cost printers so that true total cost of ownership can be calculated. A further positive aspect of strong consumables management is adequate stock control, which will help to ensure that you never run out of vital supplies.

Asset Number	Asset Name	Asset Life Span	
1	L33 OFFICE COPIER	3 year(s), 8 month(s), 2 week(s), 8 day(s), 12 hour(s), 35 min(s)	
<b>General Asset Fields</b>			
Name		Cost	
Purchase Price		£2,800.00	
		<b>Total</b>	
		£2,800.00	
<b>Power Consumption (400 Watts)</b>			
7 month(s), 1 week(s), 7 day(s), 1 hour(s)			
CO <sub>2</sub> (kg)	Energy(MWh)	Cost	
1262.564985764	2506	£445.32	
		<b>Total</b>	
		£445.32	
<b>Consumables</b>			
Name	Purchase Order	Consumable	Cost
Toshiba E-Studio 4520C Cartridge Pack (4)	221928992	Toshiba E-Studio 4520C Cartridge Pack (4)	£285.00
Staples A4 Value Copier / Printer Paper (Room)	A878766-09	Staples A4 Value Copier / Printer Paper (Room)	£1.99
Staples A4 Value Copier / Printer Paper (Room)	A878766-09	Staples A4 Value Copier / Printer Paper (Room)	£1.99
Staples A4 Value Copier / Printer Paper (Room)	A878766-09	Staples A4 Value Copier / Printer Paper (Room)	£1.99
Staples A4 Value Copier / Printer Paper (Room)	A878766-09	Staples A4 Value Copier / Printer Paper (Room)	£1.99
Staples A4 Value Copier / Printer Paper (Room)	A878766-09	Staples A4 Value Copier / Printer Paper (Room)	£1.99
		<b>Total</b>	£294.95
<b>Lease, Maintenance, Warranty</b>			
Description	Type	Expires	Cost
3 Year Maintenance	Maintenance	Expires in 777 days	£250.00
		<b>Total</b>	£250.00
		<b>Asset Total Cost Of Ownership :</b>	£3,790.27

ownership can be calculated. A further positive aspect of strong consumables management is adequate stock control, which will help to ensure that you never run out of vital supplies.

Managing your consumables allows you to track usage and identify assets that use consumables less efficiently than others. From our experience, being able to generate cost of ownership reports for your printers can be quite an eye opener in identifying inefficiency and saving money. With proper analysis, you can model different scenarios, and put into place strategies to consolidate and reduce your printing costs. This can indicate that the best option is to replace printers and invest in more efficient models.

## Software compliance

Keeping track of your software licences is an important (and often overlooked) task that organisations need to undertake, and involves three key questions:

- Do you have enough licences to operate your software legally?
- Do you really know how much your software inventory has cost you and is costing you each year?
- Are you spending money on software that is no longer being used?

CSE Asset Manager can monitor all devices automatically and identify new software as it is installed. Its powerful reporting functions will identify instances of non-compliance, and devices that do not have authorised licences.

A good ICT-based asset management system should be able to collect information on application licences that are deployed to workstations automatically, and



### PAT Failed Test Results Report

Generated on 15/11/2012 13:38:37      Status Fail  
 Test Date      Date Range 01/06/2012 - 15/11/2012      Selection Type SelAssetCat  
 Next Test Date      \*\*No Selection\*\*

Appliance ID	Asset	Description	Location	Status	Fuse Amp	Test Engineer	Updated By	Updated Date
1794	L33 22" HP	Desktop Computer Monitor	L33	Fail	13	TSA	sdadmin	26/08/2012 13:27:32
		Notes	Insulation test failed		Test Date	22/08/2012		
		Fail Reason	Insulation test failed		Next Test Date	22/08/2013		
1892	L28 HANNSG	Desktop Computer Monitor	L28	Fail	13	TSA	sdadmin	26/08/2012 13:27:32
		Notes	Earth Leakage Failed		Test Date	22/08/2012		
		Fail Reason	Earth Leakage Failed		Next Test Date	22/08/2013		

## Asset disposal

The Waste Electrical and Electronic Equipment (WEEE) regulations create a need to maintain an accurate equipment list, and to provide documentary evidence of correct disposal procedures being followed. A computerised asset inventory facilitates this by centrally recording and storing compliance documentation, and recorded in a form that can be accessed easily by the senior management team.

Transactions in CSE Asset Manager cannot be deleted or modified, and always record who has done what. This means that you have a complete audit trail from initial purchase to responsible disposal.

## Depreciation modelling

Keeping track of asset values is important in determining the economic life of an asset. This can be modelled in a number of ways, to ease the decision-making process in determining when to replace or renew items. This exercise is often carried out using spreadsheets, but the weakness of this approach is that spreadsheet records have to be updated manually when new items have been acquired, or when items have been

CSE Asset Manager supports the three most common depreciation methods, and these can be applied at device or category level.

scrapped or disposed of.

Asset	Depreciation Method	Depreciation Value
L33_22" HP	Straight Line Percentage	1%
L28_HANNSG	Straight Line Percentage	1%

Being able to model depreciation scenarios directly from within an asset management system provides great benefits as it ensures that the data is correct and always up-to-date.

The overriding benefits of maintaining an asset inventory are that vital information such as this is available on demand to members of the management team.

## Warranty management

Managing warranties and associated maintenance agreements effectively provides important protection for any organisation, but due to the wide range of agreements and the wide dispersion of items throughout an organisation, it is something that is easily overlooked or lost track of. An asset management system is an ideally placed system to provide the hub for managing and maintaining your warranty agreements.

CSE Asset Manager doesn't just provide a comprehensive management system for warranties, but will also check the on-line databases of IT suppliers such as HP and Dell automatically to check individual asset warranties.

Ideally, you should be able to associate warranty information with each asset. This should contain all the details necessary to allow your support staff to find and expedite warranty claims quickly and efficiently. In addition, a reporting system should be able to warn you when warranties are expiring, allowing you to plan ahead and extend them as required. Since extended warranties have associated costs, you should also be able to model these and ensure best value when negotiating contracts.

## Linking assets to your help desk

Asset management systems can benefit from being linked to your help desk function, saving significant time in cross-referencing hardware details. Support staff can identify the equipment being reported as faulty immediately, and access the devices asset inventory record instantly. This means that when staff report faulty equipment to warranty providers, they already have the information that is required.

CSE Asset Manager discovers serial numbers and what is inside each piece of IT equipment automatically. There's no need to crawl under the desk, or to dismantle any equipment.

## Room and asset booking

If your asset register already knows about all your equipment (and possibly also about your rooms and other resources), then there is really no reason why it should not also provide a booking system for shared assets such as rooms, laptop trolleys, minibuses, etc. If these assets are also linked to the assets that are located within them, these can be booked at the same time to ensuring that everybody is aware of what is booked and when.

CSE Asset Manager allows you to make any asset bookable, and provides an easy-to-use calendar visible to authorised users. It can also link to the Help Desk to flag outstanding tickets on the bookable assets

It would also be useful if the person booking the asset could see any help desk tickets outstanding against the equipment being booked. In this way the booker can decide whether to go ahead or make alternative arrangements.

## Reporting

Once all the relevant information is stored within an asset management system, a simple method of accessing the information is needed. This is where reporting systems come in. From a management perspective, this feature is probably the most visible and important method of querying the system and extracting management information: timely, up-to-date, and accurate information is a critical management function for any organisation.

CSE Asset Manager supports report generation from templates, but also provides comprehensive preformatted reports to meet a variety of requirements. All reports can be scheduled to run and be distributed to an email list automatically.

There are several common methods of generating reports. First, there is some form of ad-hoc system that allows you to create your own report templates and then run them to extract the data. This is fine for those who understand the structure and format of the data they are working with.

Another method is to use pre-formatted reports that perform set functions (a report on assets disposed of in the last 30 days, or the cost of ownership of printers over the last year, for example). It would also be advantageous if these standard reports could be automatically scheduled to run at set intervals and circulated to key personnel within the organisation.

## Conclusion

Developing an inventory management system requires investment in systems and time. However, the advantages are immense, as inventory management puts you in total control of procurement and maintenance of your assets. It will provide you with a single point of reference when dealing with asset-related queries from modelling depreciation for the accounting books, to looking up part numbers for warranty claims or replacement ordering.

A good IT-based asset management system can remove much of the drudgery from the initial set-up and (perhaps more importantly) from on-going data maintenance.