

Fixed Asset Inventory: Choosing the Best Solution

No one likes doing inventories, but they are necessary. Fortunately, technology has made the taking of asset inventories easier, quicker and more accurate than ever.

But to deploy the right technology for your situation requires planning and understanding. Here are some factors to consider when deciding how to conduct your future inventories.

Manual versus Automated

In terms of asset inventory technology, the most basic question to consider is whether to conduct your inventories manually or with automation. Manual asset inventory taking has the advantage of being cheap (all you need are pencils and paper) and familiar (everyone knows how to check found assets off of a system-generated report or write locations and tag numbers on a piece of paper).

But manual asset inventory taking has decided disadvantages. It is slow and quite time consuming, requiring manpower that could otherwise be used to better advantage. In addition, asset inventory takers can, inadvertently or because of just being lazy, provide inaccurate results. They may miss certain inventoried items, misidentify items, calculate incorrectly or just do a sloppy job. Oftentimes, manual inventories are done in a quasi, almost half-hearted way because they can be so painstaking and time consuming.

Automated asset inventory taking, which involves hardware, such as a scanner or reader, and software for reading barcode and/or RFID asset tags, has greater upfront costs than the manual method. It requires the purchase of hardware, software and perhaps training, as well as time to learn how to effectively use the technology. And then there is the issue of change. After always doing inventories manually, changing to an automated system requires a shift in attitude by those involved, which some find disconcerting.

However, automated asset inventory management provides considerable benefits over the manual method. It greatly increases accuracy, cuts the time required for inventories by at least 50% and reduces "lost" inventory. And audits are completed faster and less expensively. In general, automation simplifies asset inventory management and makes it easier, which encourages users to conduct more complete inventories. The bottom line: Automation generally produces more meaningful and accurate asset inventory data, which is more reliable and useful to management than data from manual inventories.

Add Scanning to Your Existing System versus Purchasing a Standalone System

No doubt, you currently maintain a database in your accounting system's fixed asset module that has historical data regarding ordering, retiring and transferring assets. Assuming you decide to automate your asset inventory procedures, you must decide if you are happy or not with the fixed asset module in your current financial management system.

If it does not meet your needs, your first step in the asset inventory automation process is to find an accounting package that works for you. In fact, the accounting package you purchase may include scanning capability, precluding your need to add a scanning module. Note that when you add scanning capability to an existing system, such as offered by BMI Systems Group, nothing changes in your accounting system except for the addition of scanning.

Your choice now becomes whether to add scanning to what you have or purchase a standalone system.

You might choose a standalone system because your current system lacks certain capabilities. For example, if your accounting system's fixed asset module is not Internet-based but you want one that is, a standalone product could be your preferred solution. Perhaps your current system, which you want to keep, cannot accommodate a scanning add-on package. In this case, you have no choice but to deploy a stand-alone system.

While some users prefer a standalone system, the vast majority chooses to add scanning capabilities to their existing accounting package's fixed asset module. The cost and complexity of having to input data into accounting software when purchasing an asset and then re-inputting much of the same data into a standalone system is time consuming, costly and prone to generating errors. As a general rule, add scanning to your existing system rather than purchasing a standalone product when possible.

Features You May Want From a Standalone System

- Track assets by location
- Track whether asset is active or inactive
- Generate standard reports for depreciation
- Assign asset categories
- Add new items in the field
- Conduct physical asset inventory with a portable data terminal
- Reconcile physical-asset inventory to book-asset inventory
- Keep asset photographs
- Maintain asset history file
- Generate management reports
- Schedule asset maintenance
- Schedule transfers to other locations
- Record notes for each asset
- Print barcode labels and catalogs
- Provide system support for RFID and barcode scanning
- Have capability to export data via Excel, text, HTML, etc.

Adding Scanning to Your Existing Fixed Asset Data Management System

If you decide to keep your existing system, (Fixed Asset Module) and add scanning capabilities to it, you need know if off-the-shelf products will work with what you have. BMI's Fixed Asset Scanning Systems interfaces with financial management systems from the following Public Sector vendors:

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| • Sartox | Texas ESC, Region 20 |
| • Tyler Technologies/Infinite Visions, Eden & Munis | CSI |
| • SunGard/BusinessPLUS, ONESolution, eFinance PLUS | Skyward/ SBS |
| • Innovak International | Weidenhammer Systems/CIMS, alio |
| • Oracle – PeopleSoft Enterprise | West Virginia Education Info Systems |

If your Fixed Asset Module vendor is not on this list, BMI can contact them to explore the possibility of allowing BMI's product to interface with the vendor's product. Often, the vendor will charge its customer to have its product interface with a scanning system.

Scanning Options

First and foremost you must choose a rugged portable data terminal (PDT) and a scanning system with the features you need. There are two and sometimes three scanning system options available depending on the interface.

Rugged Portable Data Terminal – Minimum recommended features

20+ key numeric keypad	Drop Specification - 5 feet	PAN – 2.1 Bluetooth
Integrated Laser Scanner	Sealing - IP54	High quality 3.5" VGA screen
2200 mAh main battery w/backup	CPU – 624 MHZ	OS – Windows Mobile 6.1

Basic inventory scanning system

For the most basic asset inventory for example, a system can be quite simple. The PDT (portable data terminal)/scans asset tags to take an inventory while the system produces a text file to upload back into your fixed asset module. The scanner has limited capability and is usually a PDT with a DOS or proprietary operating system (OS). There is no way to back up or edit scanned data with the basic inventory system, nor does it produce reports. Inventory reporting must be done on your financial management system's fixed asset module.

What you want with a 2nd tier system is a scanner program that includes limited validation capability; the ability to validate the asset tag number is a minimum requirement. It should also include a configurable export file utility because all fixed asset modules have a unique file format that must be produced from the scanning system to interface properly with your fixed asset module. The program on the scanner should also support scanning assets multiple times and saving the last record scanned.

Additional features of an add-on scanning system that provides more functionality than basic scanning include:

- A PDT/scanner with Windows Mobile OS
- A PDT/scanner with flash data storage and external memory card support for auto backup
- System includes a database on the desktop to review, edit and report on scanned data prior to producing a scanned file for uploading and posting to your Fixed Asset Module.
Note: Some interfaces do not support this method. Contact BMI to see if your vendor does.

Advanced inventory data management system

An advanced data management system includes a program on a mobile scanner and a standalone desktop application. BMI's system, for example, compares an export of fixed asset records against a physical scanned file from the barcode/RFID scanner. The program on the mobile device allows you to re-tag and clean up current asset records "on the fly." Collected data can be reviewed and edited prior to reconciling, exporting, uploading and posting into your fixed asset module using an interface program supplied by your software vendor.

Advanced features that provide robust scanning and data management to your fixed asset module include:

- Fixed and/or mobile active and passive UHF RFID asset tag scanning
- Asset tag number validation with invalid tag notification
- Data storage on non-volatile memory with auto backup to external memory for protection against data loss
- Current number of assets in a location/room shown on PDT
- Descriptive data of missing assets by room
- Converting current valid tag number to new tag number on PDT
- Ability to view and edit additional fields, including description, manufacturer, model and serial number when scanning the asset tag number
- Robust reporting of exceptions prior to posting to your fixed asset module
- Support of Bluetooth communications for mobile active RFID reader and mobile exception report printer support

By a wide margin, most users purchase an advanced system because of its wealth of features and functionality.

Barcode Scanning versus Ultra-High Frequency Radio Frequency Identification

Once a system is chosen, a choice must be made between using barcode and/or UHF RFID (ultra-high frequency radio-frequency identification) technology. UHF RFID uses wireless technology to transmit data from a UHF RFID tag attached to an asset back to an UHF RFID reading device. BMI recommends the Unitech PA 690 rugged PDT/scanner to scan barcodes. It also supports reading active UHF RFID tags when an additional mobile active UHF RFID reader is purchased. BMI recommends the Motorola MC 3190Z for clients that want to scan barcodes as well as passive UHF tags.

At this point in the decision process, the user has three options:

Barcodes: These are basic, widely used printed barcodes. Barcode tags cost 13 to 45 cents each, which is the least expensive option. However, the scanner must be within 6 to 12 inches of the tag and in line-of-sight of the scanner to work. Using barcodes saves up to 50% of your time when compared to manual inventory methods.

Passive UHF RFID tags: A passive tag uses the energy transmitted by the UHF RFID reader for its energy. Because the reader provides the energy, the reader and tag must be close to one another – within about three to 12 feet – while not requiring them to be within line-of-sight. Since the tag uses the reader's energy, it costs more than a barcode tag but not as much as an active RFID tag; passive RFID tags run \$1.00 to \$2.50 each. This option is 40% to 65% faster and more expensive than barcodes, but less expensive than active RFID scanning systems.

Active UHF RFID tags: The third option is active UHF RFID tags, which contain batteries that provide their power. Two types of active UHF RFID systems are available: fixed active and mobile active UHF RFID systems. Fixed active UHF RFID systems can track assets down to the room level and mobile active RFID systems can track assets to the location and building level only. A fixed active UHF RFID reader can read asset tags in an area of as much as 10,000 square feet per reader with no line-of-sight requirement. Fixed active UHF RFID technology requires no personnel to take an inventory. It is all automatic. Fixed active UHF RFID is generally deployed when robust loss prevention is required or if an individual asset must be located quickly. A mobile active UHF RFID reader has a range of approximately 200 lineal feet. This technology requires fewer personnel and reduces the time to take asset inventory by 70% to 85% when compared to using barcodes. This enormous savings comes with a cost: The tags are \$18 to \$29 each. The batteries in these tags are good for approximately five to six years. Among the three options, this technology has the fastest scan time but is also the costliest.

In many cases it may make sense to use all three scanning technologies for the most cost effective and productive way to accurately manage your fixed assets.

It makes a tremendous amount of sense to deploy a barcode and/or an UHF RFID based system if you want to maintain an accurate fixed asset inventory and enjoy huge gains in accuracy while reducing costs and manpower requirements. Contact BMI Systems Group to discuss options and technologies your organization can use today to save time and money.