



Asset Tracking

A Guide for Busy Professionals



877-373-0390

| www.redbeam.com

| Atlanta, Georgia

Table of Contents

Getting Started with Asset Tracking

Asset Tracking 101

Who Needs Asset Tracking?

The Value of a Reseller

Choosing an Asset Tracking System

Smart Asset Tracking Software Features

What Asset Tracking Hardware Should You Use?

4 Ways Asset Tracking Will Save You Time

Lightning-Fast Physical Inventories

Ongoing Asset Management

Fewer Lost, Missing, or Stolen Assets

Information When and How You Need It

How Asset Tracking Impacts Your Bottom Line

Big Picture Perspective

Simplified Reporting

Greater ROI

Regulatory Compliance

1
2
3
4

Introduction

Are you tracking your assets with a pencil-and-paper system or managing them with an Excel spreadsheet? Are you putting off inventory because the task is just so overwhelming? Are you uncertain about the accuracy of your asset records? Have you begun to realize just how much time and money your organization is spending looking for stuff?

If you've answered "yes" to any of these questions, then you've probably begun the search for an asset tracking solution – a way to automate the process of identifying, locating, and keeping up with your company's valuable resources.

This guide is for anyone who wants to improve their organization's visibility into and management of fixed assets. It will help you understand asset tracking the best way possible. You'll learn about what asset tracking is and how it works, and discover practical ways to track your assets.

GETTING STARTED WITH ASSET TRACKING

Asset Tracking 101

Fixed assets are the tangible things your organization uses to create value. Poor management of these things can be costly, so it's important to put a system in place to track them.

Asset tracking is all about making sure that your asset records match physical reality. It's about staying in the know about the "who, what, when, where, and how much" of your assets.

What follows is a basic framework for understanding how asset tracking systems work and how to find the right one for your organization.

What is Asset Tracking?

Asset tracking refers to the process of verifying the location, condition, and value of your physical assets.

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Asset Tracking Systems

Fixed assets are the tangible things your organization uses to create value. Poor management of these things can be costly, so it's important to put a system in place to track them.

The combination of hardware and software that work together to help you keep track of your assets is called an asset tracking system (also referred to as an asset tracking solution). A system is made up of hardware, software, and labels.

Asset tracking hardware can display, transmit, and capture encoded information about your assets; it also sends that information to an application that stores and interprets the data. Asset tracking software can generate reports that calculate and summarize information such as:

- Current asset value
- Depreciation
- Location and movement
- Use history
- Lost or damaged assets

Automatic Identification (AutoID) Technologies

Asset tracking depends on being able to assign a unique identifier – an identification number at the very least – to each item you need to keep track of. Barcode and RFID are two ways of assigning and attaching identification to assets. The software, hardware, and labels used in most asset tracking systems will generally be based on one or both of these identification technologies.

Barcodes use a series of lines – or bars – and spaces of varying widths to encode identifying information about an item. Barcodes can be 1D or 2D and involve a range of different symbologies that are decoded using laser scanners or imagers.

Alternatively, RFID tags and labels contain microchips that you can encode with an item's identification information; the information they carry – often in greater detail than barcodes are capable of holding – is transmitted and received over radio frequency waves.

Deciding which ID format makes the most sense for you depends on several variables, including:

- What you want to track (if your assets are liquid-filled or metallic, RFID might be tricky to implement)
- Where and how these items are used (if you want to be able to capture a lot of ID reads without having a direct line-of-sight between the reader and the asset, then RFID can deliver performance here that barcodes can't match)
- Your asset tracking budget (because barcode technology tends to be less expensive to implement than RFID)
- The cost of losing assets or failing to meet external compliance requirements (if the risk of losing track of expensive or critical equipment is high, then fast, reliable RFID-tracking may be a "no-brainer")

Asset Tagging

One of the first steps in implementing any asset tracking system involves establishing digital identities for your assets. This starts with attaching tags, which are encoded with unique identification information, to the assets you want to track.

These tags can come in many different forms, including printable RFID-encoded labels, plastic RFID-encoded tags, paper and synthetic barcode stickers, and more. Whatever asset tracking system you implement will give you specific instructions on initially uploading or entering this asset tag information into the software.



Figure 1. Asset tags show ownership and make taking audits a breeze.

Once your items are tagged and in your system, you can scan a tag at any time and be able to access all of the identification information associated with that asset.

You'll also be able to account for it during audits and inventories and update its use history, location, condition, and other details as needed.

Data Capture Devices

Data capture devices include RFID readers and barcode scanners, and are a critical piece of hardware in asset tracking systems. These devices elevate your asset tracking activities from manual data-entry tedium to automated processing: they associate your physical assets with their digital identities in the software.

Some devices are capable of capturing both RFID and barcode data, giving you flexibility that you may need for tracking multiple types of assets in different locations.



Enterprise mobile computers help speed up data collection and increase productivity.

Like asset tags, data capture devices also come in a number of different form factors (e.g., handheld, fixed, wearable, etc.) and offer capabilities that are designed to support a wide variety of applications and environments, so it makes sense to consider the general productivity-enhancing opportunities here – even beyond asset tracking – when weighing your hardware options.

Who Needs Asset Tracking?

Simply put, any organization that has fixed assets needs asset tracking. Publicly and privately-owned companies alike must stay compliant with regulatory standards that require them to report the value of their fixed assets (we'll talk a little more about these regulations later on in this guide).

What do we mean by fixed assets? Also referred to as property, plant, and equipment (PPE), fixed assets are any tangible items that are purchased as an investment in a company's long-term financial gain.

Fixed assets support a business's operations and aren't intended for sale. An asset tracking system makes it easy for anyone to maintain the up-to-date fixed assets records that are needed for calculating taxes and ensuring insurance coverage.

However, even companies with relatively few fixed assets can benefit from asset tracking systems, which can be used to track just about anything. Asset tracking can significantly cut down on the time spent searching for frequently used tools, small parts, and office equipment. Everything a company owns can be tracked, including:

- IT equipment (e.g., laptops)
- Vehicles
- Files
- Medical equipment
- Maintenance supplies
- Educational materials
- Videos
- Instruments

The possibilities are endless.

Return on Investment (ROI) Alert

While some smaller businesses may try to get by without an asset tracking system, the truth is that knowing where your tangible assets are, offers valuable benefits to all companies. Mismanaging your assets or operating under outdated information can severely affect anyone's bottom line.

The Value of a Reseller

When starting your search, you'll find different options for purchasing asset tracking systems, including: 1) directly from an asset tracking software developer/ manufacturer; and 2) working through a Value Added Reseller (VAR).

While working directly with a manufacturer means that you'll be getting information about a solution straight from its maker, you also have to consider that their goal, ultimately, is to sell you their specific product. In the name of due diligence, you'll need to reach out to manufacturers of several different systems, and the burden of sorting through each one's marketing messages and feature sets will rest on you.

VARs, on the other hand, typically cultivate relationships with multiple manufacturers in a particular area of technology so you don't have to. They focus on developing expertise in order to provide appropriate product offerings to a range of different types of customers. A VAR's job is to ensure that you get the best asset tracking system for your needs.

Believe it or not, we commonly hear of companies spending time and money on asset tracking systems that they never end up using. Working with an experienced, reputable VAR can help shorten the research phase of shopping for an asset tracking system, and can increase the likelihood that you'll end up with a solution that actually fits with the way your business operates. VARs can offer their customers several benefits, including:

- Access to a full range of products, which helps them know what options will fit your needs across a variety of criteria.
- Expertise, based on the time they've taken to carefully and objectively test and select the best products on the market.
- Aggressive pricing.
- Insight and expertise to pair their understanding of business with their mastery of technology.
- Assistance in discovering built-in features and benefits that you might not even have been looking for.
- Continued support and guidance throughout the system's lifecycle.

Ultimately, an experienced VAR can do more than provide simple answers to your questions – they have perceptivity about what you may not know, can anticipate your next questions, and help you feel fully confident in your asset tracking system purchase decision.

Choosing an Asset Tracking System

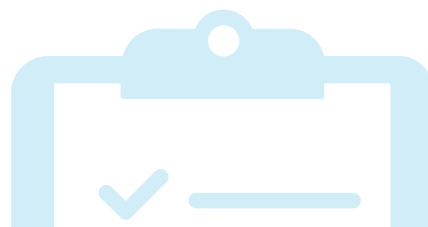
Asset tracking systems comprise a combination of hardware and software. When evaluating different systems, the underlying question you need to consider is this: Will this particular hardware and software technology combination offer the best solution for my company's specific needs?

The answer may well hinge on whether the system is based on RFID or barcode. As you weigh the pros and cons of these technologies, there are several factors that can help you determine the best option for you.

Here is a checklist of asset tracking variables that are helpful for you to verify on your end before you begin exploring asset tracking systems:

- Environmental conditions where assets will be tracked (e.g., dusty warehouse, temperature-controlled laboratory, humid greenhouse, etc.)
- Number of assets
- Physical dimensions of assets
- Material composition of assets
- Spacing of assets (how close together are your assets?)
- Distance between assets and your data capture device (how far away will your assets be – e.g., do you need to track assets stored on high shelves or other hard-to-reach locations?)
- Existing hardware and software (e.g., will your asset tracking system need to be integrated with any other software applications?)
- Budget

Once you've got a thorough understanding of your resources and conditions, you can begin reaching out to manufacturers and/or VARs to learn about your options and understand what different solutions offer. We highly recommend setting up demos as the best way to explore asset tracking systems, so that you can experience for yourself how each one works.



Smart Asset Tracking Features

Asset tracking software serves as a one-stop-shop for a company's asset data, filling in the blanks on how many assets a company has, where they are located, and how much they are worth. Think of asset tracking software as the "brains" of the asset tracking system.

With so many asset tracking software options on the market, you'll quickly see that not all are head-of-the-class when it comes to feature sets. Certain factors can make a huge difference in how useful the software ultimately is.

Here are some examples:

Reporting Options

Highly configurable reporting options give you the freedom to sort and view data by categories such as location, employee, and more, rather than limiting your output to predefined data sets. Web-based vs.

Desktop-Based vs Web-Based

Web-based applications run on your wireless network, require no extra hardware or maintenance, and are accessible by employees with proper user login credentials from any mobile device with a browser and a WiFi connection. In contrast, desktop-based asset tracking applications can only be accessed from devices on your network and are a good option for companies with limited wireless access.

User Profile Options

A important security feature, user profiles enable you to control access to the information in your asset tracking system, so that not everyone in your company will be able to see, enter, edit, or report on all data that is available. More or less access can be granted by title, function, department, etc.

What Asset Tracking Hardware Should You Use?

In an asset tracking system, the hardware does a lot of heavy lifting. Hardware components of a system can include:

- Data capture devices (for reading asset IDs), generally –
 - a handheld barcode reader attached to a laptop or mobile computer,
 - a mobile computer with a built-in scan engine or RFID-reading capabilities,
 - a mobile computer paired with an RFID sled, or
 - a fixed barcode scanner or RFID reader
- RFID antennas (for amplifying signal strength in RFID-enabled systems)
- Laptop or mobile computer (for hosting or accessing the application)
- Printers/encoders (for creating your asset ID labels and tags)

Data capture devices can be fixed or mobile. For the purposes of asset management, a fixed reader can be installed at a stationary location (like a doorway, check-out desk, or other chokepoint) and read tags as they pass by or are held up to the scanner.

Mobile devices, on the other hand, are portable and can include handheld RFID readers and wearable barcode scanners, handheld mobile computers that can capture barcode or RFID (sometimes both), and vehicle-mounted computers.

Mobile readers let you capture data wherever your assets happen to be, while fixed readers capture data as your assets move along a known path. For most asset tracking newcomers, mobile devices will be the best fit.



A wide variety of Android and iOS mobile devices can be used to track assets.

Your specific hardware selections should be determined by the ID format most appropriate to your asset tracking needs, your system's software specifications, and the environmental conditions of your business operations, as well as your assets themselves and how they are used.

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Return on Investment (ROI) Alert

In our increasingly mobile culture, many companies are offering employees a BYOD (bring your own device) option for using personal technology to complete their job duties. It's also true that many of today's smartphones can run apps that use their built-in cameras to scan barcodes.

However, when it comes to critical asset tracking activities, smartphones with scanning apps simply can't compete – in terms of performance, speed, encryption, security, reliability, and durability – with rugged, enterprise-grade devices that are designed to withstand workplace rigors, securely accommodate multiple users, and are equipped with built-in imagers that can quickly capture the thousands of barcodes involved in a typical inventory.

We highly recommend working with a professional VAR to identify the most appropriate hardware options for your system and budget.

4 WAYS ASSET TRACKING WILL SAVE YOU TIME

Lightning-Fast Physical Inventories

So much time is spent searching for assets that it should be criminal. Of course, it isn't – but not keeping accurate records of your assets could certainly put your organization at risk for non-compliance. For many companies, taking a baseline physical inventory of assets is a daunting task – so daunting that many simply put it off. But ignoring the need won't make it go away, and it certainly won't protect your organization from serious consequences.

This is where asset tracking really shines ...

Return on Investment (ROI) Alert

With automated data capture, the average time it takes to identify and account for each asset is cut from 30 seconds to just three seconds. This means employees can work 70 percent faster than they are capable of without this automated processing.

Once you know how many assets you have, where they are located, and the condition they're in, you'll only need to periodically verify the accuracy of your records. The time freed from dull manual labor processes gives employees more opportunity to engage in other higher-order business-generating activities.

Ongoing Asset Management

Asset management isn't a single task; it's a process. Asset tracking systems are designed to make asset management, well, manageable. Your asset population is changing every day – assets are being moved, added, and changed (MAC). For your information to remain accurate, you need to update your records to reflect MACs and quickly make this information available to everyone who needs it.

Moves, adds, and changes don't have to be archaic pencil-and-paper, form-driven processes. In fact, tracking asset movements has to be a convenient and uncomplicated process, or it is likely that workers will forget or overlook this step.

With an automated asset tracking system, you can track asset movements more quickly and efficiently than with manual methods. Because automated asset tracking requires so much less effort, you may find that you're actually auditing your assets on a more frequent basis and are able to use the gathered intelligence to better decide how your assets should be used.

Fewer Lost, Missing, or Stolen Assets

Asset tracking software makes it easy to stay accountable for your assets by making your asset information visible – the opposite of "out of sight, out of mind." With an efficient asset tracking system in place, you can keep a constant eye on your assets and will be able to see very quickly when something is out of place or being misused.

Imagine: no more replacing tools on-the-fly because you can't find them when they're needed – only to end up with costly and unnecessary duplicates. Having a definite asset tracking process in your operations, where assets are assigned and tracked to specific individuals, also encourages greater employee responsibility.

Return on Investment (ROI) Alert

Survey data shows that workers who spend just 10 minutes a day searching for needed tools and inventory lose about a full 40-hour workweek every year. Multiply one worker's weekly salary by the number of workers in an organization, and you can quickly see how much money a company loses annually just trying to find stuff!

Information When and How You Need It

Asset management serves the ultimate purpose of ensuring audit compliance and maintaining accurate asset records for tax and insurance purposes. Managers and auditors directly benefit from an asset tracking system's reporting capabilities which can quickly and easily supply the asset information they need for analysis and verification. Asset tracking software should eliminate the burden of generating reports.

With RedBeam, for example, you can create reports that show almost anything you could need to know about your assets, including:

- How many you have
- Where they are
- Who has them
- What condition they're in
- Their value at a specific time, or within a specified date range
- A history of when and where they've been moved

In addition, you can filter the information to prioritize it in the way that best suits your needs. You can generate reports based on location, employee, department, or nearly any other way that's meaningful to your operations.

HOW ASSET TRACKING IMPACTS YOUR BOTTOM LINE

The Big Perspective

Asset tracking systems are designed to save time and money at many different levels throughout an organization. By increasing asset accountability and enabling more efficient asset management, asset tracking systems provide data that helps multiple shareholders do their jobs better.

Managers in Accounting and Finance are primarily concerned with maintaining regulatory compliance related to taxes and insurance. They need to know how many assets the company holds and the total value of those assets after depreciation.

IT/Operations Managers are looking at similar information, but for different reasons. They turn to asset tracking solutions for insight to direct their decision-making processes around asset management. Good asset tracking software can be set up to indicate when it's time to refresh or update technology when items are due for preventative maintenance and/or repair, if critical equipment needs to be replaced, and whether or not their asset purchases are yielding optimal returns.

Information When and How You Need It

Asset tracking benefits everyone across an enterprise, even if they aren't aware of it. From the time saved on searching for tools and equipment to the money each department saves on replacing lost items, an efficient asset tracking system frees up resources throughout an organization.



Asset management is essential to the daily and long-term management of technology-related hardware.

Simplified Reporting

The entire point of an asset tracking system is to make gathering and reporting on asset information more manageable. The data collected is sent to a database that can be accessed by anyone with appropriate credentials, and can be used to generate meaningful reports. You can set parameters that limit access by employee, department, or function so that employees only see information that is relevant and necessary for them to do their jobs.



Asset tracking helps eliminate messy checklists and spreadsheets.

If you're tracking assets with a spreadsheet, then generating reports can be a time-consuming process of organizing and filtering data. You might even be using manual calculations to determine the depreciation of your assets. Asset tracking software can do all of this for you. Choose how you want the information to be filtered, select your preferred method of calculating depreciation, and the software can generate the reports from there.

Greater ROI

Asset tracking systems are inherently designed to maximize your return on investment. By staying in the know about your asset whereabouts, statistics, and history, you can take action to minimize unnecessary expenses. Here are just a few examples:

- When you have the ability to track down an item's last known location or know who checked out a particular tool, you don't have to purchase replacements just because something's been borrowed by another department or was not immediately returned to its proper storage place after last use.
- By providing managers with data about asset use patterns and a place to log repair histories, asset tracking systems can make it easier to keep up with preventative maintenance and help maximize the life of your assets.
- They help exorcise "ghost assets" from your books: An unfortunate reality for many companies involves assets have been lost, stolen, or are unusable, but which company records still reflect as active assets. These ghost assets can account for as much as 10 to 30 percent of a company's assets. This means your organization could be paying taxes on as many as 30 percent more assets than it actually owns!

Regulatory Compliance

Most organizations are required to annually audit their fixed assets. While government agencies and public companies face regulatory requirements, even private and nonprofit organizations benefit from an annual audit.

Government Agencies and Contractors

Statement No. 34 of the Government Accounting Standards Board (GASB 34) requires all government agencies to maintain accurate records of the value of their fixed assets. These include long-term assets that are generally more valuable and can be preserved longer than capital assets. These include things like land, buildings, equipment, and machinery that is attached to a building.

Private Businesses and Non-profit Organizations

While private companies and nonprofits are not subject to the legal standards set forth in Sarbanes-Oxley and GASB 34, there are many reasons why they should consider adopting similar standards as best practices.

Nonprofit organizations may soon face Financial Accounting Standards Board (FASB) regulatory requirements and need to be prepared to present accurate financial records that include details on the acquisition, depreciation, and disposal of fixed assets.

Likewise, private companies that may wish to one day go public or be acquired by public companies will be required to submit accurate, up-to-date financial records for assessment.



Conducting annual physical inventories is often required for corporations, non-profits, and educational institutions.

While the word “audit” can bring to mind an overwhelming process of accountability and verification, it doesn’t have to be that way. An efficient asset tracking system can make the auditing process so simple and fast that you’ll stop dreading it.

But you don’t have to wait for an audit – staying prepared year-round can minimize tax and insurance liabilities. Asset tracking can be used to keep track of asset life cycles so that you are always prepared to account for your fixed assets at any time.

Moving Forward with Asset Tracking

This guide was designed to get you started on the basics of asset tracking, including what asset tracking is, how an asset tracking system works, and why most organizations need one. If you’re reading this, chances are you are in the beginning stages of searching for one. Please don’t hesitate to reach out to us with any questions you still have – we will be happy to help or connect you to a professional service provider who can better address your needs.

About RedBeam

RedBeam was founded in 2004, and we've been growing ever since. From the launch of our first packaged application to becoming one of the leading software brands in the data collection industry, we've tried to stay true to our core belief – make it as easy as possible to do business with us – and to deliver exceptional value to our customers.

We owe a huge thanks to our customers and reseller community for partnering with us on this awesome journey, and we hope that you'll continue to be part of our story. Looking for an asset tracking or inventory management solution? There's a good chance we can help.

