

WHITE PAPER



## It's 10PM; Do You Know Where Your Assets Are? Enhancing ROI with RFID Tracking

Apptricity®

## Summary

Many organizations that make decisions regarding asset management are doing so based on inaccuracy. Without a precise tracking system that is able to monitor and track assets, a lack of visibility exists. When businesses are unable to see and locate their equipment and products, time is wasted, which can end up being costly. Businesses that manufacture, distribute, and sell products are constantly searching for ways to become more efficient and accurate with managing their goods. Radio Frequency Identification (RFID) technology is a valued tool capable of tracking assets and people, thus increasing workforce effectiveness and ultimately maximizing ROI.

This white paper will look at the value of RFID technology for a variety of industries by:

Giving information about tracking technology and the types of RFID. Presenting the many ways RFID with asset management can improve procedures and increase ROI. Providing information on how to choose the right RFID partner.

## The Technology of Tracking

Radio Frequency Identification (RFID) is a method used for identifying objects by means of wireless radio frequencies where a sensor collects item information stored on an RFID tag. RFID tags were originally used to track large containers. Then, small tags were created to fit on each product. RFID tags are an improvement over bar codes because the tags have read-write capabilities, which means the data stored on an RFID tag can be updated. Businesses have found that using RFID technology offers a better way to track items for manufacturing, transportation, sales and marketing intentions.

## RFID with Asset Management

RFID technology is present throughout the supply chain. During manufacturing, products and parts are tracked for purposes of quality control. Shipments and inventory are then traced for accurate distribution and transportation. Finally, RFID technology assists in delivery and sales by tracking item location as well as replenishment. In conjunction with RFID are the individual applications designed to recognize and process RFID data. The information read through an interrogator (reader) is compiled and presented via a smartphone or tablet device. The data application solution can also be accessed through a website where all information about tracked assets is relayed from a robust information database.

## Active Versus Passive

An Active RFID tag is self-driven by an internal power source that enables reading from a far distance. With the use of point-by-point monitoring, businesses have the ability to know the location of their assets and if those assets happen to leave a site. For instance, certain classes of active tags can reach up to 1500 feet. Therefore, if a computer or a piece of equipment has been moved within that wide range, accurate data is supplied about when and where that asset was relocated. Active RFID is ideal for high value assets requiring a greater read distance and higher memory capacity. A Passive RFID tag is powered by an interrogator that reads by scanning the tag. The read range for passive tags is dependent upon the tag size, the power of the interrogator and antennae type. For example, if using a handheld interrogator to gain information from a passive tag placed on a computer monitor, that handheld device would need to be placed close to the tag, generally less than a foot away. Passive RFID is perfect for lower value assets that do not need constantly-powered tags or point-by-point monitoring.

## Reduction of Ghost Assets

Ghost assets include equipment or products that are no longer in use. Though these assets are no longer in high demand to serve your business, their absence can be costly if not accurately accounted for with RFID tracking. Companies who neglect or ignore ghost assets set themselves up for SOX compliance issues, artificially inflated values, and worse: higher tax payments to the IRS. Also important to note are assets that are still in high demand but that go unnoticed. For instance, a computer monitor sitting in a closet could be of use but instead remains in the closet while a new monitor is ordered. RFID tracking reduces the practice of unnecessarily purchasing products or not employing assets that are already available.

## Workforce Time

Asset tracking systems allow users to maintain all the information associated with that item so they can be easily referenced when needed. For example, users can track asset usage by employee and see a full history of where that asset has been and what was done to it. When combined with Work Order Management systems, work orders can be assigned to particular employees and assets. So, if a task needs to be completed using an asset, the appropriate personnel and assets can be paired up. This streamlines the planning of asset-related tasks and helps ensure that the required assets and personnel will be available. Workforce time can also be tracked for depreciation and maintenance purposes, which helps keep a log of asset usage for things like machinery or vehicles.

## Streamlining

As mentioned before, solutions like asset tracking can help to streamline the management of assets and their associated information. Things like supplier warranties and purchase information, maintenance schedules and history, user manuals and chain of custody can be called up with just a few clicks instead of rifling through file cabinets or switching back and forth between spreadsheets and enterprise systems. For example, employees in charge of managing asset maintenance schedules can receive notifications of recurring work orders to service the assets. On the other hand, if repairs need to be done on a particular asset, users can easily assign a work order and attach it to the asset so the employee knows exactly where and what to do. A good example of a situation where asset tracking helps to streamline operations would be in hospitals. Instead of assuming where items are and tracking them down when needed, users can pull up a macro or micro map location to see the asset's location, down to the building and even room level. The asset tracking system can help ensure things are where they are supposed to be by assigning assets a home location and notifying asset managers if items leave their home location. Also important to note are a hospital's most important assets - its people. Providing patients with wrist bands that have embedded RFID tags containing unique patient codes and pertinent information may well help to reduce errors and improve patient safety.

## Identifying Change

Tracking information associated with each asset helps organizations spot trends in asset data and can help extend the life of your investments. For example, if you're tracking vehicles and maintaining all the information about fuel usage and mileage, you can more effectively rotate and reassign vehicles to ensure an optimized level of usage. So instead of keeping close tabs on each and every asset hoping to spot uneven usage or higher than normal incidences of required maintenance, users can customize the solution with particular business rules that will alert asset managers of issues as they arise.

## Data Logging Functions

Additionally, RFID tags are useful where physiological or environmental data is necessary. This can include temperature, speed, altitude and even blood pressure measurements. Essentially, the overall health of the asset is monitored. For example, having the ability to check the temperature of containers throughout the transportation cycle would be a huge benefit to businesses that transport perishable food or vaccines.

## Auditing

As with many other enterprise solutions, asset management and tracking software allows companies to maintain a complete audit trail of asset history, e.g., who has the asset, where it has been, its usage levels, what type of maintenance the asset has had in the past, and where the asset was purchased. For example, organizations like airlines that have complex and high-tech assets and vehicles, particularly those with higher safety and security concerns, can maintain a complete history of each part in the aircraft so problems or defects can be traced back to the exact time and place that the part was obtained. The airline could then recall all aircraft in use with parts that came from that same vendor to help ensure the highest level of safety and security possible. Knowing where each and every part has come from and having a complete history of maintenance is an invaluable resource that will assist your organization in making the best decisions about when and where to place each asset for maximum effectiveness and safety.

## Inventory

Some assets have interchangeable parts that your organization must keep on hand and replace at recurring intervals. Asset tracking solutions help keep this type of maintenance on schedule and ensure assets are in prime working condition to help increase inventory efficiency and guard against

lost productivity due to down time.

### **Case in Point: NASA White Sands Test Facility**

NASA struggled to achieve visibility of their properties and equipment. Essentially, many assets were disappearing, and the data regarding assets was inaccurate. NASA chose Appticity asset management solution to manage and track these assets that were scattered throughout the New Mexico desert. With the use of RFID, GPS technology and integration with Google Maps, real-time tracking was provided to show an item's exact location on site. The project proved to be the first successful implementation of its kind for NASA and earned prestigious recognition both for the efforts of the implementation team and the comprehensiveness and ease-of deployment offered by Appticity Asset Management.

### **Lingering Doubts Put to Rest**

A few companies choose not to track assets because they are concerned with the additional expenses associated with the implementation and use of RFID and its partnering software programs. These doubts are put to rest, and the proof of service speaks for itself as more and more organizations take advantage of RFID technology. ABI Research reports the span of RFID applications, evaluation and consideration of use cases continue to grow as do technology performance and price points; thus the market for RFID technology and partnering applications are forecasted to grow, as well. Gartner Inc. states ROI at a minimum is 35-50% for tracking location of equipment.

### **Choosing the right applications for RFID**

Successful execution of RFID requires assistance from a solution partner who has the technology and expertise required to deliver valuable tracking data with your organization's future in mind. Appticity supply chain management applications are designed to scale according to your business requirements, large or small. Whether you are in need of an Active RFID solution for high value assets requiring high-powered monitoring or a Passive RFID for lower value assets with less need for point-by-point tracking, Appticity can reach your asset management tracking needs:

**Asset Management**  
**Inventory Management**  
**Smart Asset Management**  
**Warehouse Management**

With an intuitive, user-friendly interface or built-in auditing capabilities, our solutions minimize or eliminate the costs associated with training, upgrades, implementation and scaling. Appticity provides on premise or offsite data housing that is built on a robust platform, and we can have it up and running in 12 weeks or less.