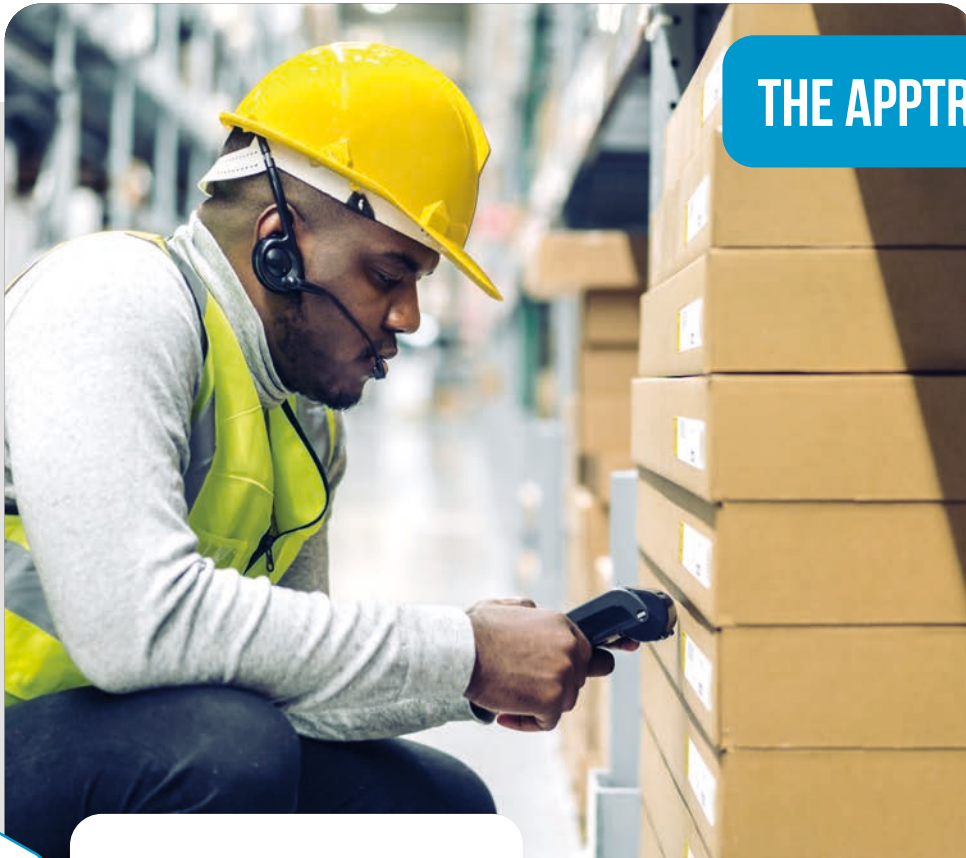


HOW TO CHOOSE THE BEST TAGGING TECHNOLOGY



THE APPTRICITY DIFFERENCE

While many companies specialize in one of the tracking solution types, Apptricity's Asset and Inventory Management solutions offer a single application that can utilize barcode, RFID, BLE, LTE, and Satellite tags for your tracking purposes. Our solution lets the value of your items dictate the type of tag used to track it.

As part of developing your tracking solution, we also provide an analysis of your tracking environment to offer professional advice on the best tracking technology (or technologies) to use. Manage all your assets and inventory items in a single System of Operation with Apptricity.

Introduction

With a variety of different tags to use for tracking your important assets and inventory items, how do you determine which tag to use? As the Internet of Things continues to grow year-over-year, more companies are utilizing IoT-connected tags to enable real-time tracking of the location and condition of their important items. Access to location information helps reduce shrinkage from lost or stolen items, helping companies reduce spend on replacement assets or inventory items. With tags spanning various price points and reporting data, choosing the right tag can be difficult without the right information.

Tag Types

There are five major tag types that are used for tracking:

1. Barcode
2. RFID
3. Bluetooth Low Energy (BLE)
4. LTE (Cellular)
5. Satellite

Within each of these types, there are various configurations, sensor capabilities, and passive/active reporting capabilities to choose from. Understanding how to pick the best tag is vital to maximizing ROI, so to help with this process, we assembled a list of three questions you should answer when evaluating what's best for your business.



"Automated inventory management systems save up to 40% of employee time looking for lost or misplaced items"

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What is the value of what I'm tracking?

Put simply, the value of the tracked item should warrant the cost of the tag used to track it. An item with higher value may necessitate a real-time tracking tag, while cheaper, consumable items may not require the same level of immediate reporting. It's important to understand the following principles that govern cost of ownership for any tag you chose to use:

- Active tags such as LTE or Satellite charge a monthly connection fee
- Increasing the ping rates also increases data and battery consumption, both resulting in higher cost
- Tags with specialized sensors cost more than basic GPS tags

It wouldn't make sense to spend \$50 on a tag to track something worth \$10, and conversely, you may need more information for tracking a \$100,000 item that a 25-cent tag can give you. As in most areas of technology, the more you spend, the more features you get access to. Understanding this spectrum will help you realize maximum ROI.

How close to real-time do you need your data?

This question addresses the difference between an active and passive tag. If real-time data is a must, using an LTE or Satellite tag would be recommended because these tags connect to the internet without needing a gateway. Furthermore, tags that report more frequently must be charged more often, so understanding the need for real-time data is a huge factor in determining what tag to use. If data is needed on a less frequent basis, passive tags like RFID may be a better option. All passive tags require a scan to gather information, so the reliability of data is equivalent to how frequently you collect it.



What are the conditions of your tracking environment?

Understanding the conditions of your tracking environment should play a big role in determining the tags you want to use. Examples might include:

- **Tracking items in a packed warehouse** - BLE beacons may be better because they can push through impedance
- **Tracking items on a large, outdoor jobsite** - LTE tags may be best because they self-report instead of requiring a scan
- **Tracking items in remote areas of the globe** - Satellite tags are best because they can report from anywhere in the world
- **Tracking metal or liquid items** - Specialized RFID tags are required because radio waves don't travel through metal or liquid

Because tracking tags can be used in virtually any environment, a professional consultation is highly recommended as part of determine what solution will work best.



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