

# The Ekahau RTLS Checklist

A few things to consider when looking to purchase an RTLS system



**Locate. Measure. Manage.**

**How?  
Ekahau.  
That's how!**

- Asset Tracking
- Patient Tracking
- Workflow Optimization
- Safety and Security
- Wireless Sensor Solutions

## The RTLS Checklist

If you are considering the purchase of a Real-Time Location System, you are faced with a big challenge in selecting from a wide variety of vendors and technologies. There are numerous claims in the market today regarding system performance, ease of deployment, scalability, non-interference and technology viability. We have assembled a list of questions that will help you select the best system for your hospital and questions that any serious RTLS vendor should be able to not only answer, but demonstrate with facts and show with their system *in your environment*. You are the customer and you are about to make an investment that is going to transform your operations by providing important improvements to processes in your hospital. Choosing the right solution is absolutely critical.

1. **Company** – Many companies have only recently entered the RTLS marketplace. How long has the vendor been around? If you choose a vendor that may go out of business, how do you keep the system going, get spare parts, procure new tags, etc.? Have they used the same technology for many years or are they still trying to get to a viable solution perhaps by combining several technologies (which add cost and complexity).

2. **Technology** – Not all technologies have been rigorously tested and have proven to be safe for use in the healthcare environment. Is this technology been certified as safe for use in hospitals? Are you using similar technology already in your hospital and have familiarity with it? If it uses Wi-Fi, does your Wi-Fi vendor endorse RTLS over their network or do they suggest it might cause problems? Can you leverage anything you have in place today from the network, computers, PDAs, barcode scanners, etc or do you need to procure new network hardware?

3. **Interference** – There are countless studies and reports on the internet regarding studies where independent laboratories have tested varying radio technologies such as Wi-Fi and Zigbee and their impact on clinical devices, other radio devices and networks. Are you using Wi-Fi today for data and voice? If so does Wi-Fi (802.11) play well with Zig-Bee (802.15.4)? Does the vendor require wiring in piggyback technologies such as 125kHz or 933mHz radios which can cause interference to life critical devices? Have you completed a risk assessment on what problems a new technology might cause in your hospital? Is the underlying technology truly based on a global standard where entire industries have adopted it and the safety has been proven over and over?

4. **Departmental or Hospital-wide coverage** – Can the vendor's solution scale to provide hospital-wide visibility? If so, do they have to wire the whole hospital and if so at what cost? If you are tracking assets and want to do it only in the ER, what happens to a pump when it leaves the department and goes to another floor with the patient or for cleaning in the biomed shop? Equipment wanders outdoors

as well: can the system tell you how many wheelchairs are in the parking lot ? If you are using your existing Ethernet or Wi-Fi to support the system, do you need to add switch ports, cabling for connectivity or power, additional Wi-Fi access points? What is the cost of a few more Access Points, if needed, versus an entirely new infrastructure.

5. **Deployment** - How rapidly can the deployment be done? Is it days, weeks or months? Not only does it cost more if it takes longer, but it implies running cables ( power or Ethernet or both ), drilling, moving ceiling tiles etc. How do I schedule shutting down patient rooms and other areas to conduct the system installation? What is the lost revenue from not being able to populate beds during the installation cycle - \$2000 per bed per day? This needs to be factored into the cost of deployment.

6. **System Accuracy** – Will the vendor commit to an accuracy level throughout the hospital? Do they have the knowledge and tools to demonstrate this to you ? If they commit to a performance level, is this using their algorithms or adding other infrastructure to meet the requirement or commitment they are making ? If you think you need six inch resolution, are you willing to pay for it and do you need it hospital-wide ?

7. **Tags** – What is the maximum battery life? Can the tags operate in different modes? For example, if it's a Wi-Fi system can they beacon and/or work in an IP mode? Can all the tags that the vendor offers operate bi-directionally? Do you need alert confirmations, acknowledgements and alarms on the tags themselves. Do you want to be able to manage the tags remotely from a central console or do you prefer to run around the hospital and connect to them using a wired connection?

8. **Tag-less Tracking** – Can the vendors system track without tags? This can save a lot of money. Can they track my Wi-Fi enabled IV Pumps, Patient Monitors, COW carts, VOIP Phones and other Wi-Fi devices without having to use a tag? If so, is the performance similar to how the vendor is tracking their tags ?

9. **System Management** – Do you need to learn a new network/system management tools and dedicate resources to managing a parallel network or more network nodes? How sophisticated is the network management tool for a proprietary RTLS system vs. using a Wi-Fi system?

10. **Demonstration** – All vendors claim their systems are easy to deploy and manage. Can the vendor come in and effectively demonstrate live how the system works? How long does it take to show a live demonstration? Would you buy a new flat-screen TV without seeing what the picture looks like?

11. **Piloting / Vendor Comparisons** – Is the vendor willing to set up a competitive evaluation of their system? If they claim their system is easy to deploy, will they commit to a 2-3 floor pilot with minimal cost in your facility to not only demonstrate their system, but to back-up their claims ? Would you buy a

car without test driving it and perhaps trying a comparable model in the line-up or even a competitive model ?

**12. Lifetime System Cost** – What is the mean-time between failure of any infrastructure components you may have to procure and procure again down the road due to possible failure? Does your hospital ever go through renovation and re-allocations of space? If so, what are the costs to re-wire the RTLS system. If you add a new wing or structure in the future, what is the cost to add that to your system?

We hope that this short primer will help you in making the correct and educated decision when selecting an RTLS system for your hospital. Whether you are looking to track assets, staff or patients, monitor environmental conditions or system alarms or ensure the safety of patients and personnel, Ekahau just might have what you are looking for. For more information please feel free to visit us at [www.Ekahau.com](http://www.Ekahau.com)



The Ekahau T-301A Asset Tag and the Ekahau T-301-BD Wi-Fi Location Enabled Text Pager