



# Planning Your RTLS Project



Hospitals, emergency departments, clinics and operating rooms are focused on delivering the highest quality patient care. That said, healthcare's rising patient census and operational requirements demand efficiency, consistency, and documentable evidence of compliance as a complement to streamlined workflows.

**A properly designed Real Time Locating System (RTLS) can provide simple yet impactful solutions that match your team's workflow and meet your compliance needs.**

The right RTLS solution can:

- Simplify processes
- Scale and meet changing needs
- Provide tools and meet the needs in one unit, whole hospital, or multiple hospitals in a group
- Generate real time key performance indicators (KPI's)
- Impact budget and workflow decisions to improve patient outcomes and lower costs

Planning your RTLS project might seem overwhelming at the beginning, but you can position yourself to get the answers you need with a bit of homework and by asking the right questions at the front end. The following checklist will walk you through the process step by step.

### **Step1: Analyze your current state**

Reflect on what you are doing now. Being able to share this information will equip your integrator with invaluable insight into your current process(es) and objective(s).

- What is your current staff workflow?
  - Identify staff involved and their responsibilities.
  - Do you have a diagram of your existing processes?
- What are your current processes?
  - What is working that you would not want to sacrifice?
  - What is not working that you need to change?
- What else do you need to consider?
  - Current IT integrations and hospital-wide factors.
  - Staffing issues, common frustrations, and impact on patient care.

Ultimately, determine the most important changes that need to be made.

### Step 2: Get the right people in the room

Understanding the specific needs of key players and departments is essential to identifying a solution that works for all.

- Who are the key stakeholders?
  - Consider Clinical and Departmental input in addition to stakeholders like IT, Biomed, Facilities, Security, & Supply Chain.
- Which departments will be impacted by this project?
  - Describe their biggest issues.
- If you could build your RTLS project team, who would be on that team?
  - Consider who will be the “champion” for this project.
  - Consider a point person from each impacted department including IT.

### Step 3: Get the quote

The more specific you need your RTLS quote to be, the more information you will want to have available. Being able to share that information with any vendor that is assisting you will greatly enhance your experience.

- What kind of quote do you need? Budgetary? Formal?
- Is this a departmental solution or will you employ this RTLS solution throughout the entire hospital?
- What is your timeline for choosing and deploying the RTLS solution?
- Do you have a sharable copy of CAD file maps (floorplans)? This facilitates better planning and implementation of best practices.
- Are you currently employing any technology that might be used with the new solution, e.g., Nurse Call Cancel?

### Step 4: Get it done in the time you need

As you know, making a solution work in your facility means a lot of moving pieces need to work together. To help you meet your implementation goals, consider these things:

- Are there any obstacles to funding approval? If yes, what steps do you need to take now to keep those from slowing you down in the future? Consider special approvals, budget cycle, and ‘submit by’ dates.
- When do you need to be using the technology in your hospital?
- Are there any outside factors driving that timeline, e.g., accreditation issues, etc. Sharing this information up front can help your integrator help you prioritize.
- Will there be, other projects taking place in the hospital that could require shared resources or people? Make sure to consider other demands on your IT department.

### Step 5: Make sure everyone can use it

Installing a system that has implications for multiple departments requires a training approach that is tailored to your needs. A uniform approach to training will ensure better results

- How many people and how many departments will need training?
  - Think about the ratio of supervisors to staff and super users that other staff can rely on while they learn.
- How many shifts will need training?
  - How will training needs differ from shift to shift?
- What are your ongoing training needs?

Your RTLS solution is going to integrate with the technologies you're already using at your hospital. To do this efficiently, gathering key information up front will serve you best. Here are some things to keep in mind while you plan:

### Consider integration with existing technology

What other RTLS system(s) or application(s) are currently installed? (e.g., Nurse Call with auto call cancel)

- Are they still in use or have they been abandoned?
- Who is/are the project leader(s) for these systems?
- Have these systems met your objectives and expectations? In what way(s) could they be improved?
- Do you know what vendor/manufacturer installed (services) the other system(s)?
- Do all your facilities use the same IT providers?
- Do you (or your IT team) have current information on your technology vendors (i.e., ASCOM phones, overhead paging, alarms, elevators, door locks, etc.)?

### Consider your layout

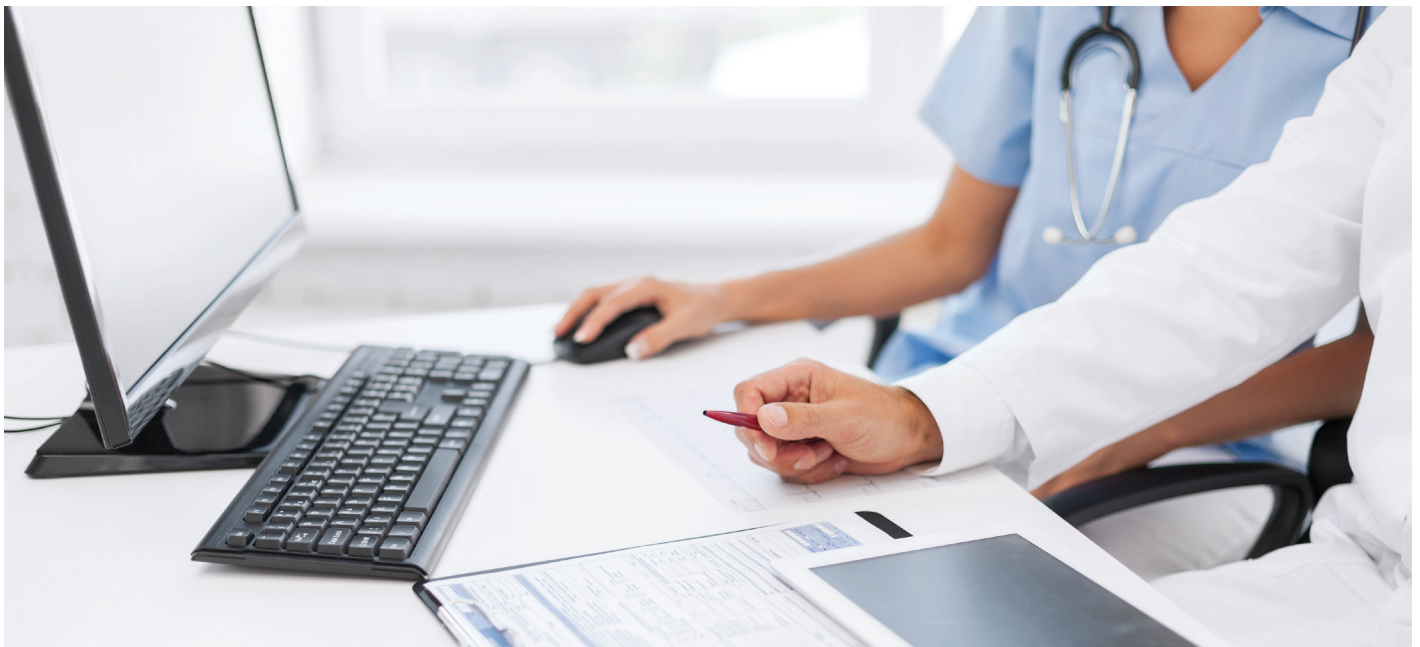
- Do you have access to current CAD drawings/floorplans for your facility? Do you know who does?
- Have you identified key entry/egress points for your department?

### Consider IT constraints

What type of wireless infrastructure do you currently have? Are there plans to upgrade/replace it in the future?

- What grade is it? (Data, VOIP, Location)
- What network? (Cisco, Aruba, etc.)? Is it the same throughout/across your facilities?
- Are there plans to change networks?
- What version of access points are being used?
- Are you currently virtualizing servers?
- Do you have (or are planning) any other RTLS deployments? (e.g., VOIP phones, Vocera, Nurse Call with auto call cancel, Staff Duress)
- Do you have an SQL database server?
- Do you rely on in-house staff or outside vendors for network cabling/drops, POE/switches, etc.?
- Are there any other vendors you may have forgotten? Think of access control, door lock, cable, elevators, etc.

At their core, real time locating systems are designed to use state-of-the-art technologies to improve and enhance the everyday workflows experienced by hospital staff. How you and your teams evaluate and choose to deploy RTLS will depend on how you understand and prioritize the use cases that are most important.



## Use Case: Asset Tracking and Asset Management

Asset tracking and management is a scalable system to locate and manage assets, save money looking for lost equipment and reduce 'shrinkage' or loss. It can also manage PAR-level mobile medical equipment, provide meaningful reports, generate alarms, and escalate as needed, and integrate with elevators, doors locks and security cameras. It can be as simple as "dots on a map" – the location of a tagged asset – up to integrating with CMMS (Computerized Maintenance Management System). In any case, gathering the following information will help you evaluate the system that will work best for your workflow:

- Consider your current asset tracking and management process. What is good, what to keep, what needs work, what to abandon, add or automate? Think about:
  - Identifying equipment that staff hide/hoard, can't locate when needed or when FTEs are required to spend time trying to locate equipment.
  - How are inventory PAR levels monitored? What about managing rentals and returns?
  - How is asset status verified, reported, and communicated? Is 'clean' vs 'dirty' equipment tracked?
  - Identifying 'shrinkage' due to loss/theft. Are loss points identified and/or effectively monitored?
  - Is/will a CMMS be used for 'updates' on certification, recalls, or preventative maintenance?
  - Do you need general location or specific location information? What kinds of reports and alerts do you desire? Do alerts need escalation?
  - How do you currently store, maintain, and deliver your high value dollar items? Is equipment utilization monitored before purchasing or renting additional equipment?
  - Do you designate rooms for dirty and clean equipment? Who maintains the stock in the clean rooms? How are requests made when a dirty room is at capacity, or a clean room is not adequately stocked?

## Use Case: Staff Duress

A staff duress solution is designed to address the need of staff safety within your hospital or group. Designated staff receive a badge equipped with location features that can be used to send out a signal for help, reducing emergency response time. If you are considering a staff duress system, these questions will help you develop the best solution for your staff and unit:

- Is this for a specific department or throughout the hospital? (e.g., behavioral health unit, emergency department)
- What is your current security response workflow? What technologies are included in that workflow?
  - Consider systems such as: radios, phones, overhead paging, alarms, strobes, etc.
  - Are there other vendors who may need to be involved to continue using these systems?
  - Who responds to duress events? Is it centralized (e.g., main security office)?
  - Besides those responders, who else needs to receive a notification when an event is taking place?
  - How does your hospital determine when a duress event is "closed"?

## Use Case: Hand Hygiene

A hand hygiene solution is typically employed by groups looking to automate hand hygiene processes and documentation, reduce the spread of infection and improve patient outcomes. This solution equips designated sanitizer dispensers with a device that will capture key metrics to document to what degree your protocol is being followed. If you are looking to implement an RTLS hand hygiene solution, consider these topics to ensure the system meets all your needs:

- What is your hospital's protocol for hand hygiene practices?
  - For example, does staff have to wash in and wash out every time, or after a specific series of events?
  - Are there different requirements on special units? How is compliance assurance different for those units?
  - What methods are you currently using to gather and document your compliance metrics? (e.g., secret shopper, electronic data)
  - What dispensers are you currently using for hand hygiene?
  - Where are these devices located?

### Use Case: Patient Location

A patient location solution is often implemented when a group is looking to improve efficiency when checking patients in, scheduling, and improving customer experience. A well-designed patient location solution could meet needs by communicating a patient's location before, during and after each appointment across their office experience. When developing your plan for patient location, consider these topics:

- Describe your current workflow? Which steps in your workflow could be improved for efficiency?
- Consider groups that may benefit from patient location information, (e.g., nurses, registration, transport, doctors)
  - Do you have an EMR that you would want to automatically work with your patient location system?
  - How are you currently monitoring and evaluating patient wait times?
  - Are your patients being seen for more than one thing? What process do you employ to help to manage communicating patient's current location?

### Use Case: Patient Security System

A patient security system can be implemented to answer a variety of security needs: protecting patients from others or to protect them from themselves. A reliable patient security system depends on real time location information to protect your most vulnerable and at-risk patients of any age; signal processing delays could spell disaster. To design the right patient security solution for your needs, consider these topics:

- Which patients are you looking to secure? What is the primary concern for their safety?
- Which units or departments would benefit most from a patient security system? (e.g., labor & delivery, NICU, behavioral health, emergency department, transitional care, etc.)
- What are you currently doing in these units to protect these patients?
- What is driving your decision to change/incorporate a patient security system?

### Use Case: Temperature and Environmental Monitoring

Most healthcare facilities are responsible for stocks of vital perishable medicines and supplies, so seek to prevent product loss and ensure all departments are meeting compliance standards. Temperature and environmental monitoring records and tracks data remotely to eliminate the need for manual processes, enabling greater staff efficiency. To build out this solution for your facility, consider the following:

- What is your current process regarding Temperature and Environmental Monitoring? While putting this information together, consider these pieces:
  - What do you currently monitor? (e.g., vaccines, blood banks, food storage)
  - Are there other use cases that you would like to monitor? (e.g., room temp and humidity, tissue cryo, differential air pressure, breast milk, etc.)
  - Who manages your EM program, is it by department, or is there a dedicated team?
  - How often are units checked and how is this logged?
  - Who receives notifications or alerts when a unit is out of range?
  - How are they alerted?
  - Do you like and want to keep this alerting method?
  - Are there other ways that you would like to be notified of an out-of-range sensor?
  - Does this workflow differ during off-hours?
  - Does this workflow differ based on what is being monitored?
  - How is an out-of-range event typically resolved?
  - Is a corrective action logged?
  - Is there any concern of losing high value items due to current workflows?
  - How are your records stored and for how long?
  - How easy is it to access this information if required to produce records to show compliance?
  - Do you have a NIST certification program?
  - Who performs the NIST certification?



### Nurse Call Cancel

A real time location driven automated nurse call cancel solution can help staff effectively manage patient care, spend more time in front of patients, and positively impact HCAHPS scores. Response times and hospital efficiency play a critical role in how well caregivers can meet their patients' needs. However, the time spent doing paperwork, manual data entry or searching for support staff, can create bottlenecks in clinical workflow. A real time location system will automate call cancellation, automatically illuminate dome lights when staff are present, time-stamp staff presence in a room, document response times and length of visit, facilitate staff rounding, generate patient and staff interaction reports, and trigger clinical events from the staff badge. Consider the following questions when looking at an automated nurse call cancel solution:

- What type of nurse call system do you have right now? e.g., Rauland, Hill-Rom, others?
- What is your existing process for notifying staff of a patient need?
- What reports are you currently receiving or would like to receive?
  - Staff and patient interaction frequency
  - Time spent in room

With so many “moving parts” a Real Time Locating System (RTLS) project can be overwhelming at first, which is why we built this document to give you some key questions to ask yourselves as you move toward your decision.

At Convergent, we've learned that every successful RTLS project begins with early customer discovery: engaging with you and your teams to understand how RTLS technology can meet your needs, expectations, and desired outcomes. We stand ready to help translate your needs into a proper, comprehensive RTLS design that fulfills the requirements of all your hospital stakeholders.

Ultimately, our focus on project definition, detail, transparency, and planning will deliver an RTLS project that is on time, on budget and within scope – all focused on building a long-term relationship with you to ensure your RTLS project is successful from the very beginning.

Let us know how we can help