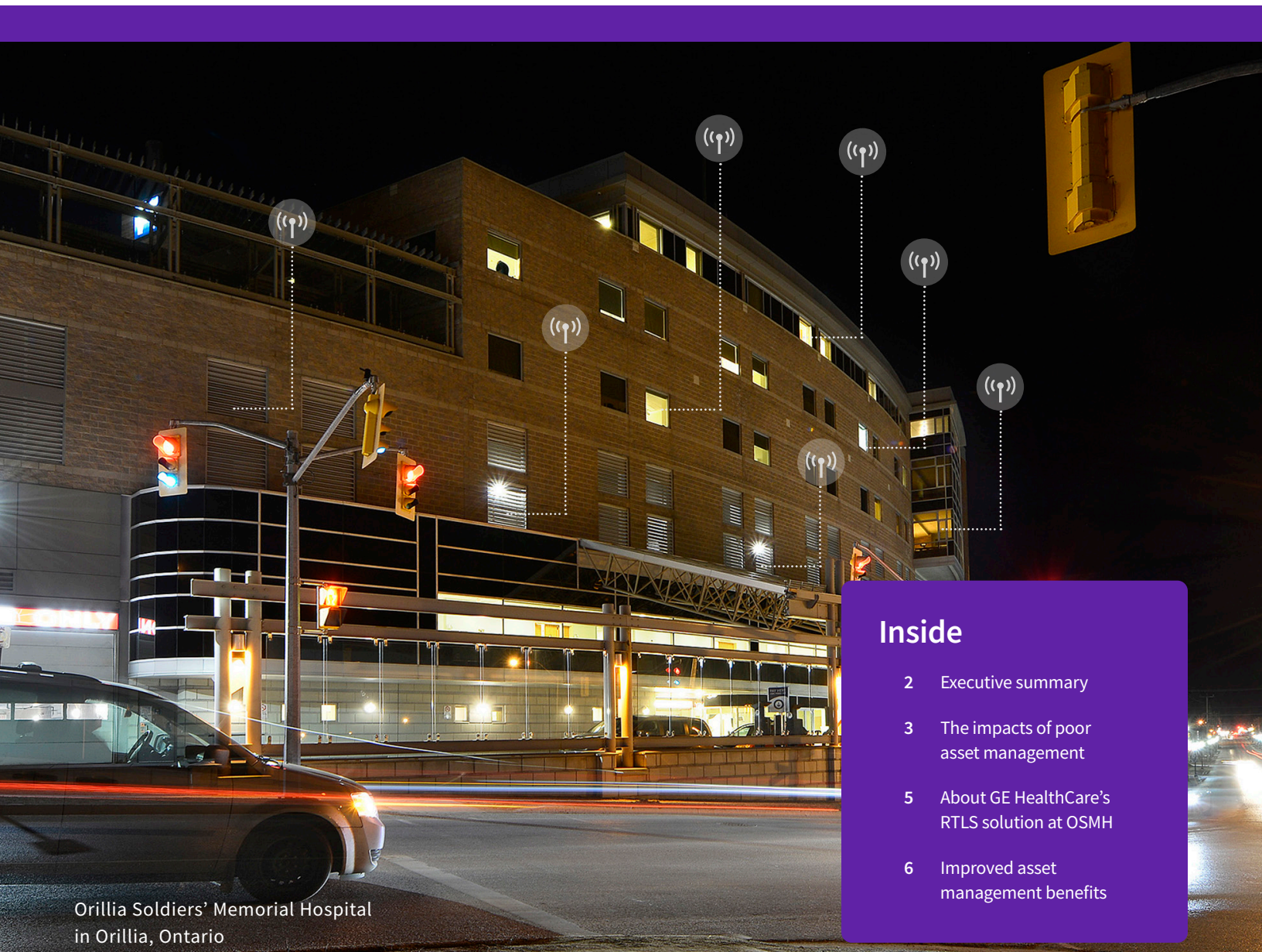




GE HealthCare

OSMH leverages Real-Time Location System to help improve outcomes

Implementation of GE HealthCare's RTLS solution leads to improvements in hospital efficiencies, clinical satisfaction, and patient care



Orillia Soldiers' Memorial Hospital
in Orillia, Ontario

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Executive summary



About OSMH

Orillia Soldiers' Memorial Hospital (OSMH) is a 180-bed acute care hospital located in Orillia, Ontario, that serves the residents of North Simcoe Muskoka and beyond.



Poor asset management of mobile medical devices in hospitals causes multiple inefficiencies, leading to burdens on patient care, clinician work, and operating budgets. GE HealthCare's asset management technology Encompass™ is a real-time location system (RTLS) that helps clinicians locate their mobile assets faster and monitor them more efficiently, so that less time is spent searching for medical devices and more time is spent caring for patients.

Orillia Soldiers' Memorial Hospital's implementation of this RTLS solution has enabled the healthcare system to realize true efficiencies and benefits as it pertains to clinician satisfaction, quality of care for patients, and the hospital's bottom line.

The impacts of poor asset management

For hospitals, the inability to quickly find medical equipment when it's needed—whether it be an infusion pump, an ECG machine, or even a wheelchair—can have far-reaching negative impacts:



Hospital efficiencies

When mobile assets are shared between multiple departments in a hospital, it means that nurses, clerks, and other hospital staff often have to spend valuable minutes trying to track down where something is. That translates to less time spent directly caring for patients.

“It doesn't just impact the floor that is looking for the equipment,” says Krista Lovering, director of surgery and medicine at OSMH. “It also impacts all the other floors that have to stop what they're doing to answer the phone, and then go to look to see if they have the equipment. It can really touch many different departments.”

Older methods for keeping track of mobile equipment—such as whiteboards and sign-out books—are frequently misused or not used at all, with some departments going so far as to hide or lock up equipment so that they can be sure they have it when it's needed.

“Just as with good overall health, good asset health means prevention is better than treatment.”

— Carmine Stumpo, President and CEO

Poor asset management of mobile devices in hospitals can lead to burdens on patient care, clinician work, and operating budgets.



Staff satisfaction

Hoarding and hiding medical equipment can lead to staff resentment and conflicts between departments, with many clinicians believing that assets “belong” to their department, rather than viewing them as hospital assets. In addition, with resources already stretched thin and employees being asked to do more with less, the added stress of not being able to find necessary equipment in a timely manner can lead to higher levels of frustration and burnout.



Patient care

“I don’t even think health care knows what we don’t know, in terms of the amount of wasted time searching for equipment, and it’s often just accepted,” says Carmine Stumpo, president and CEO of OSMH. “But if you can’t find the essential equipment you’re looking for, it has a direct impact on the amount of time you can devote to patient care delivery.”



The hospital’s bottom line

Poor asset management can have a big impact on maintenance, because it leads to more repairs and more outdated equipment, Stumpo says. “When we don’t manage our assets, they break down sooner and you end up replacing them sooner,” he says. “Just as with good overall health, good asset health means prevention is better than treatment.”

Not properly keeping track of mobile assets may also lead to an oversupply of costly medical equipment, because hospitals may think they have fewer assets than they actually do. When rental equipment that’s purchased during surge periods goes missing and can’t be returned on time, that can also lead to higher equipment costs.

About GE HealthCare's RTLS Solution at OSMH

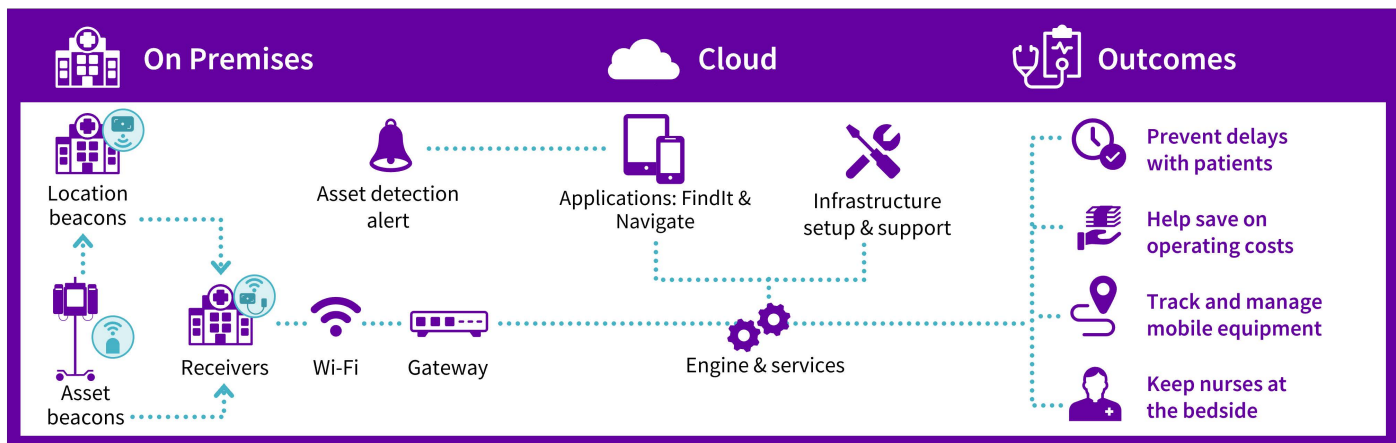
Encompass is a web-based, cloud-deployed, real-time location system (RTLS) to track, manage, and analyze location data for a hospital's mobile assets.

Approximately 800 microchipped assets tagged with beacons are tracked by a series of beacons stationed throughout the hospital, enabling staff to pinpoint the location of items that are constantly moving around the facility as they are needed.

The system is designed to be used with smartphones, tablets, and desktop computers, providing up-to-the-moment data wherever a clinician or other hospital staff member is in the hospital. It also gives hospital administration an accurate accounting of inventory and utilization, preventing procurement of new equipment if current supplies are adequate and underutilized.

In September 2020, GE HealthCare and OSMH entered into an agreement to test new service technologies in the Canadian healthcare system. In the first phase of this agreement, the RTLS solution was installed and went live in July 2021. Combining the technology with on-site advisory services, GE HealthCare delivered a RTLS Program to drive measurable operational, clinical, and financial outcomes. OSMH is the first hospital in Canada to implement GE HealthCare's RTLS solution.

The framework



The RTLS solution enables hospital staff to manage all critical mobile assets in real time with accuracy and ease so they spend less time searching for equipment and more time providing quality patient care.

The benefits of improved asset management



GE HealthCare’s innovative RTLS technology has led to several beneficial outcomes for OSMH, including improved patient and employee satisfaction and improved capital allocation.



Better patient experience

When clinicians locate equipment more quickly, that means patients and their family members don’t have to wait as long for tests or other procedures, which can help reduce stress. “If patients have to wait a long time to have a test or be transported somewhere, that can increase anxiety and worry,” Lovering says. “Anytime we can calm their fears and not keep them waiting for a long time, it leads to a better overall experience in the hospital.”



Improved clinical satisfaction

Less time searching for equipment means that clinicians can spend more time focusing on patient care. “The ease of use and the ability to really pinpoint where a piece of equipment is—not just what floor it’s on but whether it’s being used in a patient’s room or if it’s in a hallway or a storage room—has been a game changer for us,” Lovering says.



GE HealthCare's RTLS solution provides cost savings due to the decreased number of assets required, better visibility of what the hospital needs to purchase going forward, and better allocation of resources overall.

Lovering adds: "Our human capital in the hospital is our most precious resource at the moment, and with resources being so slim, anything we can do to remove those sorts of tasks that are not as patient-focused and put those staff at the bedside is a huge win."

"Having what you need is a really important thing for our staff and it's a major satisfier," Stumpo adds. "If our staff feel as though they're being supported to do their job right, that, especially in this workforce, is a major indicator that should not be dismissed and should actively be pursued." He adds that the new technology is enabling the hospital to attract—and more importantly retain—highly skilled talent. "By investing in this technology, we're telling our team that we're doing everything we can do to make their work lives better," Stumpo says.

Ease of use is another big advantage of the RTLS solution. "The ability for anyone to be able to go on and look—it doesn't have to be a nurse or a clerk, you're giving access to lots of people in the building—is an important outcome," Lovering adds.

The new technology has been an adjustment for clinicians, Stumpo says. "All providers want to make sure they're serving their patients best by having the equipment they need nearby, so it has involved unlearning and relearning a new way of approaching it where the equipment is truly a system resource rather than a department resource, and where it's fully transparent, so that everyone in the hospital knows where it is."

There's comfort in the transparency, he adds. "You couldn't easily look in closets for equipment before. Now you can."

↑ Improved clinical efficiency

Saved 37 minutes
How long did it take to locate and retrieve a bladder scanner at OSMH before and after the implementation of GE HealthCare's RTLS solution? Staffers did an experiment:

Before:

After:

40 minutes

3 minutes

GE HealthCare data collected in March 2021 by leveraging Encompass RTLS technology. This is used for illustration purposes and may not be replicable at all hospitals.



Less time looking for equipment means staff is able to spend more time with patients.

↓ Reduced capital purchasing costs

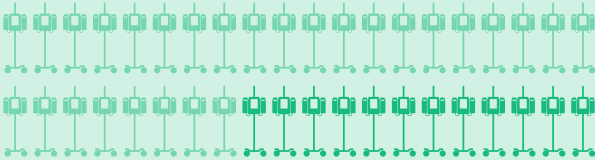
Better bottom line

“For us, the quick win has been with preventive maintenance, the physical management of the equipment,” Stumpo says. “Our materials management group, our Biomed group, and all these other people in the hospital now know and can work very efficiently and diligently to keep the equipment working with less downtime, while also giving people more access to these assets.”

Another plus has been less of a need to overbuy equipment. “When you don’t know where your equipment is, you’re going to need more of it in order to function properly,” Stumpo says.

Measurable benefits during COVID-19

When the Ontario government asked local hospitals to open up more ICU beds during COVID-19, OSMH was asked to open 40 beds. Before placing an order for 40 infusion pumps, OSMH utilized the RTLS solution to locate 28 infusion pumps that were sitting idle in the hospital, unused.



70% reduction

Result: 70% reduction in the need to purchase new pumps while ensuring asset readiness for new program within 24 hours.



RTLSs reduce the need for contingencies because you have full transparency of what you have.

“Buying overage to account for lost and not findable equipment, or bringing equipment in on consignment or rental—those are all strategies that hospitals have for compensating for the inability to find what they need when they need it,” Stumpo adds.

RTLSs can reduce the need for those contingencies because you have full transparency of what you have. “Plus, if you do need more, you can track where it’s been and have a better sense of its lifespan so you can better manage your inventory.”

↑ More effective planning

Code Orange readiness

During a recent Code Orange—when OSMH was tasked with quickly preparing for a large number of incoming patients due to a nearby medical emergency—the hospital was able to use the RTLS solution to locate needed equipment within 20 minutes. In the past, this task would typically take at least a couple of hours.

83% reduction

Result: Roughly 83% reduction in preparation time.



GE HealthCare data collected in September 2022 by leveraging Encompass RTLS technology. This is used for illustration purposes and may not be replicable at all hospitals.

What’s next?

GE HealthCare is continuing to work with the OSMH hospital system to further identify use cases for Encompass in other departments and is also pursuing expanding its collaboration to other technology deployments that could impact the Canadian hospital system.