



Navigating AI in RTLS

Separating True Value from Marketing Hype





Introduction

Artificial intelligence (Al) is a complex and rapidly evolving technology with many unknowns, but its potential impact is undeniable. Organizations have embraced the innovation and started to incorporate Al in different ways to achieve benefits ranging from improving patient outcomes to lowering healthcare costs.

However, not all Al is created equal, and much is still unknown about the technology. According to the **Pew Research Center**, while 90% of Americans have heard a little about Al, only one in three say they've heard a lot about it. Further, many report they don't fully understand how Al is currently being used and can't identify specific uses of the technology. To leverage Al tools to their fullest potential, potential buyers must be able to look critically at new technology to separate its true value from marketing hyperbole.

In the realm of real-time location system (RTLS) technology, Al can be used in multiple applications, but hospital leaders must carefully evaluate the value those applications deliver.



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The Role of Al in RTLS

Understanding the role of AI within an RTLS platform is crucial for recognizing its benefits, limitations, and overall value.

Al is predominantly used in RTLS for data analytics and reporting. After aggregating data, an Al platform can extract insights from extensive datasets.

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However, the value of Al insights directly correlates to the quality of the location data. Consistent and accurate data are essential. This presents a problem for many RTLS solutions. When the RTLS platform fails to achieve consistent room level data, the value derived from its insights is diminished. Additionally, Al as a reporting platform does not address the foundational issues of reducing infrastructure expense, maintenance, and enterprise scalability.

In another application, Al as the location engine can offer revolutionary value. Al has the potential to produce more accurate data without extensive hardware, installation, and maintenance expenses.



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Evaluating Alternative Technology Options

To decipher the potential value of Al in RTLS, it's important to understand the limitations of traditional technologies, including infrared (IR), ultrasound, and Bluetooth (BLE). Each set of technologies has its own strengths and tradeoffs, but none check all the boxes for most customers.

- IR and ultrasound have demonstrated to be reliable and accurate. However, to accomplish that accuracy, they require extensive hardware, which is expensive to purchase, install, and maintain. Consequently, healthcare providers often compromise coverage or accuracy to accommodate their budget, which leaves data gaps and diminishes the ROI potential.
- BLE technology tends to be less expensive to install than IR and ultrasound, but the tradeoff for that lower cost is diminished accuracy. Most BLE platforms are limited to near-room accuracy without supplemental hardware. Without reliable in-room accuracy, the platform use case scalability is limited and hinders ROI potential.

Some RTLS providers have resorted to combining technologies to address different accuracy needs. However, a hybrid approach may require new or additional hardware to allow the different technologies to communicate. In the end, none of these options meaningfully reduce infrastructure expenses, maintain accurate data, and provide the ability to scale — except AI.

Technology	Infared	Blue Tooth (BLE)	Ultrasound	Artificial Intelligence
In-room Accuracy				
Implementation Disruption				
Maintenance				
Cost	\$\$\$	\$\$	\$\$\$	\$

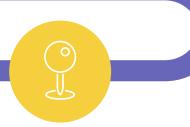
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Maximizing the Value of RTLS with Al

Al used directly as location intelligence addresses the shortfalls of traditional RTLS technologies and maximizes their value. Al as the location intelligence provides consistent room-level accuracy with an ultralight hardware infrastructure, which has a domino effect that addresses many other traditional RTLS shortcomings:

- Alleviates the majority of hardware, installation, and maintenance expenses, allowing for faster ROI
- Enables outdoor coverage, a capability that has long eluded traditional RTLS technologies
- Harnesses machine learning and continuous accuracy improvement
- Oampus-wide coverage from day one, without extensive and costly hardware to deploy
- Eliminates costly upgrades when the physical environment is changed
- Scalable to nearly all RTLS use cases without additional infrastructure



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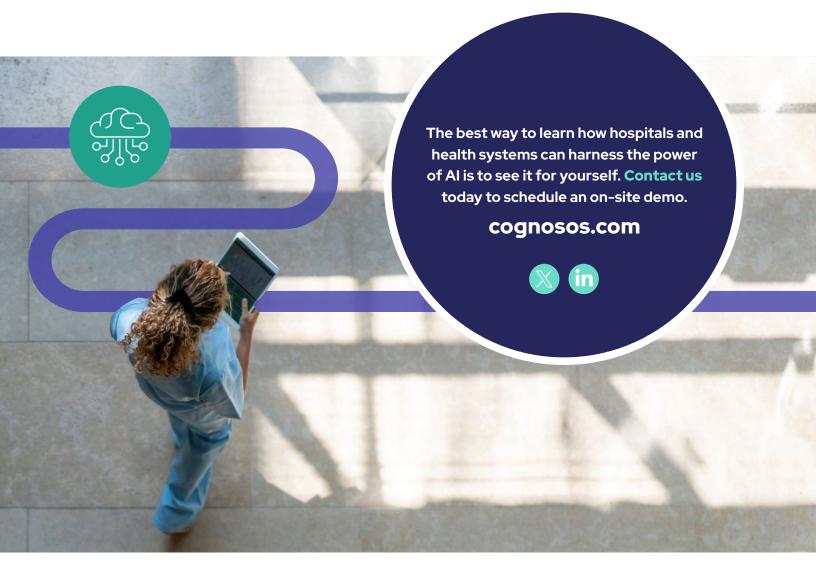


Hospital RTLS: Separate True Value From Marketing Hype

Cognosos is the first and only RTLS provider that uses Al as its location intelligence, differentiating itself in the marketplace with distinct capabilities that overcome the limitations of older RTLS technologies:

- Room-level accuracy
- ① Ultra-lightweight infrastructure to reduce hardware, installation, and maintenance expenses
- Physical installation that can be completed in just days
- No reliance on Wi-Fi network to reduce burden on IT

To learn more about how AI can increase efficiency, improve safety, and elevate care for hospitals, download our eBook, "How AI Changed the RTLS Game." In it, you will learn how AI can overcome traditional RTLS shortcomings, optimize asset management, and keep frontline workers safe.



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