

## Enlighted Transforms Hospitals

Powered by the Internet of Things (IoT) and Bluetooth Low Energy (LE) wireless technology, Enlighted helps hospitals improve the patient experience of care, while reducing the cost of healthcare delivery.

# enlighted



## RTLS Is Broken

Traditional Real-Time Location Services (RTLS) solutions force hospital executives to make difficult tradeoffs between reliability, accuracy, and very high costs.

### Difficult Tradeoffs

The location information provided by legacy RTLS systems is often unreliable. Because RTLS computations are complex, location data is not dependable without a sufficiently dense grid of sensors installed throughout the entire hospital.

Some technologies promise accuracy, but are extremely expensive and require regular maintenance and re-tuning.

### Lack of Scalability

Many RTLS systems are only effective for specific use cases. The result is the deployment of multiple proprietary systems and infrastructures, which increases costs and yields a patchwork of solutions that are not widely and consistently deployed, or used by hospital staff.

Because legacy RTLS solutions cannot scale across the entire hospital, they have not yet delivered on their enormous potential.



# A New Approach to RTLS for Hospitals



One sensor is deployed in each lighting fixture in a hospital.

Enlighted's Bluetooth LE sensors are installed in -- and powered by -- the light fixtures located throughout the hospital. This approach yields significant benefits compared to traditional RTLS solutions, including:

## Higher Quality Data

Advanced sensors are installed in the lighting fixtures throughout a building, and continuously gather multiple types of data. This approach results in more granular coverage, and significantly higher quality data than traditional solutions.

## Dependable Infrastructure

The Enlighted IoT platform is installed within, and powered by, the existing lighting infrastructure. Batteries are not needed, and there is never a risk the sensors will stop working because they are bumped or covered up by hospital staff, or patients. The end result is lower maintenance costs, and a more dependable system.

## Built to Scale

The Enlighted IoT platform is built to scale across entire buildings and hospital networks. Its powerful sensor network, deployed in the lighting fixtures throughout the building, gathers multiple types of data (light, temperature, location, more), and can address many applications — both now and in the future.

## Paid for from Energy Savings

The Enlighted IoT platform generates lighting energy savings of up to 90%<sup>1</sup>. These energy cost savings can pay for the RTLS infrastructure and associated installation as well as help meet the organization's sustainability objectives.

<sup>1</sup>In a study of 328 Enlighted installations, buildings reduced energy costs by an average of 88% upon installation of the Enlighted IoT platform.

# How Enlighted Location Services Transforms Hospitals



The Enlighted IoT platform allows hospital staff to improve workflows, asset productivity, and the patient experience. It begins with an advanced sensor and Bluetooth LE wireless technology, but can address many challenges in a hospital.

## Asset Location

Quickly locate the nearest item in a particular category from anywhere within the hospital—even across buildings. Save staff time and improve patient outcomes by quickly getting equipment when and where it is needed.

## Asset Utilization

See exactly how, and how much, a specific type of item is used over a chosen time period. Avoid over-provisioning and ensure assets are being effectively deployed, and maintained.

## Asset Loss Prevention

Receive an alert when an asset leaves a digitally bounded area, or the Hospital.

## Workflow Optimization

Use location services data to optimize healthcare delivery processes and improve outcomes. Streamline patient queuing and improve throughput.

## Patient Safety

Locate patients for safety and convenience. Receive an alert for unexpected movement out of -- or into -- a digitally bounded area.

## Wayfinding (coming soon)

Help patients, staff, and visitors quickly find their desired destinations within a large hospital complex using a Bluetooth equipped mobile device.

## How the Enlighted IoT Platform Works



Enlighted sensors are installed in each lighting fixture in a building.



The Enlighted IoT platform consists of Bluetooth LE tags, a dense network of sensors, and cloud-based data and analytics that are accessible from a variety of computing devices.

### The World's Most Advanced Sensor

Enlighted sensors are installed in -- and powered by -- each lighting fixture in a hospital. Each sensor possesses temperature, light, heat, motion-sensing, and bluetooth beacon capabilities.

### Bluetooth Tags

The Enlighted IoT platform uses physical Bluetooth LE tags to locate equipment, disposable patient wristbands, or staff badges. The system also uses virtual tags to locate Bluetooth-enabled mobile devices like smart phones or tablets.

### Dense Sensor Grid

Enlighted deploys a smart sensor into each light fixture in a building. Because lights are everywhere, this creates a dense and regular grid of coverage for locating Bluetooth LE tagged items anywhere within a hospital.

### Robust and Scalable Wireless Network

The Enlighted IoT platform's robust and scalable wireless mesh network is capable of managing over 10,000 sensors per building.

### Cloud-Based Data and Apps

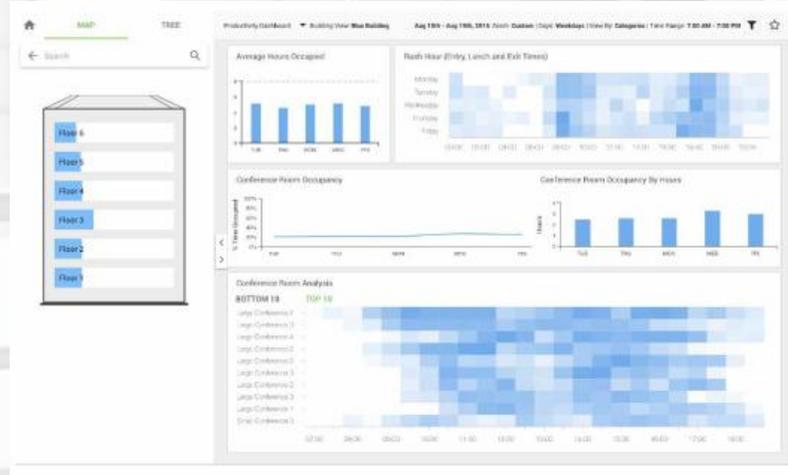
All sensor data is stored in a central data repository where it is accessed by advanced software applications to deliver detailed insights into hospital operations.

## Understand How Space Is Used

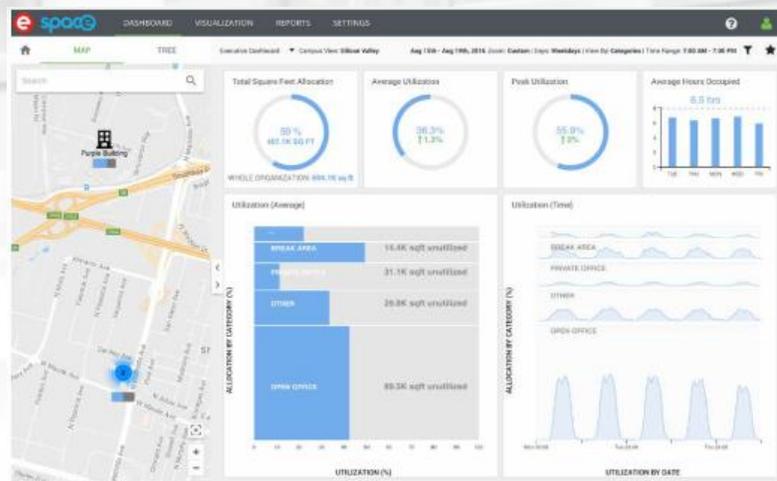
Enlighted's dense, ubiquitous sensor network also possesses advanced motion tracking and occupancy detection capabilities.

Healthcare executives can use real-time motion, occupancy, and detailed space utilization data to see how any space is being used during any specific time period.

This data-driven examination of business processes within the hospital leads to improved space planning, better return on real estate capital investments, optimized staff workflows, reduced patient queue times, and more.



Space utilization analytics provide insights using data collected 24/7 across the building



Detailed utilization metrics inform better space planning decisions

# Energy Efficient Hospital Lighting and Heating Control

The Enlighted IoT platform's dense, ubiquitous sensor network also possesses advanced lighting control and HVAC optimization features for hospitals:

## Advanced Lighting Control

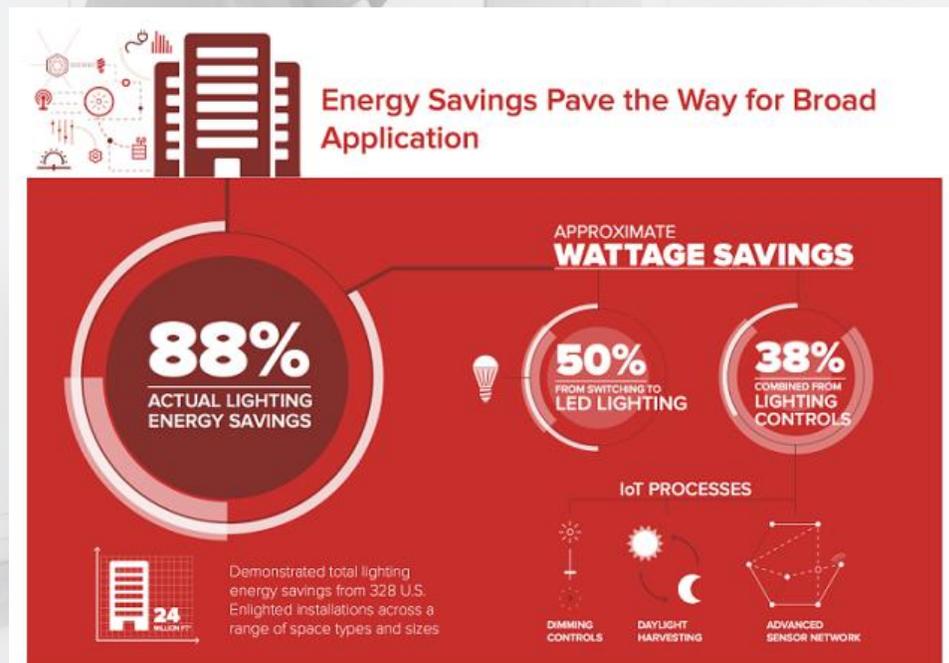
- Improve overall light quality with LED and sensor light fixtures
- Increase lighting energy savings up to 90% and lighting maintenance costs up to 25%
- Task tuning, occupancy data and daylight harvesting increase savings
- Ashrae 90.1 and Title 24 Compliant

## Heating, Ventilation and Air Conditioning Control

- Dynamically optimize heating, air conditioning and air flow
- Customize time schedules by building zones
- Rich reporting and monitoring via Building Management System
- Reduce HVAC energy use

## Innovative Financing

GEO is a revolutionary financing model that enables hospitals to upgrade their facilities without capital spending, obtaining a lease or exposing themselves to risk. It's the fastest way to deploy Enlighted's sensor network and real-time location services with an LED upgrade across your entire portfolio, and the fastest way to start saving.



## About Enlighted

The Enlighted IoT Platform makes buildings brilliant by deploying cloud-connected sensors, advanced networking, and big data analytics applications. The infrastructure pays for itself through lighting energy savings of up to 90%.

Enlighted's dense sensor network of one sensor per light fixture and ceiling-mounted positioning also capture the industry's most robust data. This powers Enlighted's solutions for real-time location services, building space management, occupancy-based HVAC, lighting control, and more.

### Enlighted Healthcare Customers

The Enlighted IoT platform is installed in more than 160 million square feet of real estate worldwide. Enlighted works with top organizations like Mercy, Google, LinkedIn, ATT, Uber, and more.



## Recent Awards

"Top Project of the Year Award"

- Environmental Leader  
Product & Project Awards

"Winner of Supplier Sustainability Award"

- AT&T

"Top 10 Innovative Companies"

- Lux Research

"Top 100 Global Winner"

- Global Cleantech

"America's Top 100"

- Red Herring

"Business Environment Award Winner"

- Acterra

"100 Most Promising Big Data Solution Providers"

- CIO Review



### Experience It Live

The best way to experience the Enlighted system is to see it live in a working hospital. Visit [www.enlightedinc.com/contact-us](http://www.enlightedinc.com/contact-us) to arrange a live demo.

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