People & Technology

Yongin Severance Hospital
Precision Tracking with RTLS for Smarter Care

Inpatient & Staff Monitoring • Asset Tracking & Utilization Optimization • Medical Refrigerator Temperature Monitoring • Outpatient Flow Monitoring • Contact Tracing

용인세브란스병원
YONGIN SEVERANCE HOSPITAL

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- **Opened**: March 1, 2020
- **Location**: Yongin, South Korea
- **Facility Size**: 72,000 m² (13 floors above ground, 4 underground)
- **Capacity**:
  - Yongin site : 708 beds
  - 33 medical departments
  - Hospital group : 2500+ beds
- **Annual Patient Volume**:
  - 2.5 million outpatients
  - 840,000 inpatients

"Yongin Severance will be transformed into an entirely digital hospital [...] Doctors and nurses will do less work but more efficiently."
- Choi Dong-hoon, Hospital General Directorl, KBR (https://www.koreabiomed.com)

"This is the best network system we are proud of."
- 박진영 부학장

Smart Hospital with Indoor Plus⁺ SmartCare

Our comprehensive Smart Hospital offer and implementation at Yongin Hospital in a 10-min video!

KEY OBJECTIVES

- Prevent unauthorized patient movement.
- Enhance patient safety through real-time monitoring.
- Minimize time searching for medical equipment.
- Reduce outpatients waiting times.
- Prevent medical supplies spoilage.
- Improve medical staff efficiency by reducing non-clinical workload.

SOLUTIONS DEPLOYED   Timeline : 6 months

PATIENT AND STAFF MONITORING
- BLE-enabled wristbands for inpatients, badges for staff for real-time tracking. 2600+ units deployed
- Automated alerts for unauthorized movement
- SOS button for emergency alerts, directly notifying nurses.
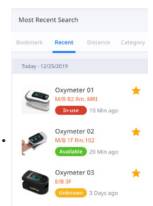- Enhanced workflow efficiency with location-based automation.

ASSET TRACKING & UTILIZATION
- Tracking of 10 types of critical medical equipment *(e.g., infusion pumps, wheelchairs, patient monitors, vacuum aspirators)*. 400+ units deployed
- Data-driven insights to optimize asset distribution across departments.
- Theft prevention through geofencing. (alerts when medical assets leave designated areas)
- Custom heatmaps & usage patterns for medical devices to optimize inventory placement.

STAFF EFFICIENCY ENHANCEMENT
- Nurses equipped with mobile apps for immediate access to patient and asset locations.
- Integration with nurse call systems for immediate staff response.
- 24/7 location-based emergency response system for staff safety.

SYSTEM ARCHITECTURE & INTEGRATION
- Integration with the hospital's existing information systems.
- AP infrastructure (hospital network) enables wireless tracking without additional wired infrastructure. 528 BLE receiver units deployed acrossed the hospital.

40% non-clinical workload reduction
> Staff can focus on patients

30% Loss/stolen equipment reduction
> significant cost savings

Asset retrieval time divided by **÷3**

Immediate alerts for high-risk patient movements **24/7**