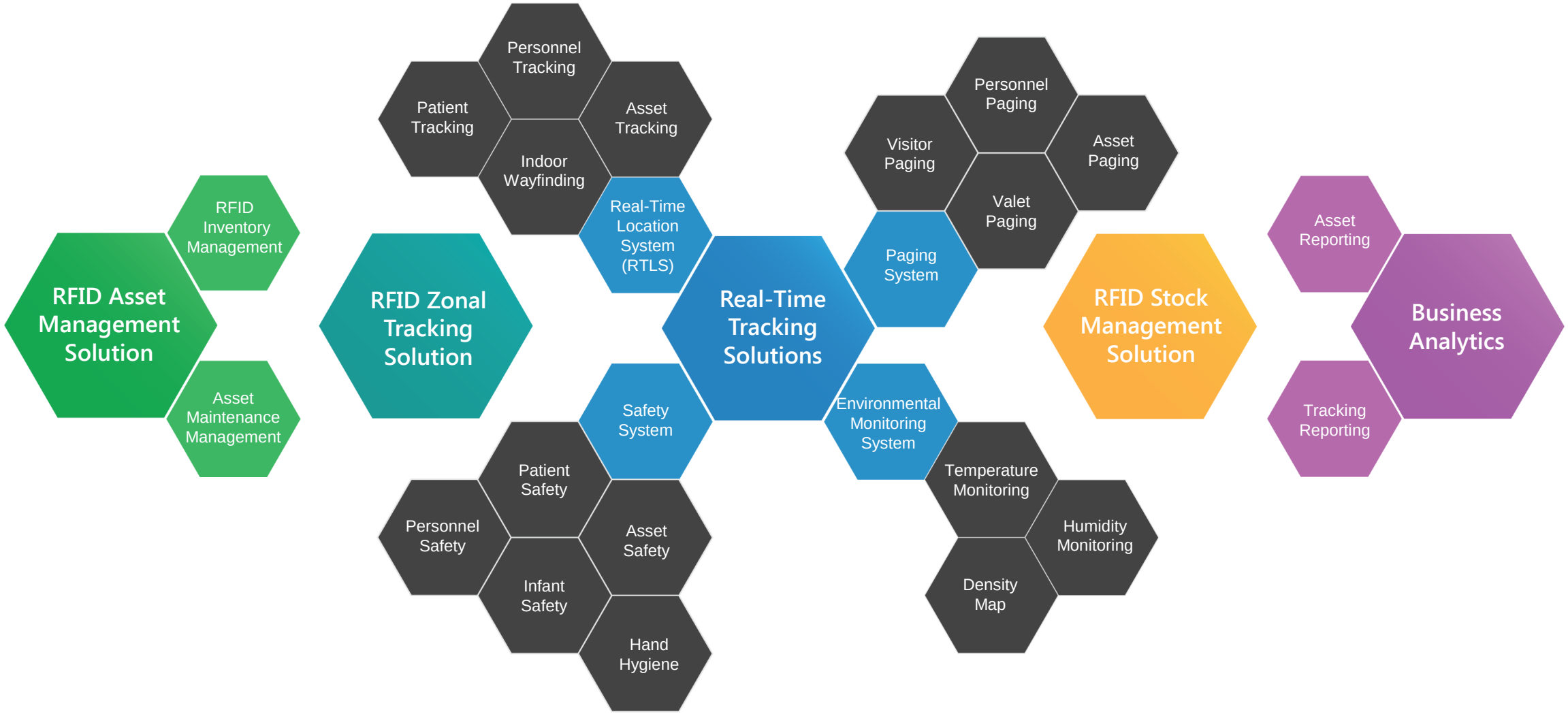
Borda Technology

Adana Integrated Healthcare Campus

SOLUTIONS


RFID Asset Management Solution
RFID Inventory Management
Asset Maintenance Management
RFID Zonal Tracking Solution
Personnel Tracking
Patient Tracking
Asset Tracking
Indoor Wayfinding
Real-Time Location System (RTLS)
Real-Time Tracking Solutions
Safety System
Patient Safety
Personnel Safety
Asset Safety
Infant Safety
Hand Hygiene
Paging System
Personnel Paging
Visitor Paging
Asset Paging
Valet Paging
Environmental Monitoring System
Temperature Monitoring
Humidity Monitoring
Density Map
RFID Stock Management Solution
Business Analytics
Asset Reporting
Tracking Reporting

Adana Integrated Healthcare Campus

Adana Integrated Healthcare Campus

16.000 Patients Per Day

Implemented Borda Healthcare RFID Solutions

PRODUCTS Hardware

We believe that what we offer to our customers and partners must be reliable and functional. To achieve that we have been researching, developing technology and proven products in order to stand behind them proudly. As a result, we have developed our own active RFID hardware and also cooperated with companies that we trust for Passive RFID hardware.

PASSIVE

Zebra RFID Handheld Reader
Zebra Mobile Computer

Zebra Passive Reader

Zebra Passive
Antenna

Omni ID Passive RFID
Tags

ACTIVE

Borda Active Reader

Borda Active Locator

Borda Temperature Tag

Borda
Mother Tag

Borda
Infant Tag

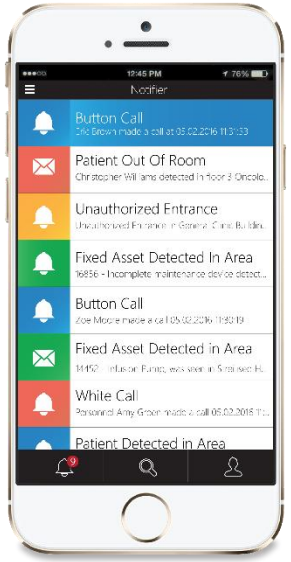
Borda
Personnel Tag

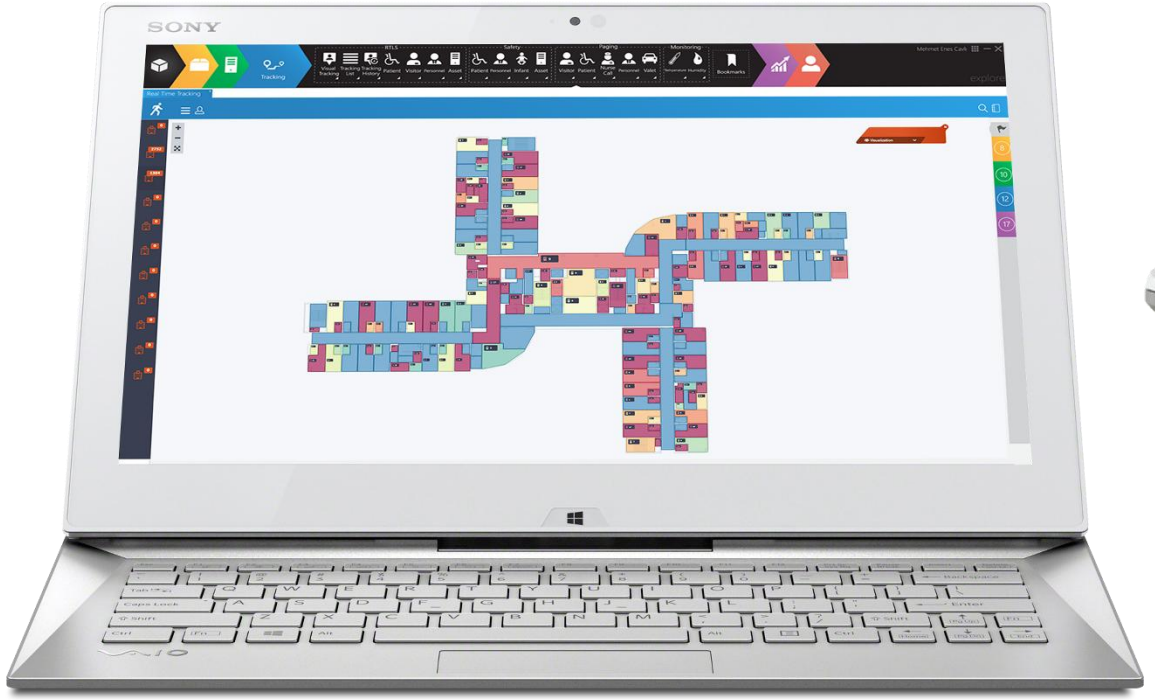
Borda
Asset Tag

PRODUCTS

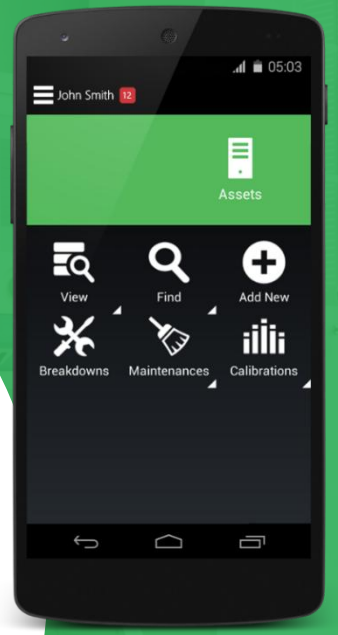
Borda Lighthouse Software

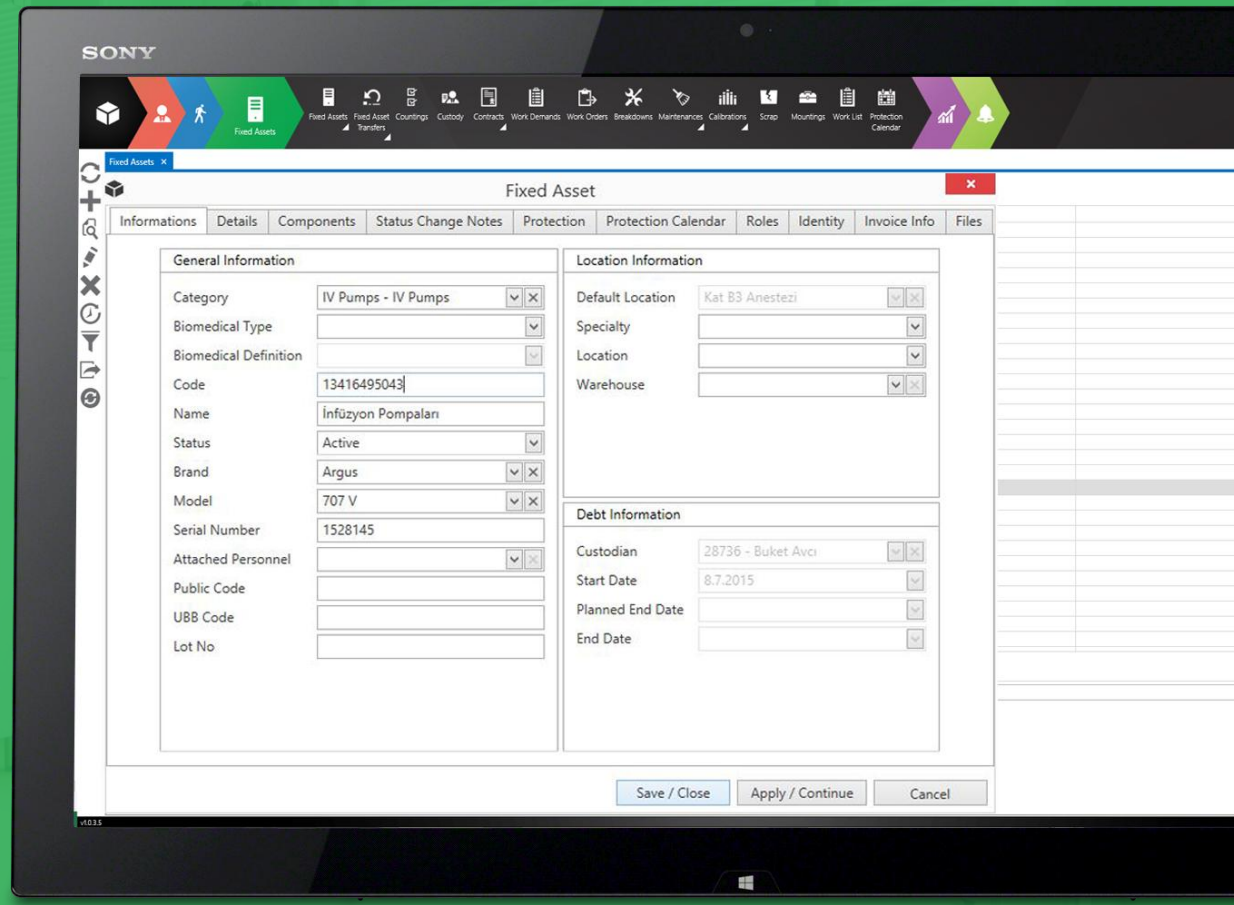
The powerful and useful platform must be created with a deep knowledge of business domain. It must also be beautifully designed, user friendly, flexible to customize according to needs. That make us design Lighthouse platform.

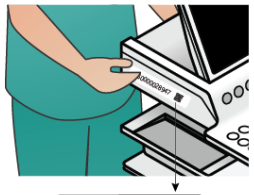


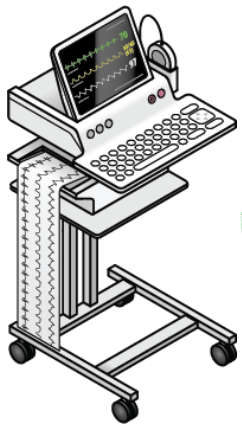


System Components









how it works

ASSET Management Solution

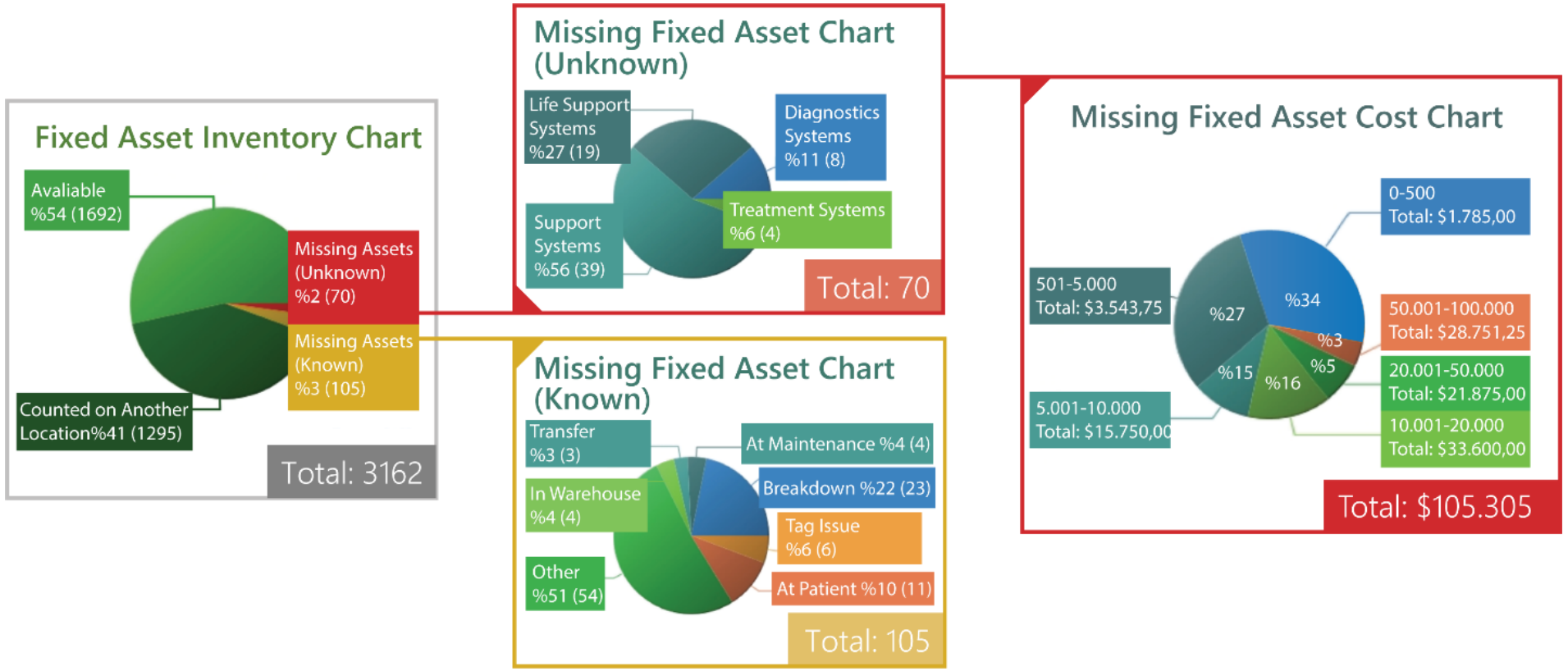
Location Tagging

- All locations are tagged with RFID tags.
- RFID tags are used in counting assets.
- These tags enable the personnels to locate themselves easily.
- These codes are used also in Central Helpdesk, to locate any request.

Counting operations are done very fast, planned and systematic

Asset inventory is monitored in room scale

Compliance with the regulations becomes easier



System Components

ZONAL Location Tracking

how it works

The presence of people and assets in the controlled zone is monitored

Unauthorized exit is detected

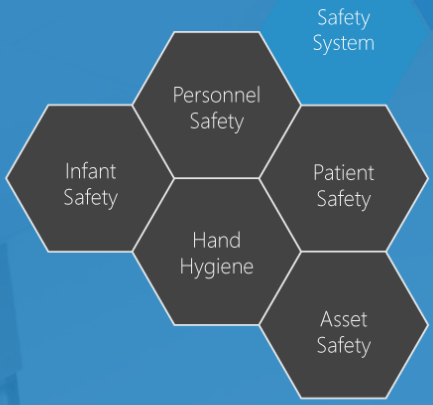
Asset inventory management becomes easier

> Passive RFID checkpoints are located in 35 exit doors.
> Each door has a flasher, which provides audiovisual alerts.
> CCTV operators recieve the alerts as a Lighthouse notification.
> Custidians of the assets recieve the alerts an e-mail.

> Loss and stolen is prevented
> Awareness of assets increases and overpurchasement decreases

System Components

REAL-TIME TRACKING Solutions



255 Active Readers

1807 Locators

The Main Capability of The Solution

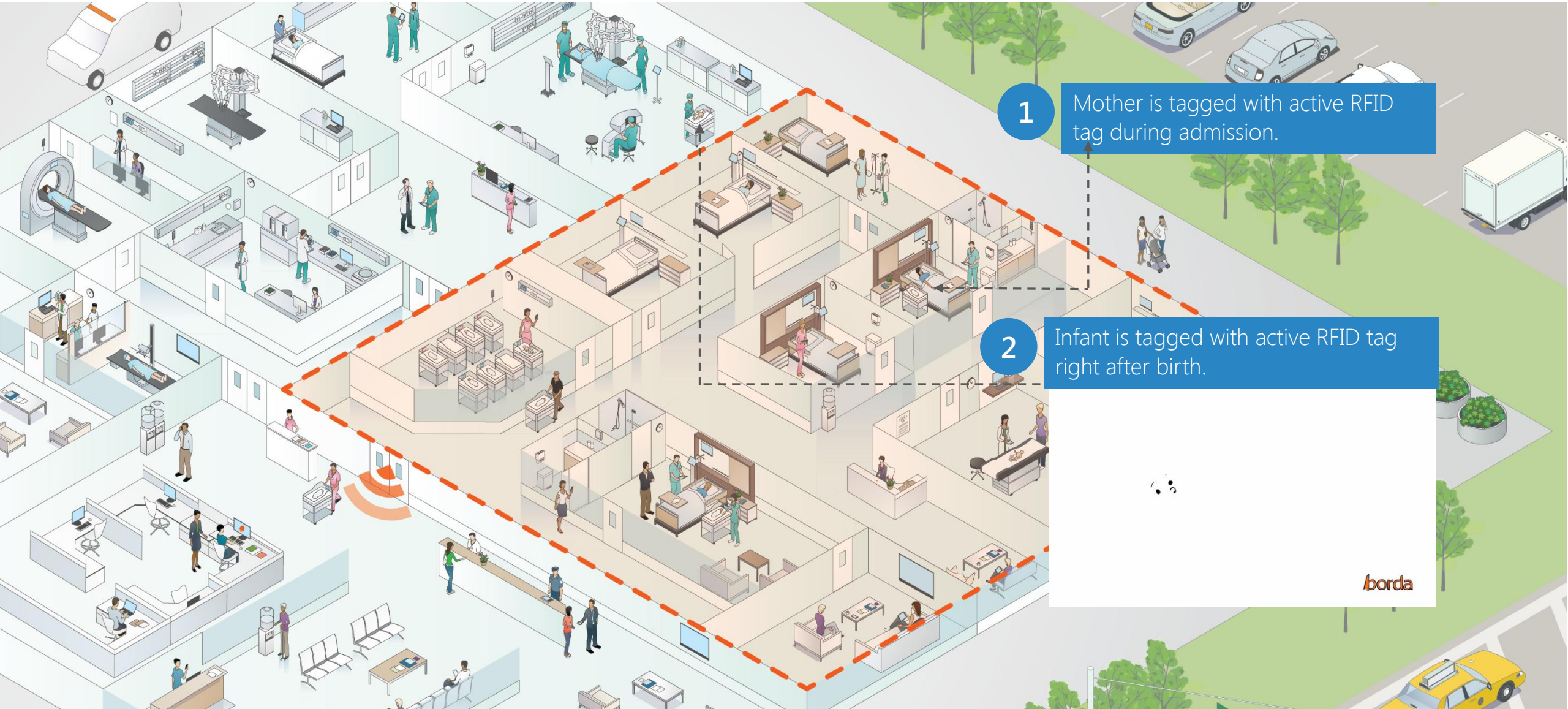
- ↘ Secure zones are created to detect unauthorized exit of the people and the assets
- ↘ Infant and patient kidnapping, also asset stealing attempts are detected
- ↘ The patient or personnel generates an emergency call

System Components

- If an unauthorized surgery patient or mother is located at the exit zones, an alert is created.
- Customized alerts are generated if it an impatient is unauthorized to leave his/her room.
- These alerts notify CCTV operators, nurses and doctors.

SAFETY Systems

RTLS - Infant Safety

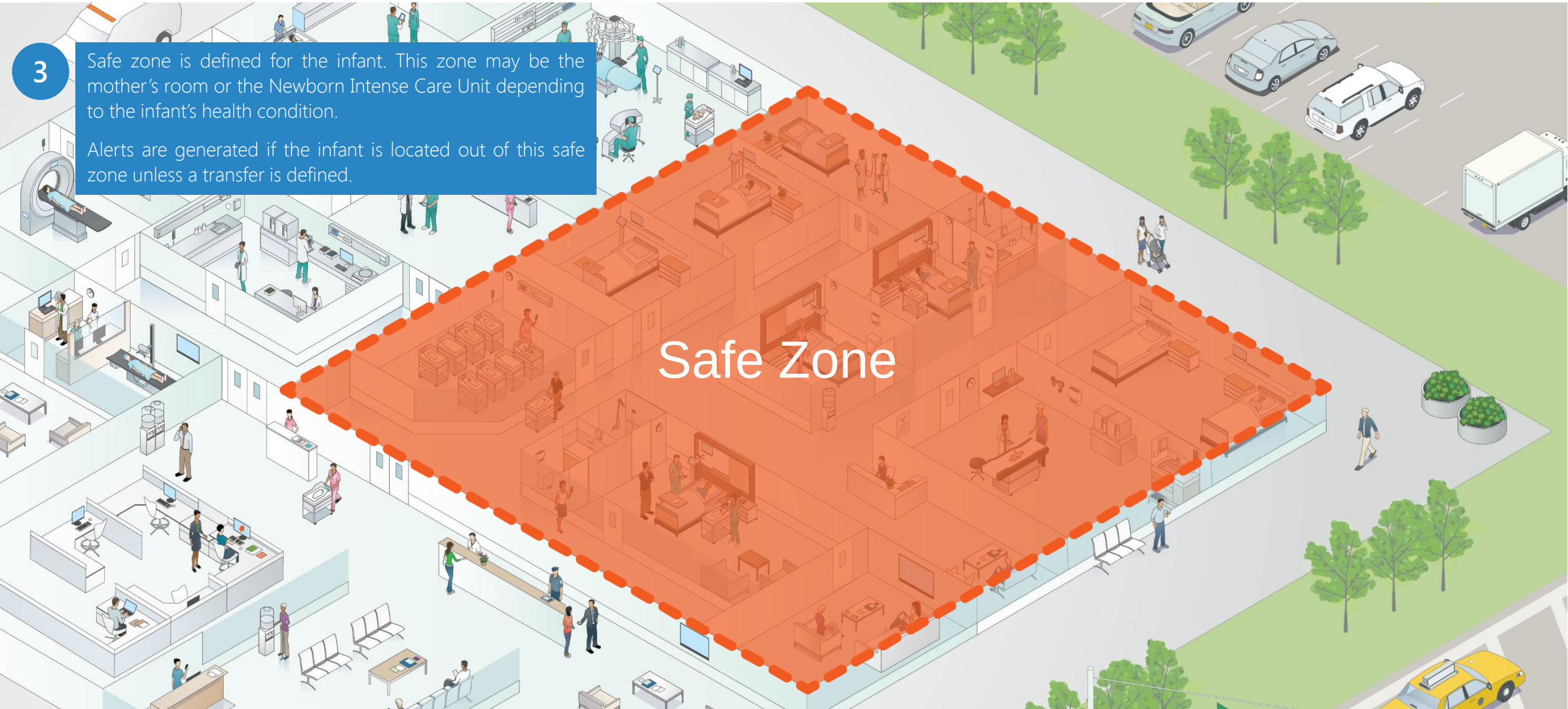


RTLS - Infant Safety

3

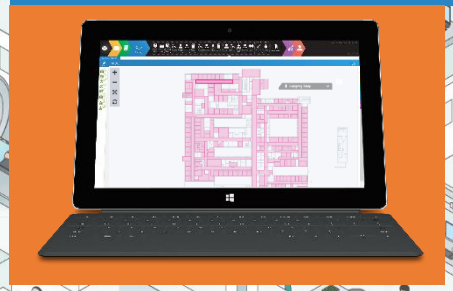
Safe zone is defined for the infant. This zone may be the mother's room or the Newborn Intense Care Unit depending to the infant's health condition.

Alerts are generated if the infant is located out of this safe zone unless a transfer is defined.



RTLS - Infant Safety

4 Room based loocations of the mother and infant are tracked.



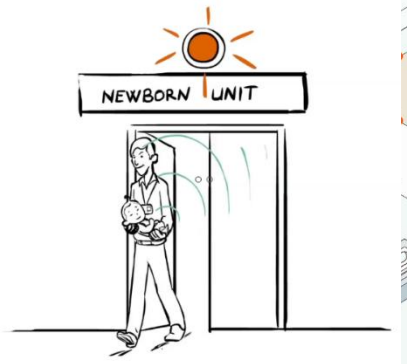
5 Infant may leave the safe zone only ifa transfer is defined with the authorized personnel

6 Alerts are generated and may be tracked on the software.

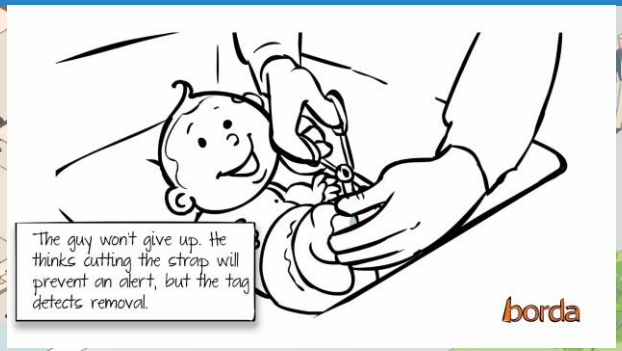
RTLS - Infant Safety

7 Alerts are generated as notifications on Lighthouse, Lighthouse Mobile, as SMS or e-mail.

8 With the BMS integration, the doors are locked automatically and audovisual alerts are generated on flashers.

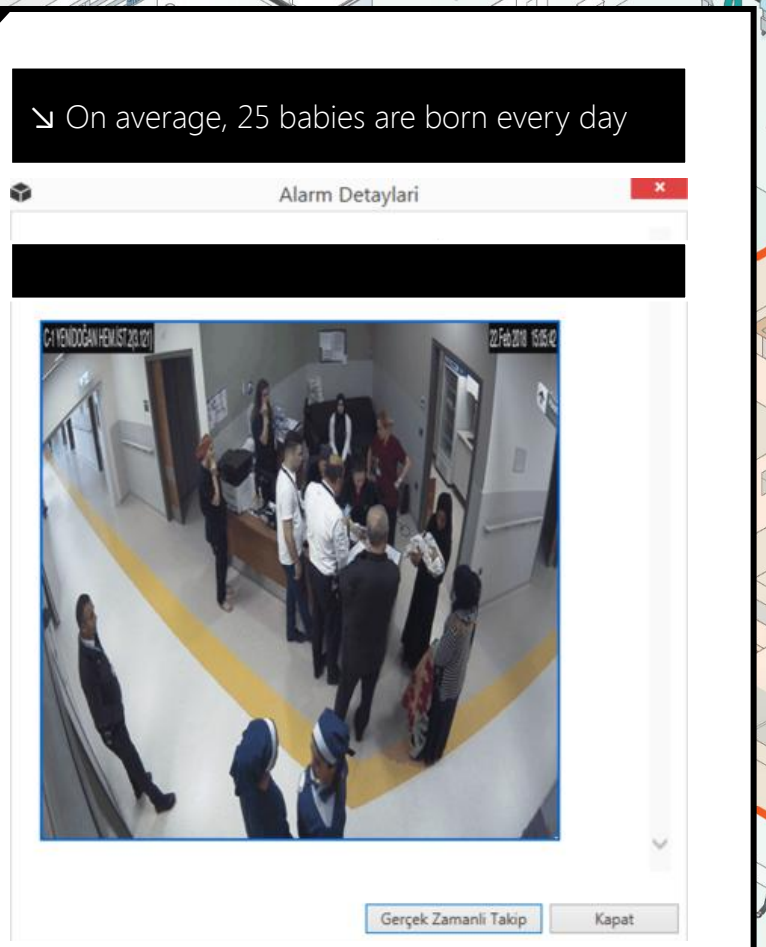


9 Increased security measures are taken with CCTV integration.



RTLS - Infant Safety

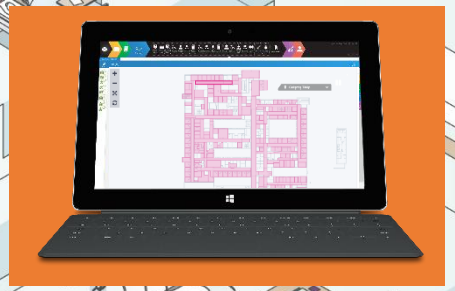
↘ On average, 25 babies are born every day



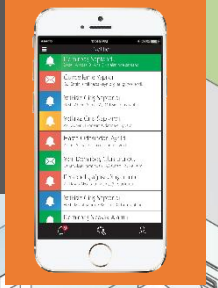
RTLS - Asset Safety

1. Locators are found on each department on every floor
2. All of the hospital is covered by the active readers
3. Mobile equipment are tagged with asset tags

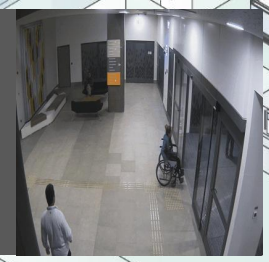
4. Department based location of the assets are tracked



5. Real time alerts are monitored on the software
6. Notification of the alert is sent on Lighthouse, Lighthouse Mobile or as SMS and e-mail.



7. Audiovisual alerts are generated by the flashers and CCTV operators are notified.



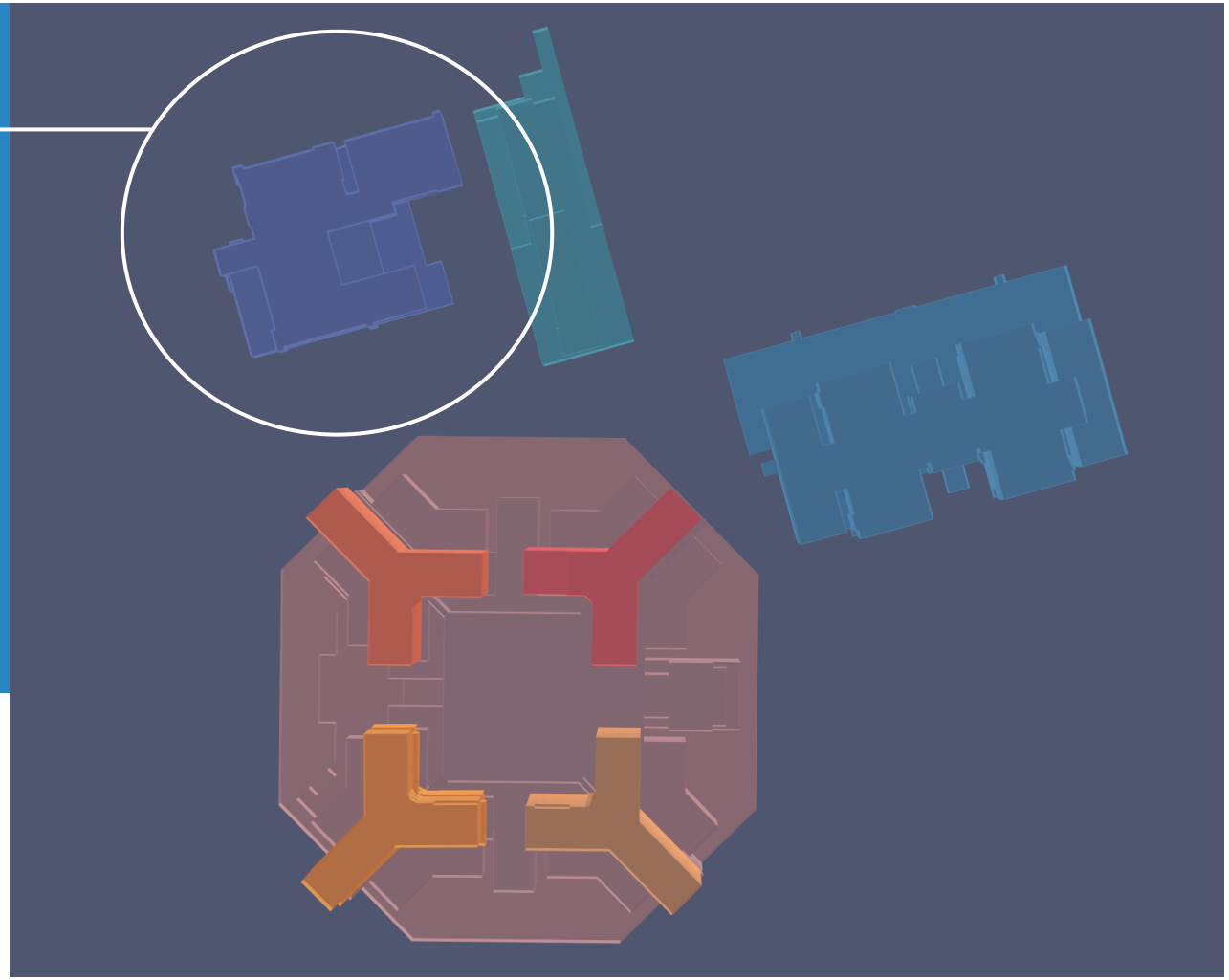
RTLS - Personnel Safety

HSFP Building

High Security Forensic Psychiatry Hospital

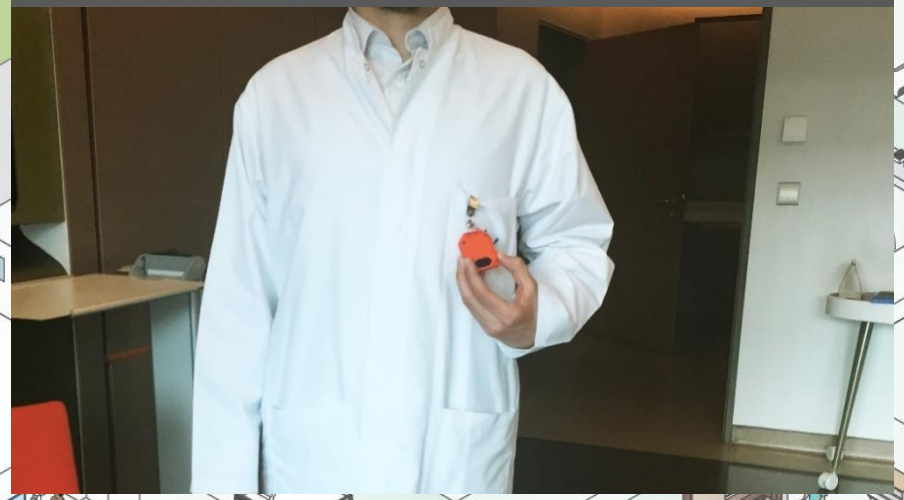
- Each doctor, nurse or personnel is tagged with a badge tag

- 287 tags in total



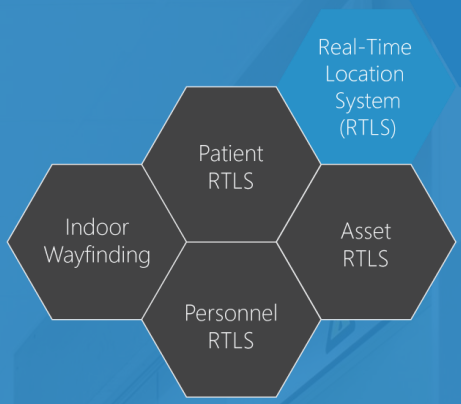
RTLS - Personnel Safety

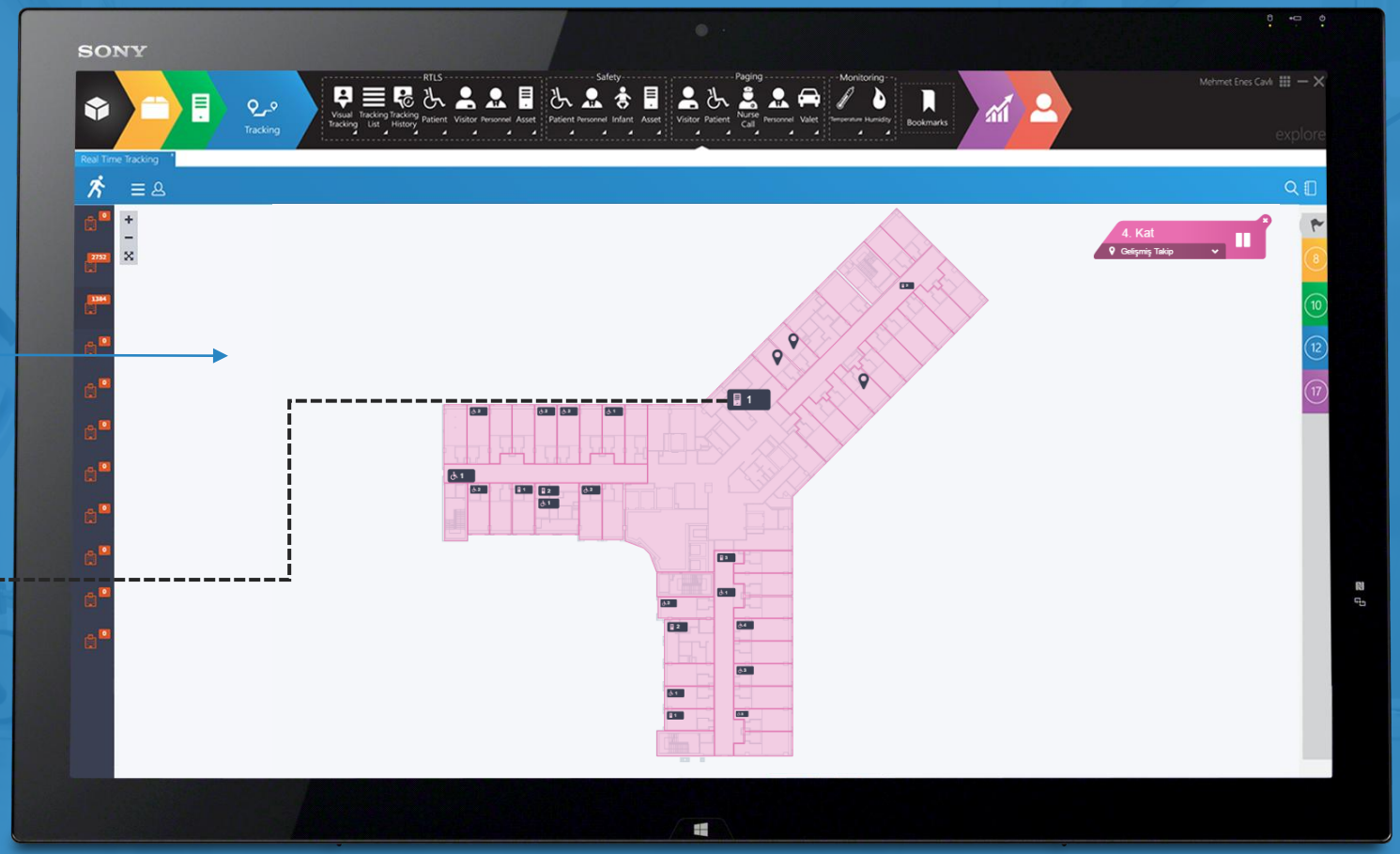
Personnels can raise white code alerts from anywhere in the hospital, simply by pressing the button found on the badge tag.



System Components

RTLS





RTLS - Patient Tracking

- The data of movements of people and objects is qualified
- Business processes are observed
- The uncertainties are eliminated
- Data is formed for administrative decisions
- Improvements are made in business processes
- Automatic control of authorization constraints and business processes is done

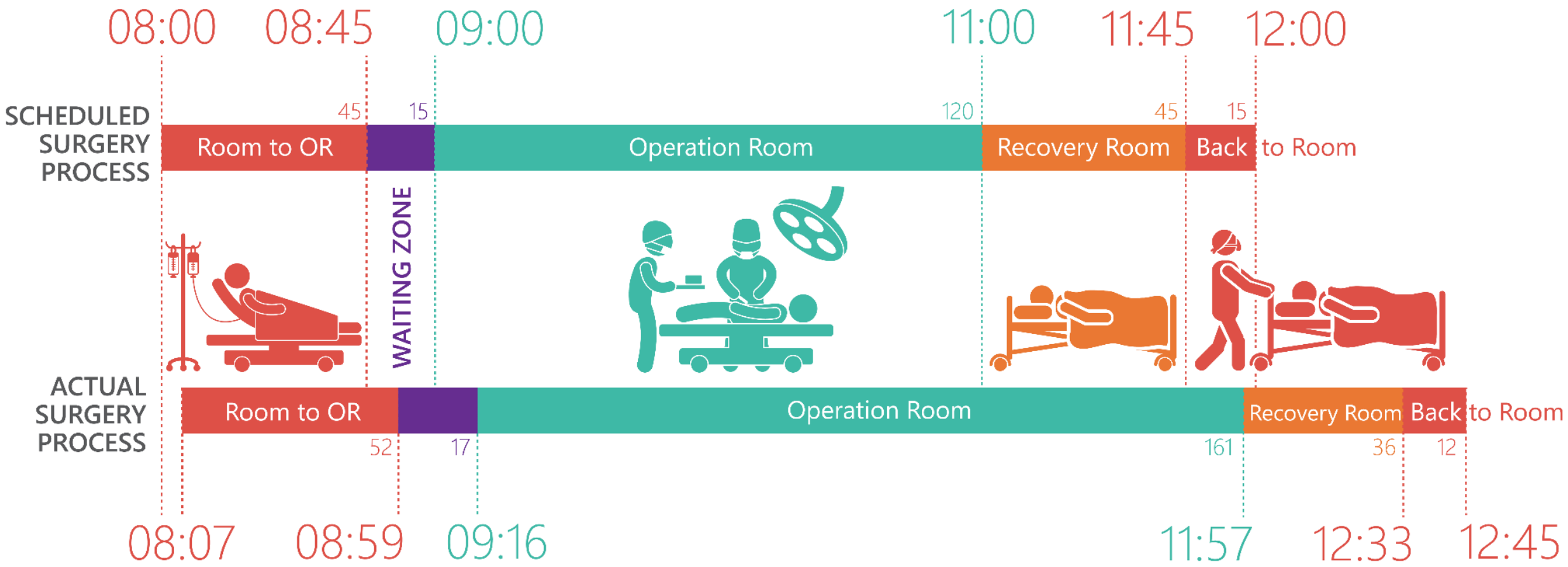
Benefits of this solution:

↘ Measurable processes

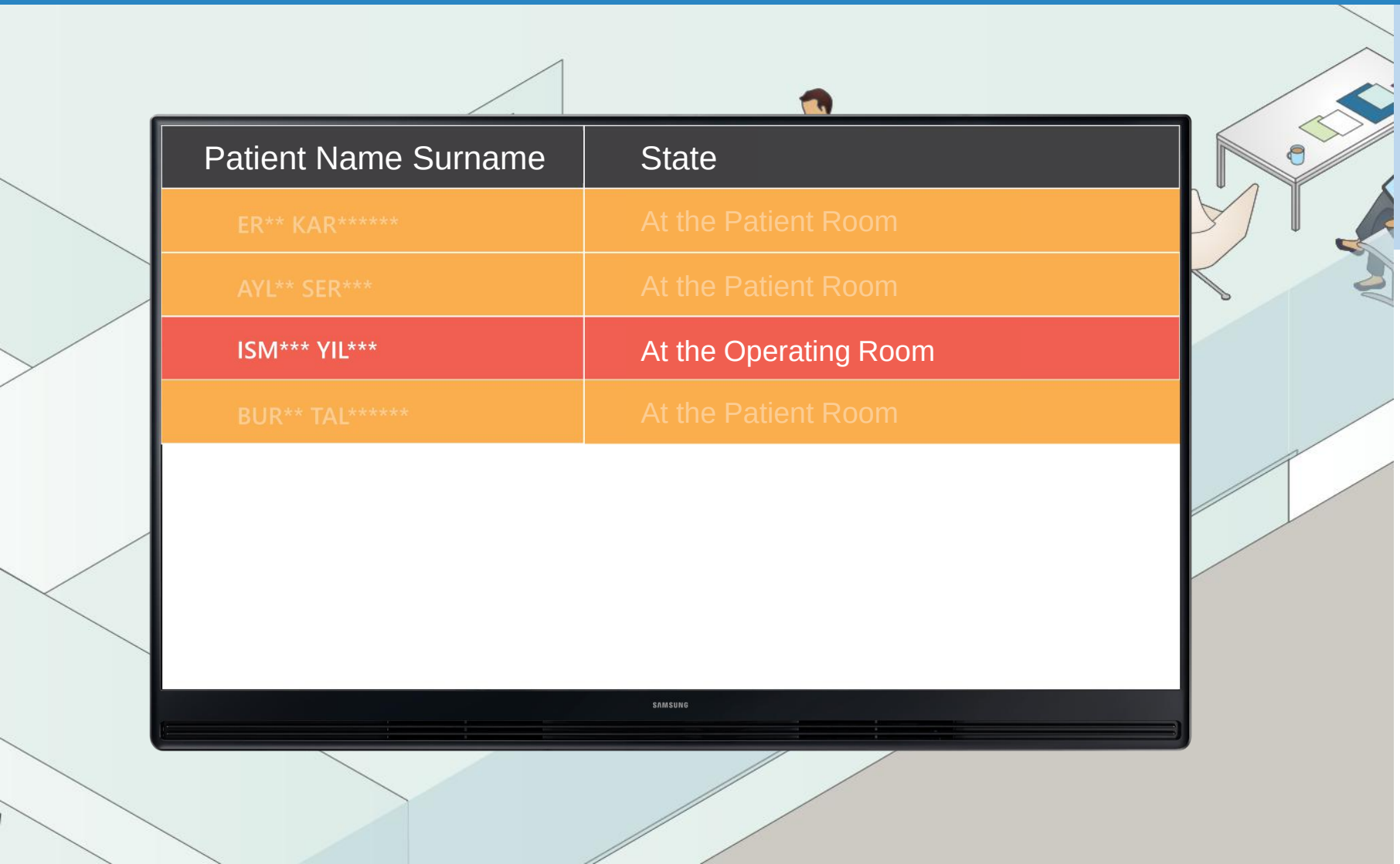
↘ Improved quality of healthcare

↘ Decreased cost

RTLS - Patient Tracking (Surgery Process)

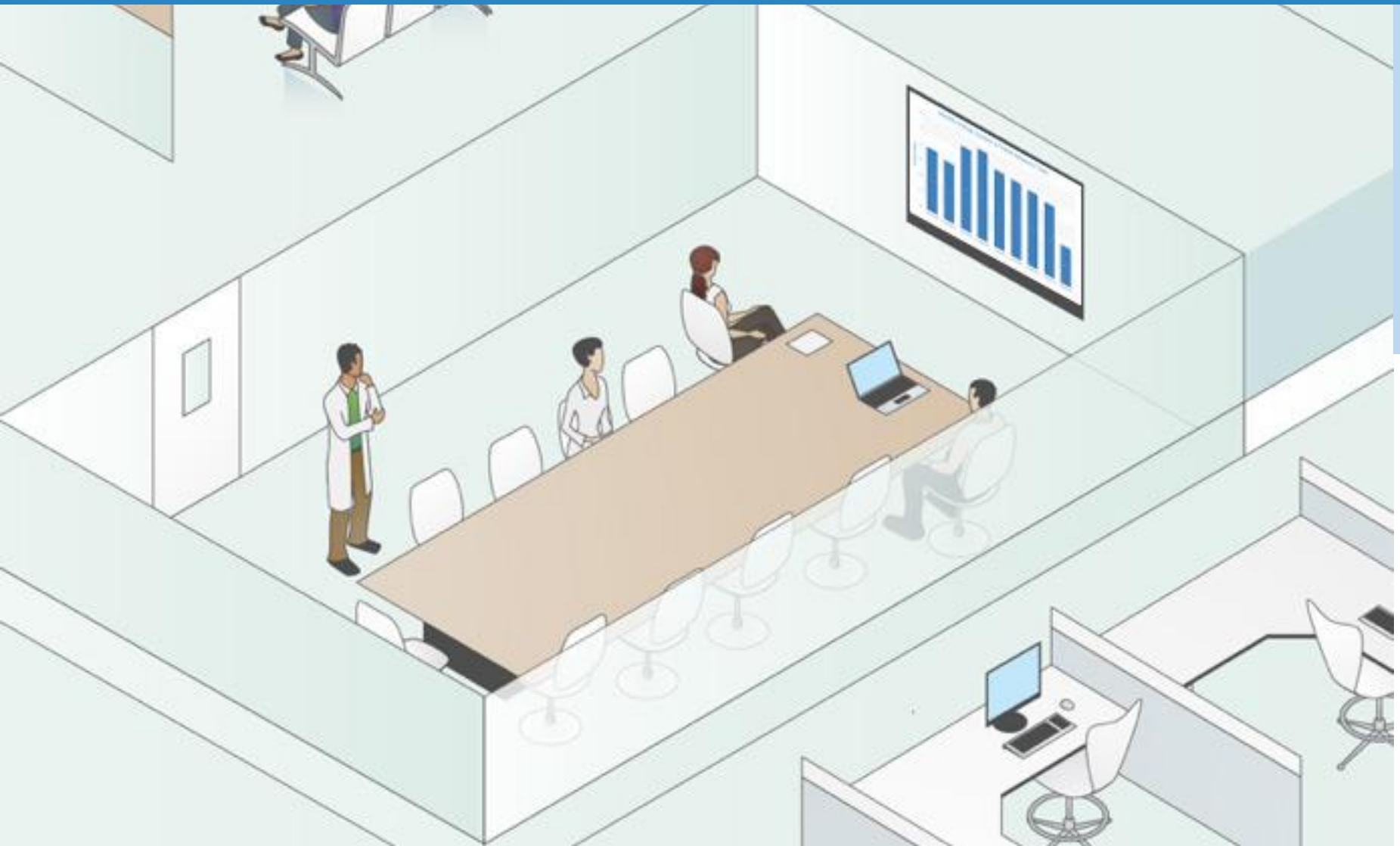


RTLS - Patient Tracking (Surgery Process)



At the waiting areas, patient's relatives and friends may follow the state of the patient from the monitors that show real-time state of the patient.

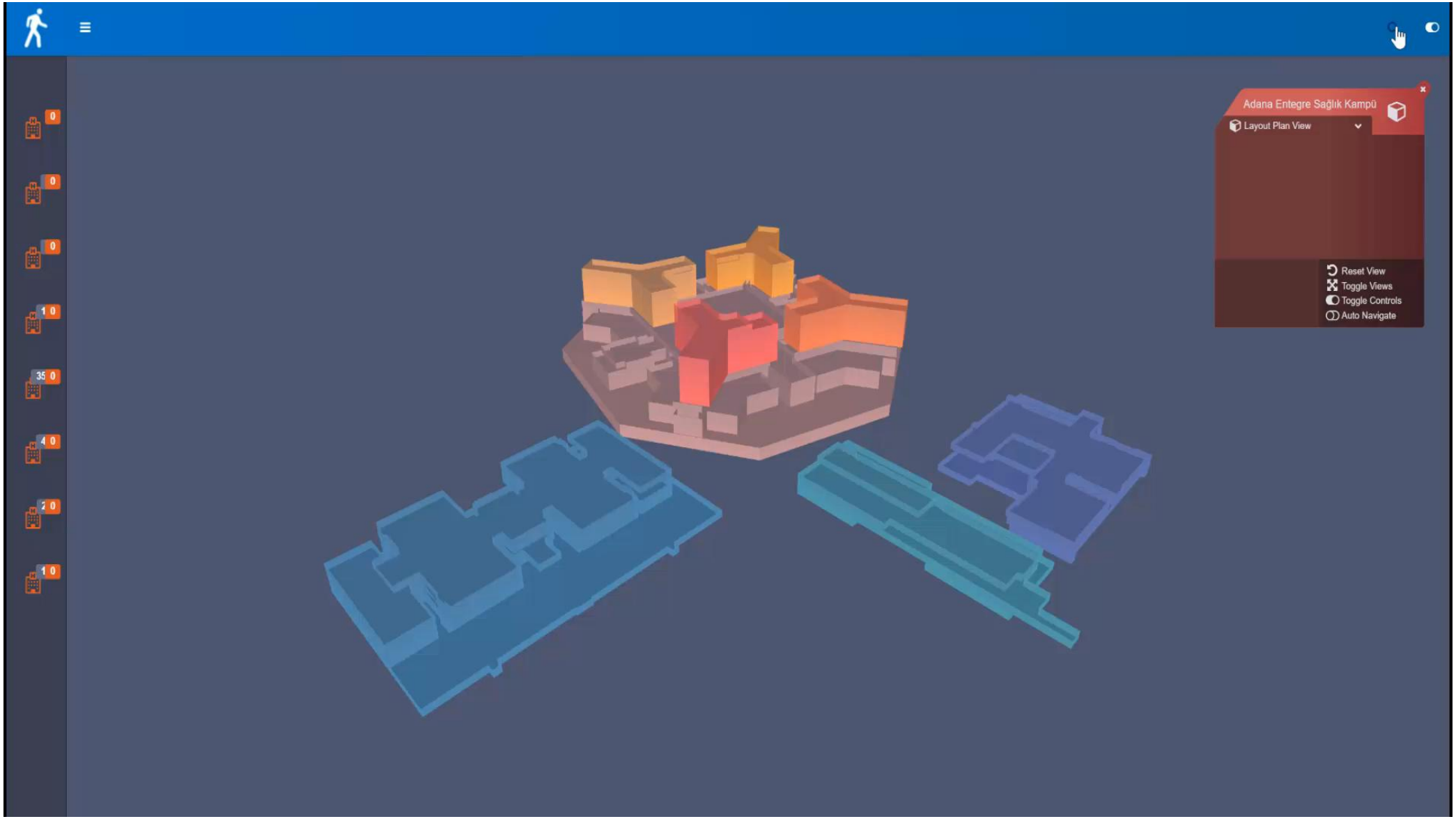
RTLS - Patient Tracking (Surgery Process)



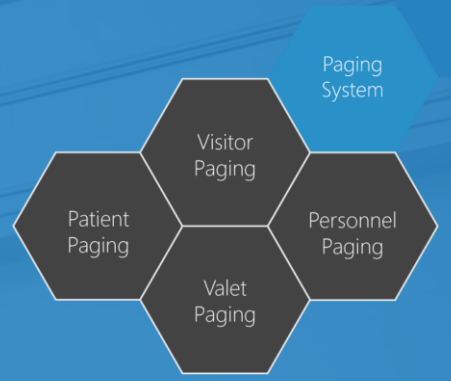
Lighthouse creates useful reports that help to:

- Clarify the spending time of the patient
- Reduce the waiting time and uncertainties.
- Increase patient and staff satisfaction.

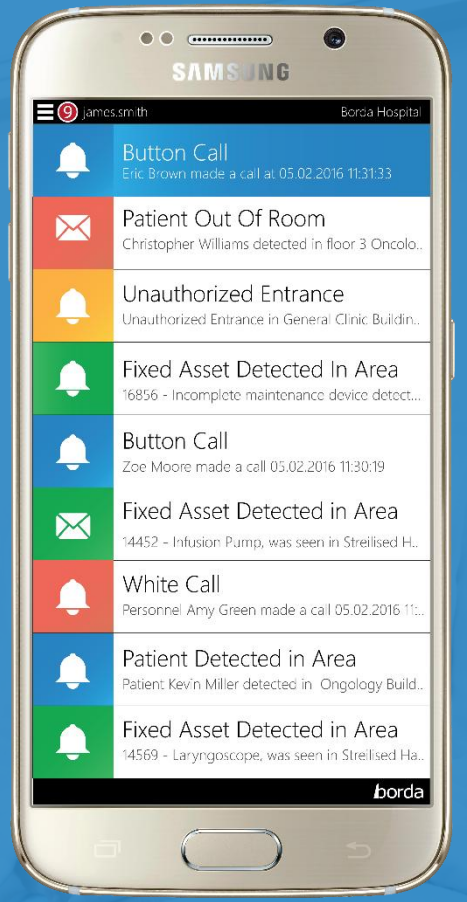
RTLS - Asset Tracking



System Components



how it works



PAGING Systems

RTTS

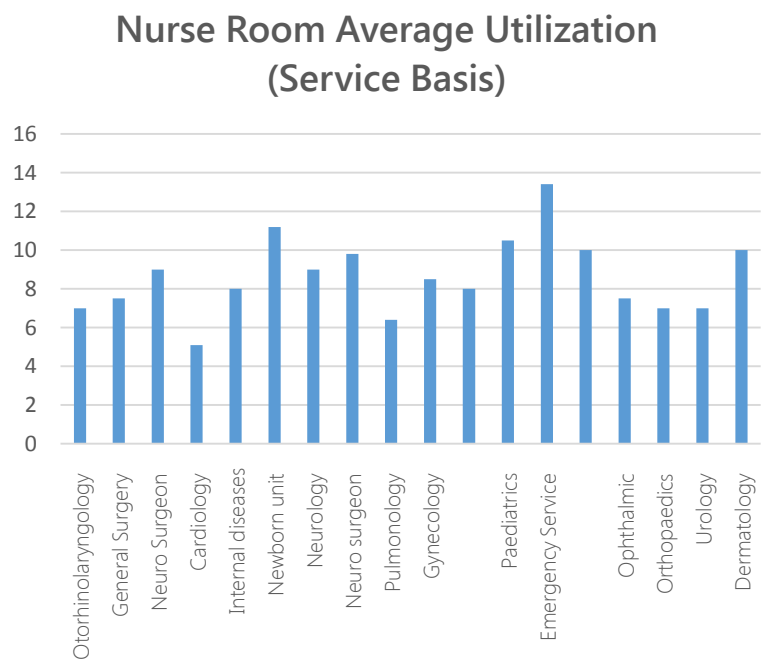
In the call notification; the caller's identity and location information is transmitted

So that the caller can be reached quickly

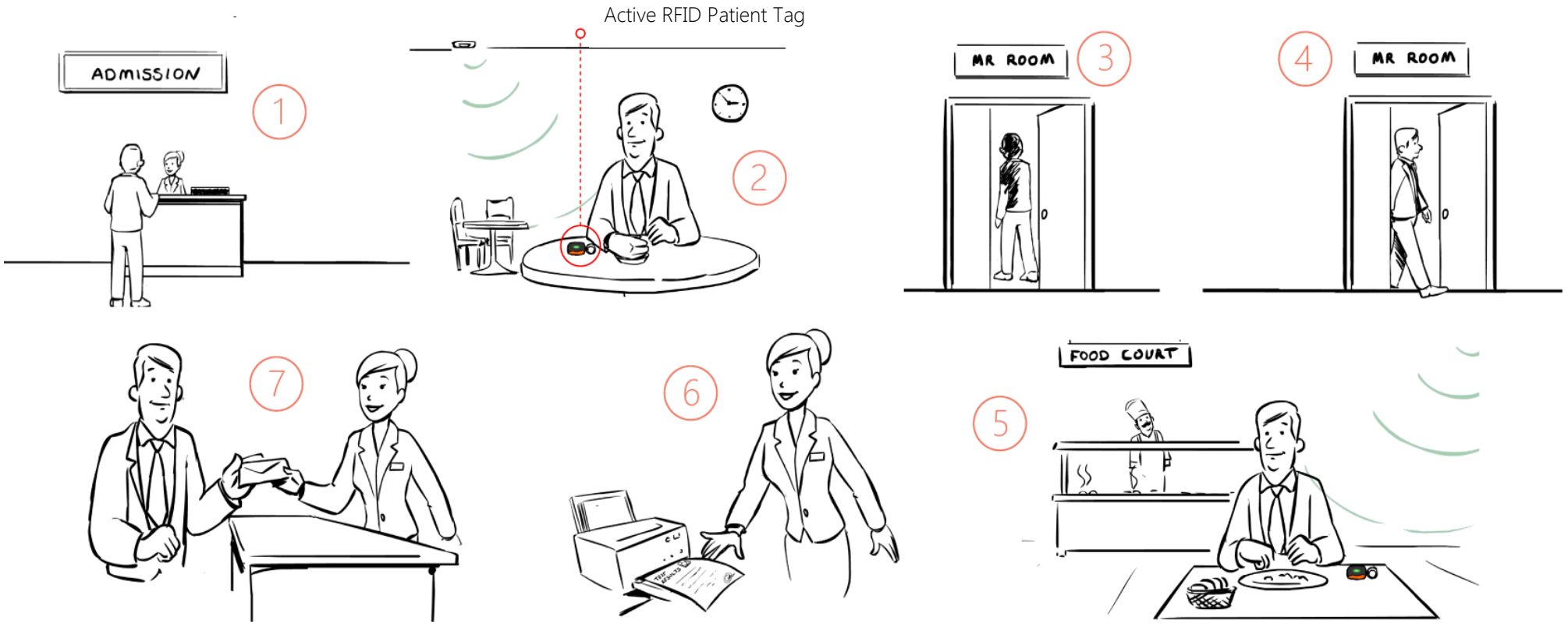
Calls are reported

The response times for the calls are evaluated on the basis of KPIs

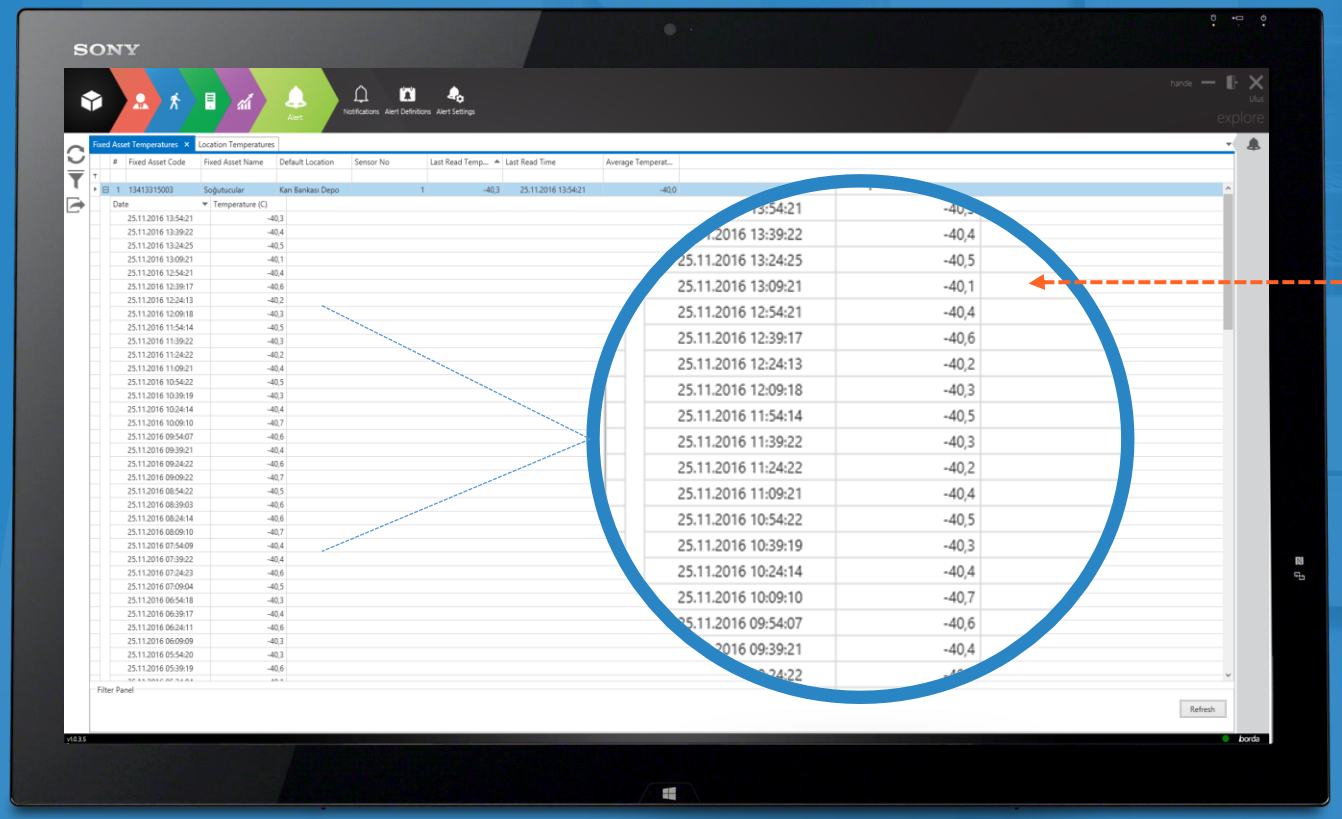
#	Service	Nurse Room Average Utilization	Expected Average Response Time
1	Otorhinolaryngology	1,8 mins	2 mins
2	General Surgery	1.6 mins	1.5 mins
3	Neuro Surgeon	1.4 mins	2 mins
4	Cardiology	2.5 mins	2 mins
5	Internal diseases	31 secs	1 min
6	Newborn unit	10 secs	15 secs
7	Neurology	1 min	1 min
8	Neuro surgeon	28 secs	30 secs
9	Pulmonology	2 mins	2.5 mins
10	Gynecology	1 min	1 min
11	Child and Adolescent Pychiatry	8 secs	15 secs
12	Paediatrics	50 secs	1 min
13	Emergency Service	7 secs	15 secs
14	Physical Medicine and Rehabilitation	1 min	1,5 mins
15	Ophthalmic	2 mins	1,5 mins
16	Orthopaedics	2 mins	2 mins
17	Urology	1.5 mins	2 mins
18	Dermatology	1 min	1.5 min



- It makes sure that the hospital staff responds to patient calls in a timely manner
- The patients and visitors are waited in the stress free areas, such as the cafeteria, for the operation and are called in due course
- The patients and visitors do not waste time waiting for the vehicles, the vehicles will be at the door when they exit



System Components



Active RFID Tags

The Active RFID tags are capable of monitoring both temperature and humidity. Reading period may be set in the desired period. In this case, the periods are set at 5 minutes.
Each tag has a unique temperature and humidity Türkak calibration sertificates.

The QR code found on the tag, possess the tag information as well as the calibration certificates.

The sensor used for temperature and humidity measurements is in industrial category.

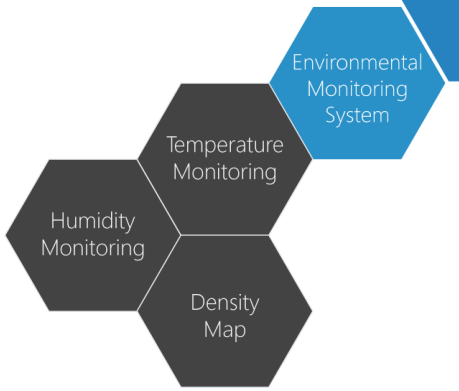
The Main Capability of The Solution

↘ Temperature and humidity are controlled automatically without interruption

↘ When the threshold is exceeded, an alarm is generated and the relevant personnel are informed

↘ Food is prevented from being adversely affected by the changes in temperature and humidity which cause rottenness.

↘ Hospital staffs do not have to check environmental values at certain periods and labor cost saving is ensured.



> Monitored Food Storage Locations

28 locations in total

- > Main Building: 6 locations
- > TUB: 20 locations
- > PTR: 1 locations
- > HSFP: 1 locations

> Monitored Food Storage Assets

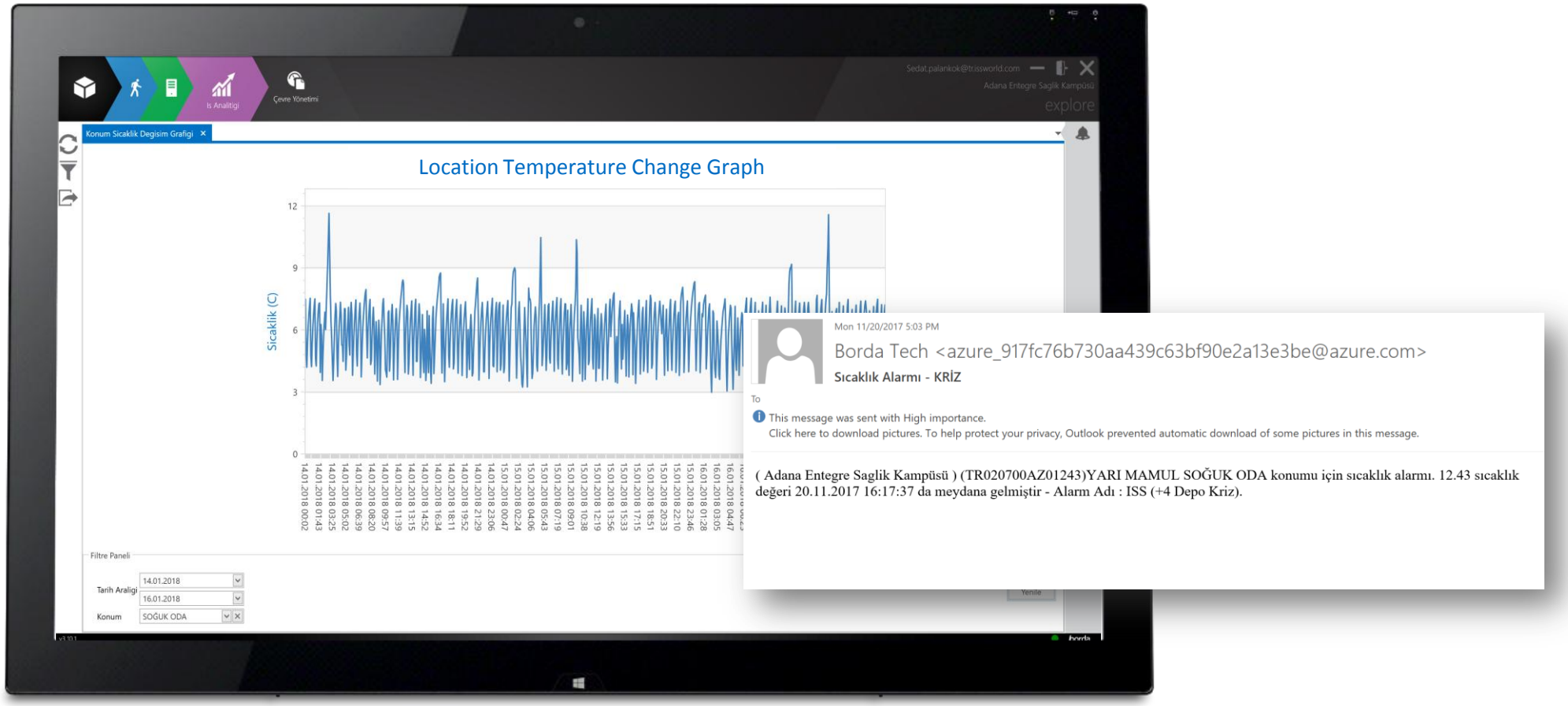
2 assets in total

- > Fridge & Chiller : 2 adet

Changes in environmental conditions are reported in detail

Environmental values such as temperature and humidity are continuously and precisely controlled

An alarm is generated in the event of exceeding the threshold value and the related personnel are informed



System Components

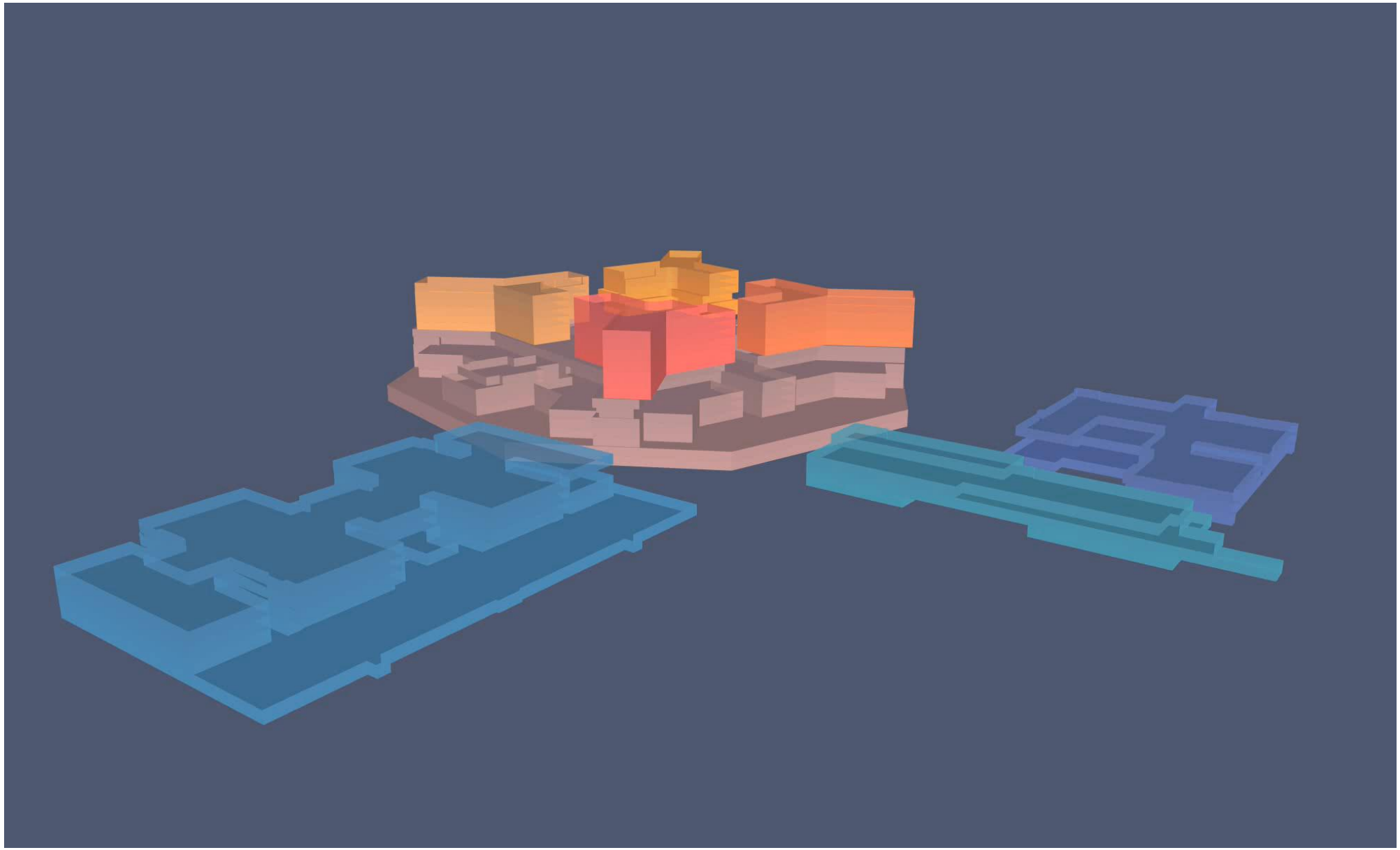
Porter Services

Porter Services Personnel Tracking

- Each porter personnel has an active RFID badge tag, which provides the real time tracking of these personnels.
- Any personnel calls 5555 and demands a porter.
- Dispatcher assignes the demand to the nearest available porter personnel on Lighthouse.
- Porter personnel controls the work demand on Lighthouse Mobile.

Borda
Badge Tag

Porter Services Personnel Tracking



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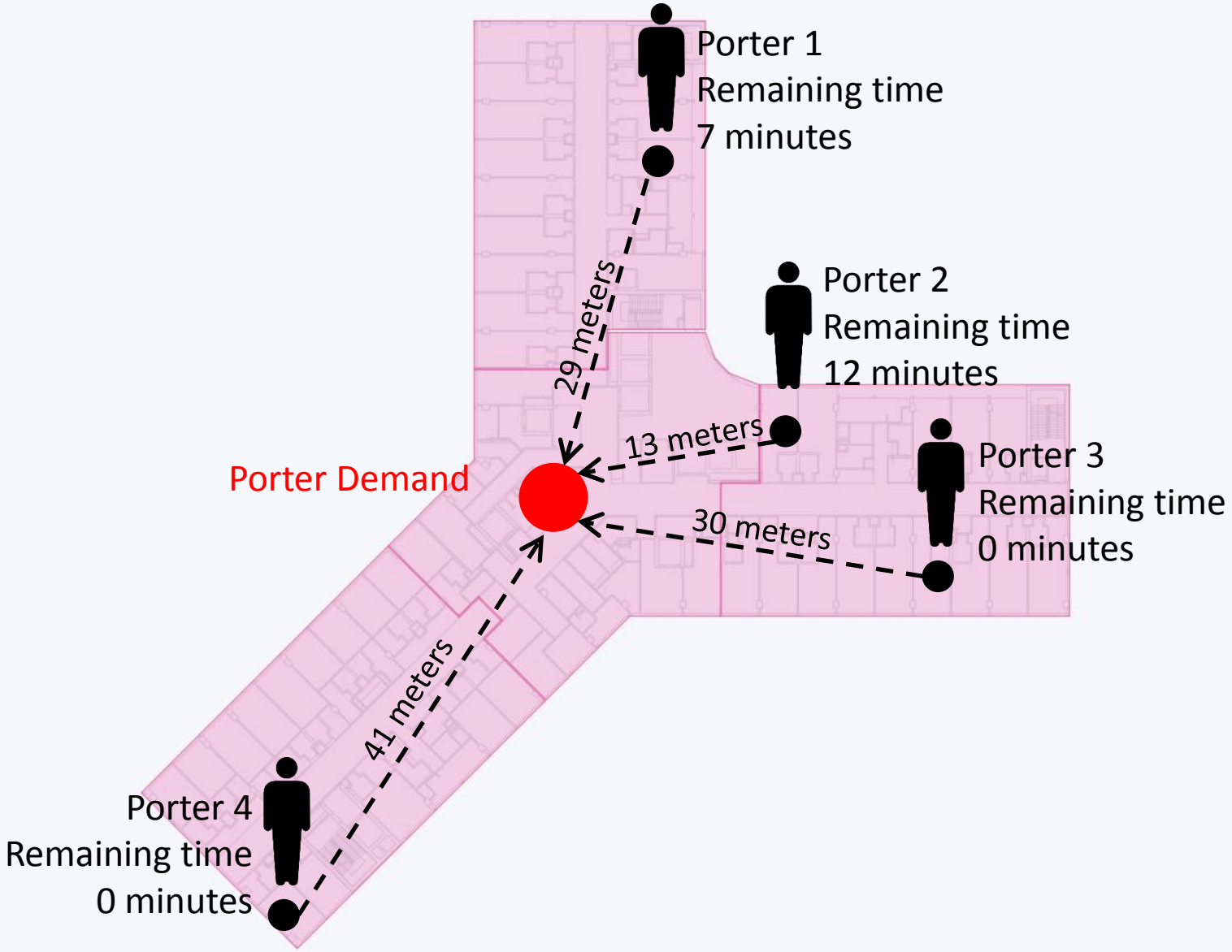

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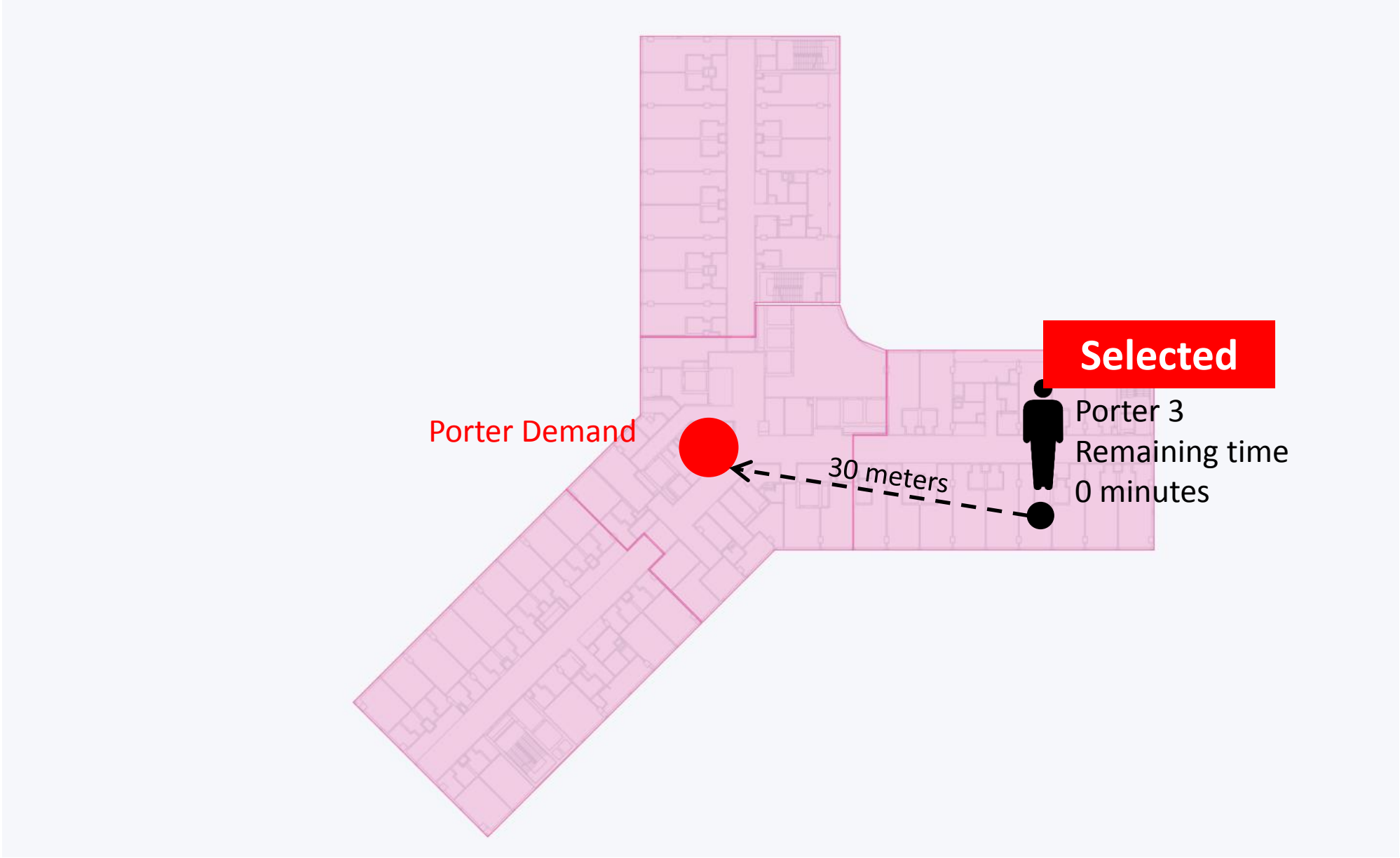

Porter Services Personnel Tracking

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