



## CASE STUDY

# THE USE OF INTERNET OF THINGS (IOT) SENSORS IN THE HEALTHCARE INDUSTRY

### Overview

Our client Roshan Eye Care is a leading eye care hospital based in Kerala, India. They cater to a niche market of customers focused on quality and results. In 2019, they decided to update their Class 100 Operating Theatres with IoT Systems.

In an Ultraclean Operation Theatre, the level of contamination through airborne particles like dust is controlled through filtration and monitoring of activities that generate these particles. A Class 100 Operating Theatre has less than one 10 micron particles in the air above the operating field.

Before the implementation of IoT, Roshan Eye Care had an employee physically monitoring the temperature, humidity and pressure at regular intervals. They would also have to physically document and store all the information. This is not only time-consuming and inefficient; it can also lead to human errors.

Roshan Eye Care approached Varishtha Infotech to assist them in kickstarting their IoT Journey.

## IoT Journey

To begin with, Varishtha evaluated the IoT needs of the customer through conversations and on-site evaluations. The Varishtha team then formulated an IoT plan for Roshan Eye Care with monitoring devices from American IoT manufacturer, Monnit ©.



3 Temperature Sensors for the Operation Theatre, Air Handling Unit (AHU), and Hospital Hall. This is used to monitor and record the temperature in different areas of the hospital.



3 Humidity Sensors for the Operation Theatre, Air Handling Unit (AHU), and Hospital Hall. This is used to monitor and record the humidity in different areas of the hospital.



1 Differential Pressure Sensor for the Operation Theatre. This is used to monitor and record the difference in pressure in different areas of the hospital.



1 Gateway. This is used to provide connection to the IoT sensors

\* An Air Handling Unit (AHU) is used to re-condition and circulate air in an environment

\* Sensor and Gateway images rights of Monnit ©

Varishtha connected the IoT sensors for Roshan Eye Care, tested the devices, and provides ongoing support as needed.

## Outcome

Varishtha was able to successfully install the IoT devices for Roshan Eye Care. The sensors and gateway measure the temperature, humidity, and differential pressure of the different environments continuously at recurring periods. This information is automatically recorded and stored on the cloud.

Implementing IoT has saved Roshan Eye Care one employee's worth of manual work, resulting in cost savings. Since all data has been backed up on the cloud, it is accessible at any time, lesser prone to errors, and enables effective decision making.

In a few months after IoT implementation, Roshan Eye Care was awarded the 'Green Hospital' award from AHPI (Associate of Health Care Providers India) which is allied to other medical quality bodies like NABH & CAHO. IoT is making a huge wave in the healthcare industry, assisting healthcare providers in attaining Green Hospital certifications.

***“ We are happy and recommend Varishtha for their IoT solutions and exemplary support service ”***

- Dr. Roshan M.S., D.O.M.S

Contact Varishtha Infotech today for your Internet of Things (IoT) needs



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