

Northampton General Hospital- Robotic Process Automation bot for oxygen monitoring

Northampton General Hospital have been using Robotic Process Automation (RPA) technology to help with their planning of COVID-19 care.

As more patients with COVID-19 were brought into the hospital the oxygen consumption increased. This was due to a rise in patients being treated using CPAP or ventilation devices. Although problems with the supply weren't predicted, the team wanted to monitor the oxygen tanks more closely to ensure they had constant and accurate readings readily available.

Northampton General Hospital has two large oxygen tanks which supply the ventilation machines, and patients are assigned to wards which allow for the equal distribution of oxygen flow. The existing system and process delivered hourly readings of the oxygen level; however, it was a manual process, requiring a person to log in to a system and physically collect each reading from the tank. This was time consuming and meant that team members needed to be available to take the reading hourly.

To begin to create a more efficient solution a project team was established to explore the possibility of using RPA to automate the process and reduce the reliance on human intervention. Robotic Process Automation (RPA) is a fast-evolving technology which leverages software bots or digital workers, which work with humans to automate repetitive, mundane tasks.

The project team was made up of people with experience in setting up and delivering RPA across the NHS, information technology, estates and facilities colleagues who manage the oxygen supply, and representatives from Automation Anywhere.

From the initial meeting the team worked through the night and had the bot created within just 12 hours.

The bot works by automating the process, extracting the data and calculating flow rates to monitor the oxygen levels 24 hours a day without human intervention. Automating the collection of the data provides management teams with reliable, consistent information about the oxygen levels.

Since the implementation of the bot, the IT and estates team have had a reliable source of information and valuable time has been freed up for staff to work on other projects, safe in the confidence that any issues with supply would be flagged instantly to the team.

Northampton General Hospital is believed to be the first hospital in the UK to be use RPA to monitor oxygen tank levels. After the successful implementation of the first RPA project, the hospital hopes to embed RPA into other departments such as HR and estates.

The team are offering this technology to any other trust who needs it.