Success Story
Intelligent Automation

Automated Brings Unique Solution to Drive Inventory Reorder Efficiency

A SHORT TAKE ON SUCCESS

Challenge
Bringing efficiency and best practices to inventory, product selection and stock rotation to Northfield Clinic.

Solution
Development of a "bot" to link radio-frequency identification (RFID) functionality to electronic medical record for reorder.

Outcome
Reduction of supply expense by 8% and a net revenue increase of 4%.

"Inventory has been cut and there has been a 40% labor savings vs. the traditional manual process. Maybe more telling – what used to take until noon each day to fully stock the hospital now is completed by 9 a.m."

Burdette Brown, Director of Supply Chain Management
Northfield Hospital and Clinics

THE CHALLENGE

Although automation has been used in many areas of business and industry for years, it is only recently gaining momentum in the healthcare field. Intalere has been championing the use of Intelligent Automation in healthcare in multiple forums over the past several years.

To explain briefly, automation involves software that mimics the activity of a human being interacting with a computer. Typical activities that a software robot can perform include completing online forms, extracting data from applications, formatting data, and creating and sending emails. Key types of process pain points that are candidates for automation include:

- Processes that are repetitive and prone to human error.
- High volume/low complexity processes.
- Processes that are tedious and mundane, leading to staff frustration and turnover.
- Processes which require excessive staff time or staffing up for high volume events.

Intalere teams responsible for automation development have spoken at regional and national Association for Health Care Resource & Materials Management (AHRMM) meetings, Healthcare Financial Management Association (HFMA) meetings, automation-focused conferences and Intalere regional alliance meetings. At one such meeting, listening to the Intalere team describe its own experience with automation and the development of bots to help manage contracts, product information and analytics, participant Burdette Brown, Director of Supply Chain Management from Northfield Hospital and Clinics in Minnesota, began to see an opportunity for possible collaboration.
Brown had been working on an initiative to take advantage of Radio-frequency identification (RFID) functionality in Northfield’s inventory operations. RFID uses electromagnetic fields to automatically identify and track tags attached to objects. The goal was to find a way to create a small-scale RFID marker to tag the bin in a 2-bin Kanban system, rather than individual items within the bin. Using a novel approach and configuration of the RFID equipment, he was able to create signals for bin replenishment. In phase one of the project, they were able to:

- Maximize the use of available space.
- Establish ample stock on hand for weekend coverage.
- Standardize the presentation of supplies for clinical ease.
- Engage local clinicians in supply selection processes, facilitated by nurse-to-nurse discussion.
- Establish best practices for stock rotation.

One problem they still faced was that the RFID software knew when the bins required restock, but it wasn’t easy to get that information from the RFID system into the electronic medical record (EMR) system for re-order. “The process was still taking too much time,” said Brown. “We wanted more efficient inventory control with earlier stocking, the ability to expand the system to more departments, as well as staff not having to walk around.”

Brown and his team had been exploring a dedicated interface between the systems, but the cost and effort seemed prohibitive. While participating in the automation review facilitated by Intalere, a light bulb went off. A bot could be the answer to sharing information between the RFID system and Northfield’s EMR system to facilitate product re-order in an automated way, helping to standardize products in use, maximize centralized supply chain impact, reduce clinical variation and aggregate contracting efforts.

About Intalere

Intalere’s mission focuses on elevating the health of healthcare by designing highly personalized solutions to improve our members’ financial, operational and clinical performance.

SUCCESS STORY

THE SOLUTION

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THE OUTCOME

Working closely with Intalere partner UiPath, one of the fastest growing and highest-valued automation software companies worldwide, the team came up with “Phil,” the automation bot. Today, the RFID scans routinely for empty bins and creates a report that details what is needed and where. Using the report info, Phil then performs data entry each day at 6 a.m. and generates reports by 7 a.m. that facilitate detailed and efficient restocking.

According to Brown, there have been significant benefits from this approach, including reduction of supply expense by 8% and a net revenue increase of 4%. Inventory has been cut in half in some departments and there has been a 40% labor savings vs. the traditional manual process. Maybe more telling – what used to take until noon each day to fully stock the hospital now is completed by 9 a.m.

“We now are assured to have the right amount of product at the right cost and on contract,” said Brown, also noting that Northfield has significantly reduced expired product and the time required to research and pick the right product.

Brown noted that in addition to the incredible cost savings, the project also had a positive impact on employee satisfaction, and supply chain is now viewed differently in terms of their ability to develop innovative, broad impact projects. Said Brown, “Data can change minds and practice.”