DEPLOYING AUTONOMOUS ROBOTICS TO SUPPORT STAFF AND CRITICAL OPERATIONS


1Forward. Unbound. in Rochester, 2Strategy Department, 3Office of Patient Experience, 4Administrative Services

Planning

Operational areas were identified across the organization to understand the role of robotics in supporting staff and critical operations. These areas are highly dependent on the healthcare setting, so the implementation requires detailed planning to ensure successful outcomes. Staff operating robotics, ensuring the basic operational function is well understood, is required for successful implementation.

1. Identifying stakeholders in planning and ongoing communication is essential to successfully notifying and engaging all impacted personnel.
2. Staff operating robotics can be a standard part of POCs and pilots. Understanding the staff perception of robotic utilization will help determine where early efforts can be focused.
3. Staff and patients confidence that robots are being operated safely and effectively is a standard part of POCs and pilots. Understanding the patient perception of robot utilization will help determine where early efforts can be focused.

Objectives

1. To facilitate the successful implementation of robotics and automation throughout Mayo Clinic to support our staff, increase efficiency, improve quality, and optimize operational function of the hospital or clinic in which they are deployed.
2. To enhance the patient and staff experiences.
3. To improve impact on operational outcomes, including return on investment (ROI).

Implementation Methods

1. Planning

A series of implementations leading up to a large-scale deployment or an iterative rollout of a large-scale implementation.

PHASED DEPLOYMENT IMPLEMENTATION

• Evaluate specific use cases (such as delivering specimens to the lab, moving equipment for processing, etc.)
• Evaluate the function of robots but also to understand the specific requirements for safe operation and testing of multiple concepts, and allow for measuring specific outcomes for results and optimization.
• Ensure safe operations by assessing and determining guardrails and operational standards
• Assess Path of Origin (PO) and use pathways

PROOF OF CONCEPT (POC)

A feasibility study or experimentation that is small-scale and short-term is intended to gather feedback and data on a specific use case. Before committing to a full-scale implementation, it is imperative to understand the performance impact and risk associated with each use case.

Goals:

• Include specific use cases such as obtaining test results for the lab, securing equipment for processing, etc.
• Ensure effective operational and safety features, and standard integration features, optimize the performance of all operations.
• Identify any issues or unplanned variables sending it to be addressed before implementation

PHASED DEPLOYMENT

A series of implementations leading up to a large-scale deployment or an iterative rollout of a large-scale implementation.

1. Complete deployment in areas required for operational deployment
2. Neutral deployment planning, including staffing, impact management, and communication
3. Ensure successful implementation and deployment

Lessons Learned

1. Staff operating robotics can be a standard part of POCs and pilots. Understanding the staff perception of robotic utilization will help determine where early efforts can be focused.
2. Staff and patients confidence that robots are being operated safely and effectively is a standard part of POCs and pilots. Understanding the patient perception of robot utilization will help determine where early efforts can be focused.