

## CLIENT BACKGROUND

- Medtronic's Preclinical Research Lab conducts product testing and training to help improve patient outcomes
- Physical size of site leads to long travel distances during traversal
- Package movement is very time- and effort-consuming



## PROBLEM STATEMENT

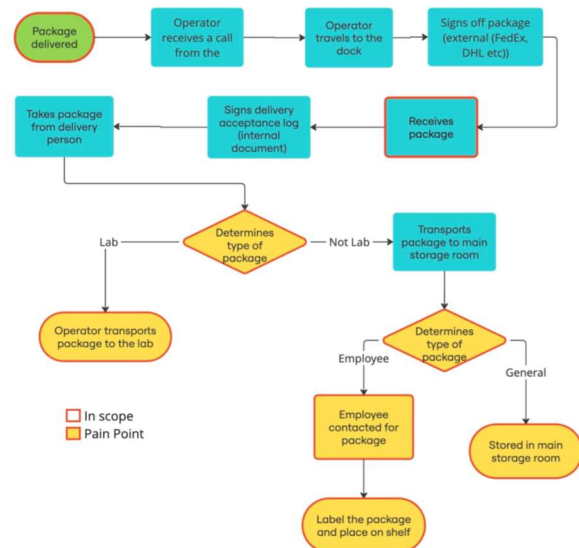
Facility requires packages to be manually moved from dock to storage

Takes excessive time and causes ineffective use of facility space, and excessive time spent on transport



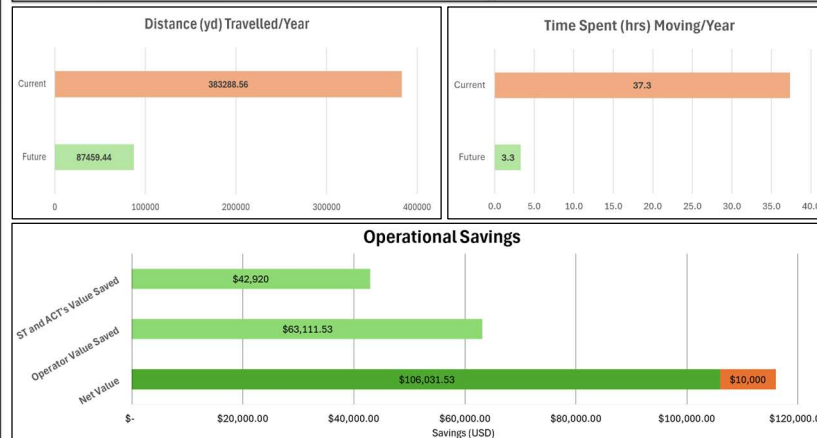
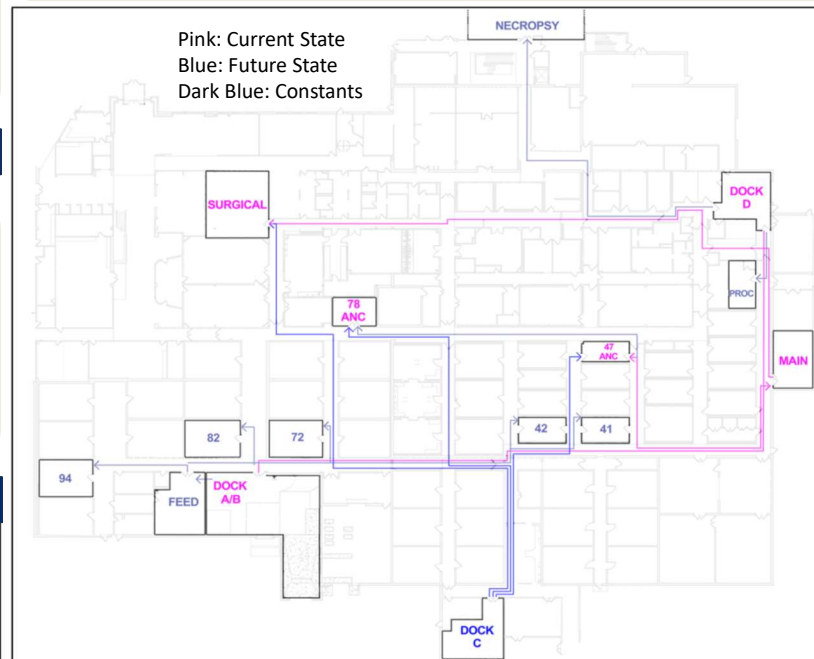
The preclinical research lab has an inefficient layout

## SYSTEM MODEL



## SOLUTION

- Spaghetti Diagram
- Time and Distance Reductions
- Operational Cost Savings



## METHODOLOGY

### Understanding

- Identifying movement inefficiencies, time spent walking, distance traveled, and ROI opportunities



Travel Time



Dock Locations



Operator Movement



ROI Opportunities

Data Collection

Movement-to-Value Mapping

- Collected data via time studies, interviews, and physical distance measurements to assess travel inefficiencies and workflow patterns.
- Used operator logs to map movement, visualize inefficiencies, and assess ROI through value analysis and cost-benefit estimation.



Time Study



Interviews



Measuring Distance



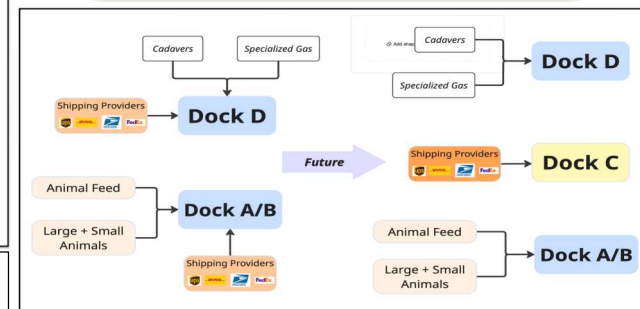
Cost-Benefit Estimation



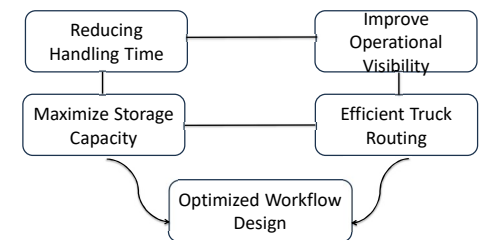
Spaghetti Diagram



Logs



## IMPACT & DISCUSSION



Advancing Efficiency via Optimized Storage and Workflow