

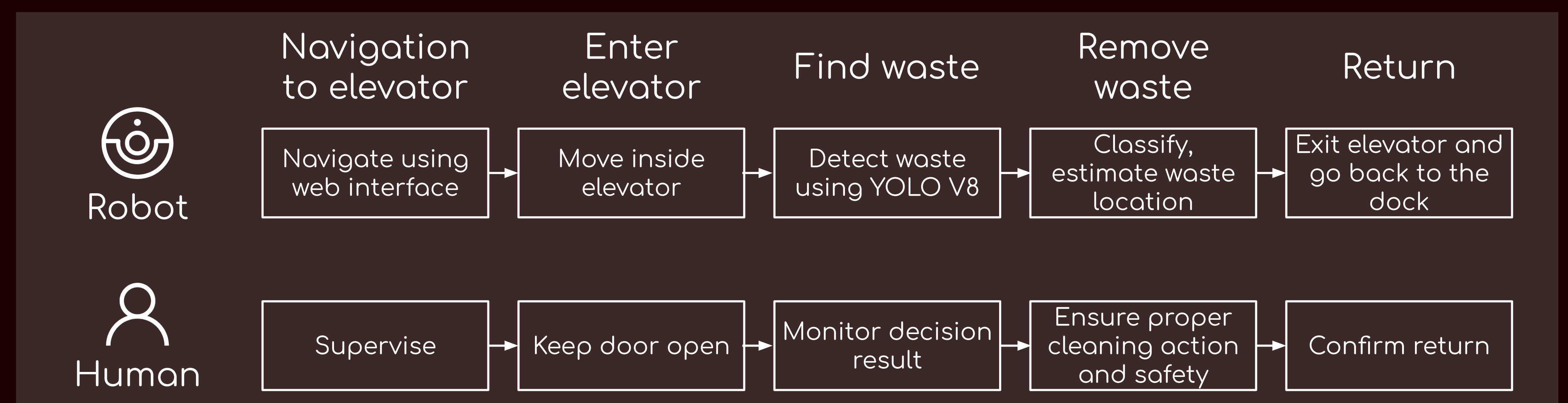
# Robo Scrubber

A semi-autonomous, robot for efficient biological waste removal in transit station elevators

## Problem

Sound Transit subway elevators face sanitation challenges due to limited janitorial staff and reliance on external vendors, leading to delayed cleaning, unsanitary conditions, and increased maintenance costs. High passenger traffic demands a fast, efficient, and minimally disruptive cleaning process.

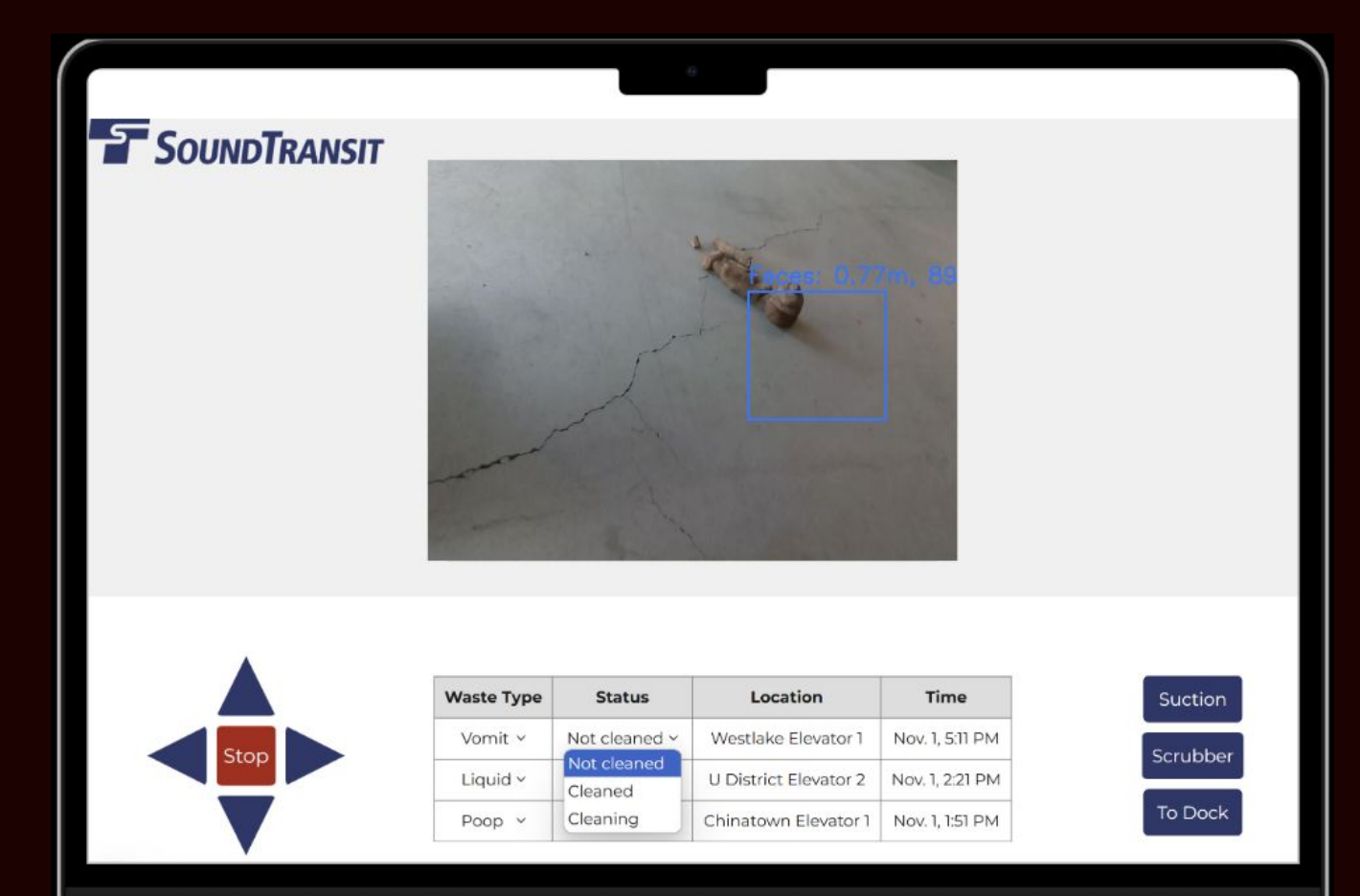
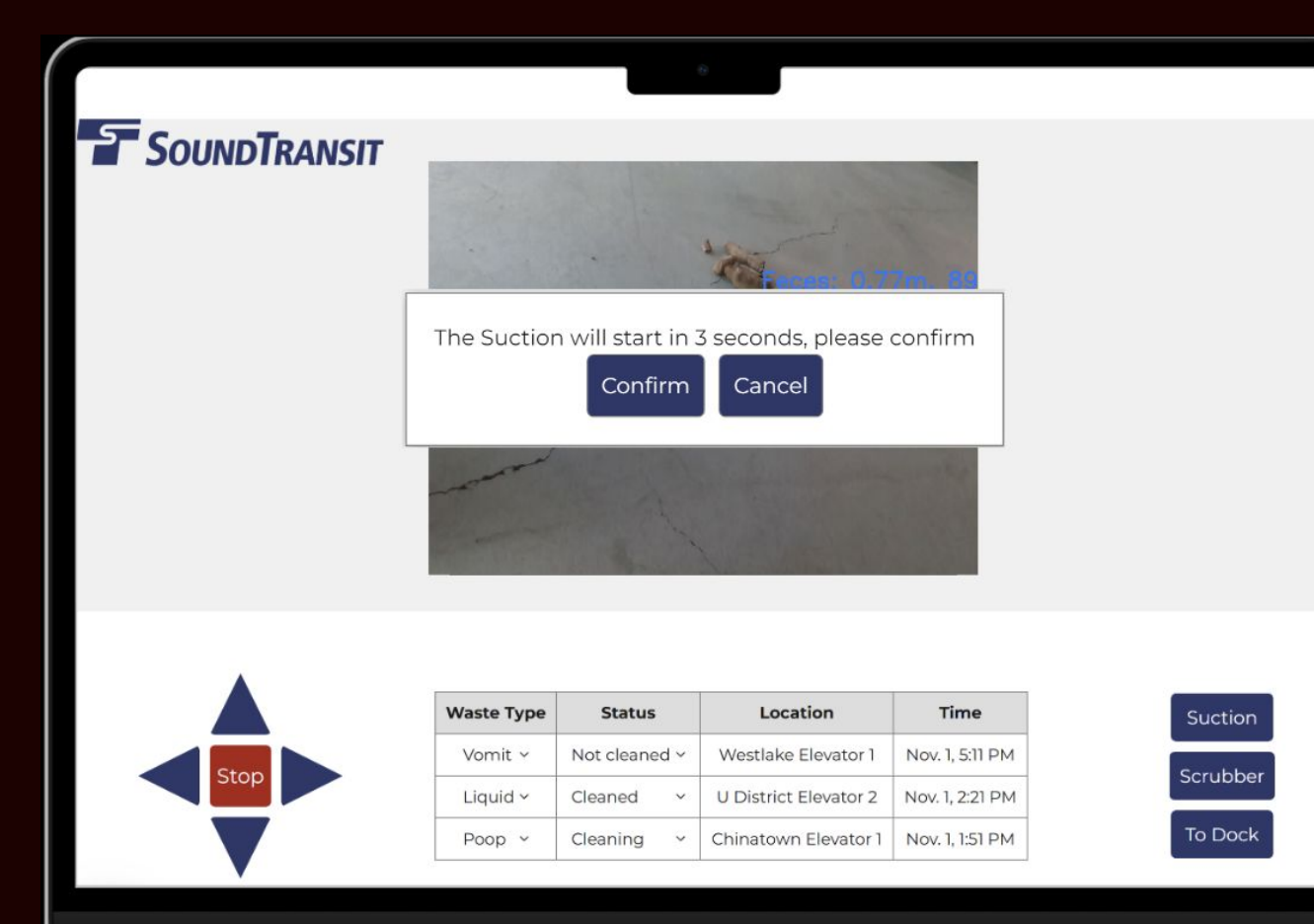
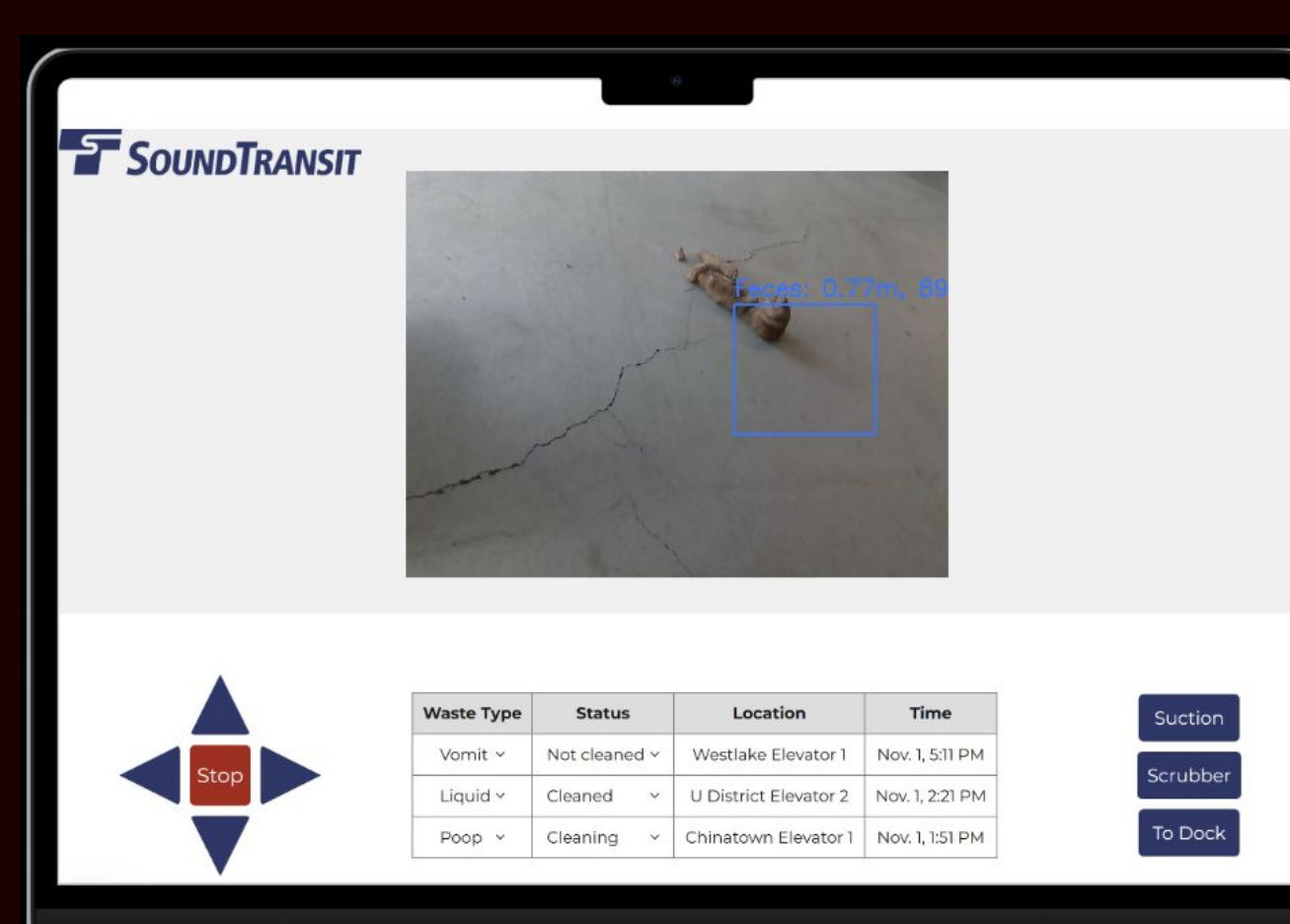
## User Journey



## Interface

## Solution

We propose a **semi-autonomous, human-supervised elevator cleaning robot** to improve cleaning efficiency. Operators control the robot via a web interface with simple directional commands, making it easy for non-technical staff to use. The robot integrates computer vision (poop-detector-2) to detect, classify, and locate waste for targeted cleaning, ensuring precise and effective waste removal. Using real-time data processing, it optimizes cleaning actions while allowing human oversight to address complex scenarios. With human-in-the-loop supervision, it ensures safe operation in high-traffic areas, reduces elevator downtime, and enhances sanitation efficiency.



## Technical Diagram

