

## Storyboard



**Emergency Department:** A walk-in patient journey from check-in to discharge, with six robot roles supporting registration, navigation, supplies, discharge tasks, waiting-room experience and comfort.



**Sleep Disorder Clinic:** An in-clinic sleep study from check-in to overnight monitoring and discharge, mapping nine robot tasks across personalized education, task reminder, technician support, and exit assistance.



**Long-term Rehabilitation Facility:** A resident's daily routine, highlighting four robot roles that support identity access, schedule reminders, entertainment, and health data tracking.

## Cardboard Prototype

### Emergency Department



Relia

**Role:** Delivery system, storage system, tour guide

**User group:** Healthcare worker, patient

**Capabilities:** Deliver medical supplies, tour guide, store medical supplies and comfort items, dispense snacks and beverages

**Interaction Modalities:** Speech, touchscreen



Bearer

**Role:** Storage system, delivery system, tour guide

**User group:** Healthcare worker, patient

**Capabilities:** Deliver medical supplies, store medical supplies, tour guide

**Interaction Modalities:** Speech, camera, facial expression



Reliable

**Role:** Storage system, tour guide

**User group:** Healthcare worker, patient

**Capabilities:** Store medical supplies, tour guide, facial expressions, rotating face

**Interaction Modalities:** Speech, 360 degrees-of-freedom touchscreen

### Sleep Disorder Clinic



Nebuchadnezzar

**Role:** Storage system, tour guide

**User group:** Healthcare worker, patient

**Capabilities:** Greet patients, tour guide, on-board data entry, question-answering, patient education

**Interaction Modalities:** Speech, videos, facility maps, tablet, touchscreen



Dream-E

**Role:** Delivery system, storage system, tour guide

**User group:** Patient

**Capabilities:** Tour guide on-board data entry, question-answering, gather patient information, store comfort items

**Interaction Modalities:** Facial expression, keyboard, touchscreen, sound

### Long-term Rehabilitation Facility



Brockette

**Role:** Storage system, entertainment

**User group:** Healthcare worker, patient

**Capabilities:** Store art supplies, UV light sanitation, touch responsive hair, face expressions, display artwork, computer games, puzzles

**Interaction Modalities:** Keyboard, speech, touch sensors, facial expression



Roamin

**Role:** Delivery system, storage system, entertainment, tour guide

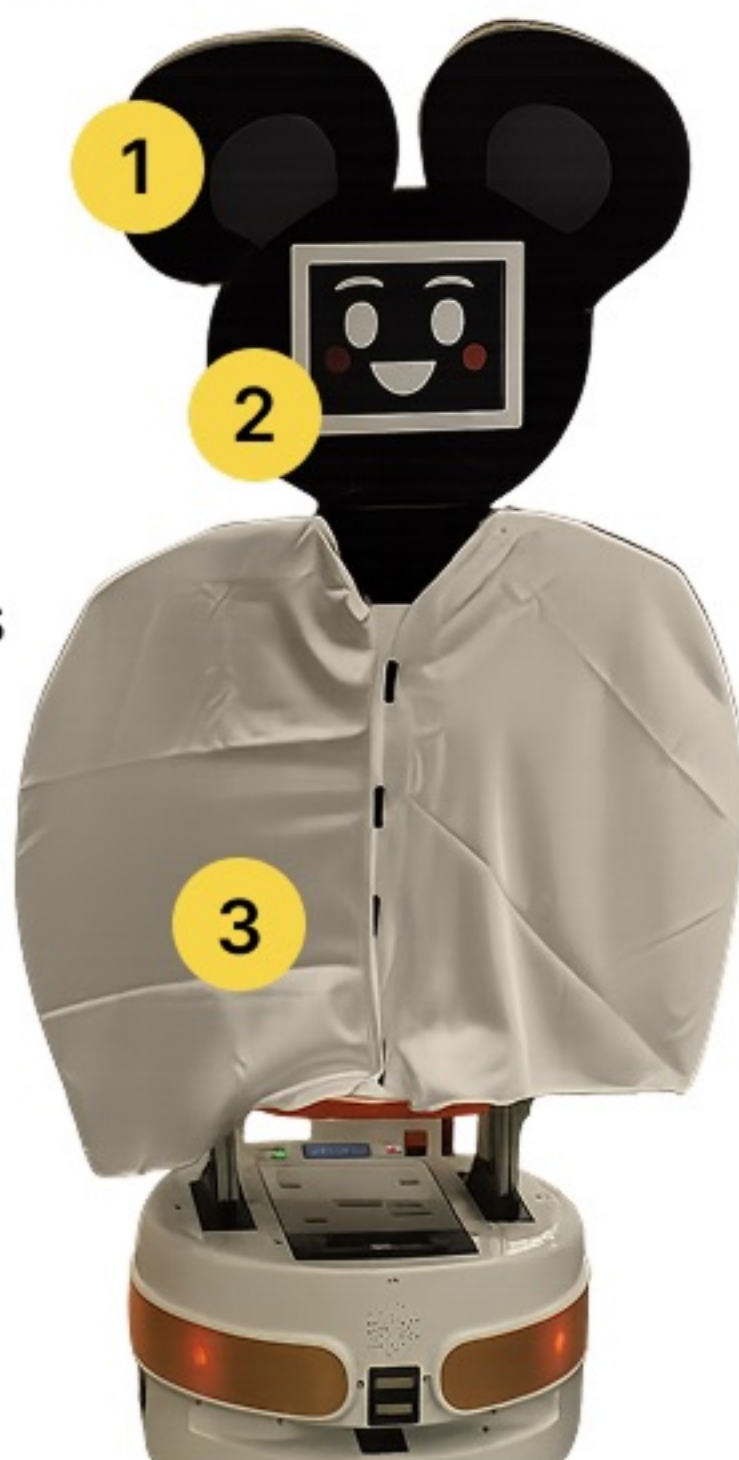
**User group:** Patient

**Capabilities:** Play music, deliver games, dispense snacks, tour guide

**Interaction Modalities:** Speech, facial expression

## Full-Scale Prototype

### Emergency Department (RELIA The BearER)



1. Mounted Speakers
2. Touchscreen
3. Storage Body / Vending System

A full-scale ED robot integrating medical-kit delivery, touchscreen guidance, and expressive cues to support registration, navigation, and discharge tasks. Designed for fast-paced workflows with secure access and clear communication signals.

### Sleep Disorder Clinic (DreamE)



1. Touchscreen
2. Desk Surface
3. Storage Drums

A calm, concierge-style robot for sleep clinics featuring voice-controlled storage, soft lighting, and data-collection support. Its soothing embodiment assists check-in, overnight workflows, and patient comfort.

### Long-term Rehabilitation Facility (Roamin)



1. Mounted Speakers
2. Touchscreen
3. Vision Systems
4. Scrolling Display
5. Moving Hand
6. Tactile Interface

A mobile recreational and therapeutic companion for long-term care, combining entertainment, schedule reminders, and social-connection tools. Designed to support resident engagement and assist staff with structured activity insights.