Hjälpa

Empowering Independence with Advanced Care Solutions

A Product of
KLOK

Joy April - Dec 2024

Hjälpa is more than a product; it's a mission to improve lives through accessible, innovative technology. As a person with a disability, I deeply understand the challenges Hjälpa aims to solve. My expertise in IT, AI, and product management uniquely positions me to deliver this solution effectively. Hjälpa aligns with Sweden's values of equality, accessibility, and sustainability, contributing to a more inclusive society.

Joy April

Vision

To empower independence and improve the quality of life for individuals of all abilities and ages.

Mission

To combine AI, robotics, and human-computing technology into an intuitive system that offers personalized care, assistance, and companionship.

Problem Identification

Problem Statement

Who needs assistance in daily Life

Visually impaired & Disabled individuals

Struggle with navigation, object identification, and performing daily tasks independently.
Identifying threads like water spills and fire

Elderly

Face challenges with health management, mobility, and safety concerns
Remembering medication schedules and medical appointments

Cognitive Challenged Children

Require support for emotional engagement, Special education, object recognition, and structured routines.

Newborn

Need consistent health monitoring, safety assurance, and parental support.

These challenges highlight the need for a smart, all-in-one assistive solution.

How we solve these challenges

Mapping Problems to Solutions

Visually impaired individuals or disabled

- Struggle with navigation,
- object identification
- Identifying threats
- daily tasks

"**Smart Shoes**: Haptic feedback for navigation. **Earpods**: Real-time guidance. **Robot**: Object detection and alerts."

Real-time navigation and object detection with smart wearables and robot

Elderly

- health management
- Mobility
- Safety
- Remembering medication schedules and appointments

"**Wearables**: Health monitoring and fall detection. **Robot**: Medication reminders and mobility support. **App**: Caregiver notifications."

Health monitoring, fall detection, and medication reminders via robot and wearables.

Cognitive Challenged Children

- Emotional engagement
- Special education
- Object recognition
- structured routines

"**Robot**: Behavioral prompts and emotional support. Learning Modules: Interactive education. **App**: Structured schedules."

Interactive learning modules, emotional support, and structured schedules.

Newborn

- Health monitoring
- Safety assurance
- Parental support.

"**Robot**: Sleep tracking and alerts. Wearables: Health monitoring for vitals. **App**: Parental notifications and reminders."

Sleep tracking, vitals monitoring, and parental notifications.

Solution Overview

Core(Works Offline)	Key	Special (USB)
1.The Smart Navigation: • Offline AR-based navigation with obstacle anticipation and adaptive guidance. 2.Health Monitoring: • Vitals tracking (heart rate, blood pressure, oxygen levels) with fall detection and alerts. 3.Daily Assistance Reminders: • Offline-enabled medication scheduling, task reminders, and routine management. 4.Emergency Alerts: • SOS notifications triggered by health incidents or falls, with offline functionality. 5.Companionship Mode: • Storytelling, music, and calming activities, accessible offline for immediate emotional support.	1. Emotional AI: • Real-time mood detection, behavioral coaching, and personalized activity suggestions. 2.Multilingual Language Assistance: • Real-time voice-to-voice translation and text conversion for global communication. 3.Dietary Assistance: • Advanced meal planning with AI-based recipe suggestions and dietary tips. 4.Educational Support: • Immersive learning modules, including AR/VR-enabled tasks for children and adults. 5.IoT Integration: • Seamless connectivity with smart home devices (lights, locks, thermostats, etc.). 6.Personalization Engine: • Adaptive learning that tailors experiences to user preferences, offering increasingly refined support over time.	1. AR Navigation: • Augmented reality overlays with real-time object recognition and obstacle anticipation. 2.Document Scanning and Reading: • AI-powered OCR technology with summarization and offline document storage. 3.Community Mode: • Shared activities and gamified challenges for family or caregiver interaction. 4.Companionship via Humanoid Robot: • Realistic humanoid interactions, including advanced emotional and cognitive support. 5.Advanced Newborn Monitoring: • Cry analysis, sleep pattern tracking, and health insights with live parental notifications. 6.Safety Alerts: • Predictive alerts for potential health or safety concerns, using machine learning. 7.Immersive Learning Tools: • Interactive, gamified AR/VR modules for cognitive-challenged children and skill-building for adults. 8.Cloud-Based Learning Engine: • Continuous updates and improvements via cloud integration for adaptive performance.

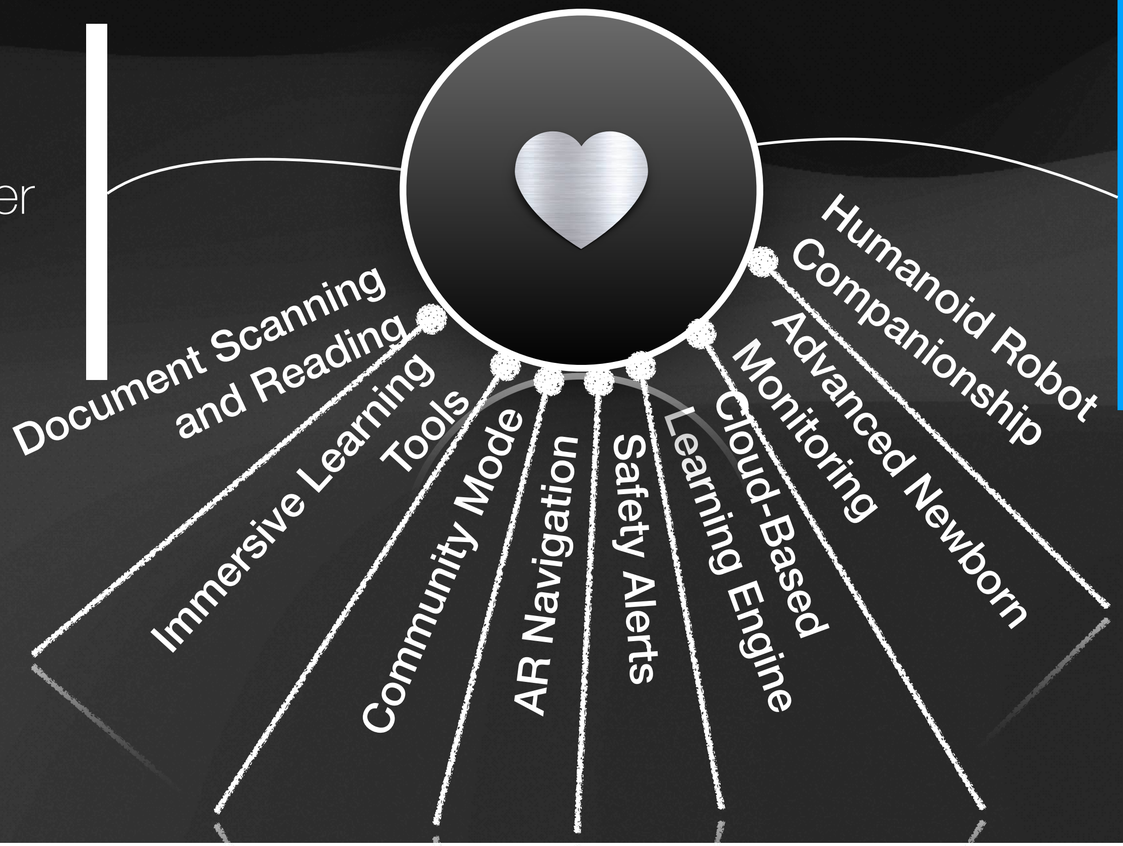
Introducing Hjälpa!

What is Hjälpa

A cutting edge compact, AI-driven robotic system designed for daily life assistance. Tailored for specific needs of individuals with disabilities or cognitive challenges.

Core Feature (Offline)

- ✓ Smart Navigation
- ✓ Daily assistance reminder
- ✓ Companionship mode
- ✓ Emergency Alert
- ✓ Health Monitoring



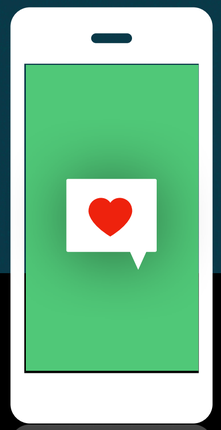
Key Feature

- ✓ Multilingual Language Assistance
- ✓ Emotional AI
- ✓ Dietary Assistance
- ✓ IoT Integration
- ✓ Personalization Engine
- ✓ Educational Support

AI NLP AR OCR OpenAI API Integration fitbit eIDAS BankID alexa

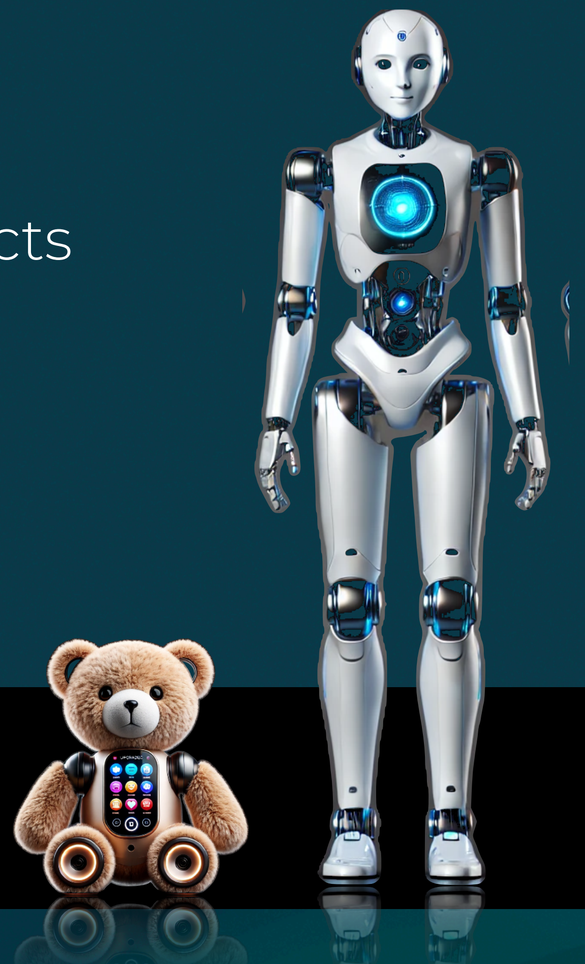
Hjälpa ecosystem

A bundle of three independent yet complementary products that work seamlessly together:



Mobile App: Foundation for navigation, reminders, and assistance.

Wearables traditional aids like canes with integrated features for obstacle detection, health monitoring, and navigation.



Robotic Assistant: Comprehensive support for mobility, companionship, and advanced care.

Hjälpa Robot Designs

Tailored for Every Need

I’m Teddy

I’m Joy

Small Version: Teddy Bear Companion

- **Target Audience**: Children and newborns.

- Key Features:

- **Playful Design**: Resembles a teddy bear for familiarity and comfort.
- **Interactive Abilities**: Engages with children through storytelling, music, and games.
- **Safety Features**: Soft materials and child-safe components.
- **Assistance**: Tracks baby sleep, reminds caregivers about feedings, and monitors safety.

Larger Version: Human Caretaker

- **Target Audience**: Visually impaired individuals, elderly people, and adults needing advanced care.

- Key Features:
- **Humanoid Design**: Friendly appearance resembling a caretaker.
- Advanced Assistance:
  - Navigation for visually impaired users.
  - Medication reminders for elderly people.
  - Emotional support and companionship.
- **Functional Arms**: Capable of picking up objects and assisting with daily tasks.
- **Health Monitoring**: Tracks vitals and alerts caregivers in case of

How they differ from each other

Feature	Mobile App	Wearables	Teddy (Mini Robot)	Joy (Human Robot)
Smart Navigation	✔ Voice guidance, haptic shoes for navigation	✔ Haptic shoes, earpods for real-time guidance	✖	✔ Navigation help and mobility support for elderly, visually impaired
Health Monitoring	✔ Basic vitals (heart rate, blood pressure)	✔ Advanced vitals, fall detection	✔ Basic health monitoring, includes vitals tracking	✔ Advanced vitals, fall detection, medication reminders
Medication Reminders	✔ Medication schedule and reminders	✔ Wearables that alert users for medication	✔ Task reminders for children (e.g., feeding, napping)	✔ Task and medication reminders for elderly and visually impaired users
Emotional Support	✔ AI-powered, mood-based suggestions	✖	✔ Emotional support, interactive learning for cognitive-challenged children	✔ Emotional companionship, personalized interactions for elderly, cognitive-challenged children
Interactive Learning	✖	✖	✔ Learning activities for children, engaging in tasks and fun play	✔ Interactive learning for adults, emotional connection, task assistance
Task Assistance	✔ Daily task reminders (appointments, routines)	✔ Task management and reminders	✔ Assists with daily tasks like playtime, emotional check-ins, etc.	✔ Task management, personal assistance with activities like mobility, reminders, social interaction
Augmented Reality (AR)	✔ AR overlays for navigation and object recognition	✖	✖	✔ AR support for users with cognitive challenges or mobility issues to help in safe navigation
Targeted Users	Everyone (especially those with visual impairments, elderly, chronic conditions, cognitive challenges)	Visually impaired, Elderly, Active individuals, Post-surgery recovery, Diabetes	Cognitive-challenged children (e.g., autism, learning disabilities), Newborns	Elderly (e.g., dementia, Parkinson's disease, Alzheimer's), Visually impaired (e.g., blindness)
Offline Access	✔ Core features available offline	✔ Some features available offline	✔ Some features available offline	✔ Core features available offline
Multilingual Support	✔ Language assistance with NLP models (e.g., OpenAI GPT, Google Translate)	✔ Language assistance with NLP models (e.g., OpenAI GPT, Google Translate)	✔ Language assistance with NLP models (e.g., OpenAI GPT, Google Translate)	✔ Language assistance with NLP models (e.g., OpenAI GPT, Google Translate)

Product Features Comparison Table

Hjälpa Product Versions

Document Scanning and Cloud Integration

Read any letters for you

OCR Technology:

- Scans and reads physical documents, providing voice-based feedback.

Cloud Integration:

- Stores scanned documents securely for future access.

Use Case:

"Fetch my last prescription" or
"Read my doctor’s letter aloud."

Advanced features of Hjälpa

Emotional AI

What it does: Uses **facial recognition** and **voice tone analysis** to detect user emotions in real time.

Use Case: Provides mood-based suggestions, such as relaxing activities or motivational quotes to improve emotional well-being.

Benefit: Creates a personalized emotional support experience for users.

AI-Powered Language Assistance

What it does: Integrates **multilingual NLP models** like **OpenAI GPT** or **Google Translate API** for real-time language translation.

Use Case: Facilitates communication across languages, allowing users to interact easily and providing support for **language learning**.

Benefit: **Breaks down language barriers**, enabling global accessibility and communication.

Smart Dietary Assistance:

What it does: Syncs with wearables and dietary databases like **USDA's FoodData Central** to recommend meals tailored to health goals.

Use Case: Suggests meals and tracks calories, while ensuring users meet their **dietary restrictions** and goals.

Benefit: Promotes **healthier living** by enabling **personalized nutrition** and better dietary choices.

Community Mode

What it does: Provides real-time messaging, activity scheduling, and goal sharing using tools like Firebase.

Use Case: Connects users with shared interests and activities, helping them participate in **social groups** and **challenges**.

Benefit: Reduces **loneliness** and enhances **engagement** by providing a supportive community for users.

Augmented Reality (AR) Navigation

What it does: Uses **ARKit** (iOS) and **ARCore** (Android) to overlay **directional arrows** and **object labels** onto the user's environment.

Use Case: Helps visually impaired users navigate through unfamiliar spaces with real-time **object identification** and **safe paths**.

Benefit: Improves independence and safety, providing real-time visual guidance for easier navigation.

For newborn parents

Newborn monitoring

Health Monitoring: Tracks temperature, breathing, and heart rate with wearable sensors.

Sleep Tracking: Monitors sleep patterns and provides recommendations.

Feeding Assistance: Offers reminders for feeding times and tracks nutritional needs.

Cry Analysis: Uses AI to determine why the baby is crying (e.g., hunger, discomfort).

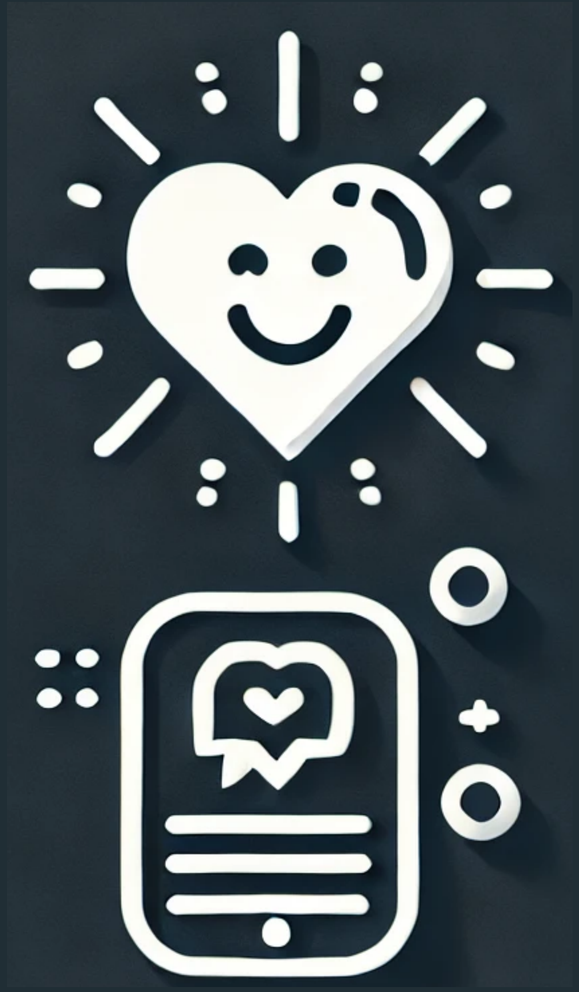
Environment Safety: Detects unsafe conditions like high room temperature or loud noises.

Daily Care Guidance: Reminders for diaper changes, vaccinations, and baby routines.

Smart Integration: Connects with smart cribs, baby monitors, and IoT devices for seamless care.

Advanced emotional support AI

Emotional Support Features



Mood Detection:

- AI detects user emotions through voice and expressions, offering tailored responses.

Companionship Mode:

- Interactive activities like storytelling, trivia, and music to combat loneliness.

Family Connectivity:

- Easy access for family members to check in or send messages.


BEFORE
AFTER
HJÄLPA
STOP
Using earpods to hear real-time voice guidance for directions
Wearing smart shoes that vibrate or provide haptic feedback to alert her of obstacles
Anna is using a white cane, appearing stressed, trying to navigate through a crowded or cluttered area with multiple obstacles.
Walking confidently through a bright, open path with minimal effort.

The elderly individual struggles to walk without support, uses a walking stick, and is dependent on reminders for medication.

Hjälpa's wearable (e.g., smart shoes) for enhanced mobility and a robot companion for timely medication reminders.

Toys and learning materials are scattered, with a sense of disconnection from activities.

Well organised and tailored education to keep the calm environment


BEFORE
A tired mother struggles to manage the newborn’s sleep and feeding schedules, relying on manual notes or alarms.
AFTER
Hjälpa monitors the newborn’s sleep and feeding patterns, sending reminders to the parent via the mobile app

Technical Details

Advanced Technical Capabilities

Hjälpa’s Advanced Tech Stack

Offline Functionality	**AI Learning**:	Expandable Design	**Wearable Integration**
Navigation and reminders work without internet access. health tracking, document reading, and navigation are available offline. Data syncs to the cloud upon reconnection.	Learns user preferences to optimize assistance and predict needs. Hjälpa leverages ChatGPT for advanced conversational AI, enabling a seamless user experience. Key features such as navigation and	Modular hardware and software upgrades for evolving requirements.	Compatible with existing devices like Apple Watch and Fitbit.

Secure Login and Data Privacy

Secure and Flexible Login

- Login Options:
  - BankID for Swedish users ensures secure access.
  - eIDAS integration for EU-wide compatibility.
  - Email login and biometric authentication (fingerprint/FaceID) for flexibility.

Data Privacy:

- Users control what data to share with caregivers.
- All personal data is encrypted and stored securely in the cloud.

Technical stack

Hardware, Software & Connectivity

Hardware	Software	Connectivity
Mobility assistance with robotic legs or wheels.	AI-powered conversational capabilities (NLP).	Cloud integration for remote monitoring and data storage.
Sensors for obstacle detection, vitals monitoring, and fall detection.	Machine learning for safety and activity monitoring.	IoT-enabled synchronization with smart devices.

Technological Components

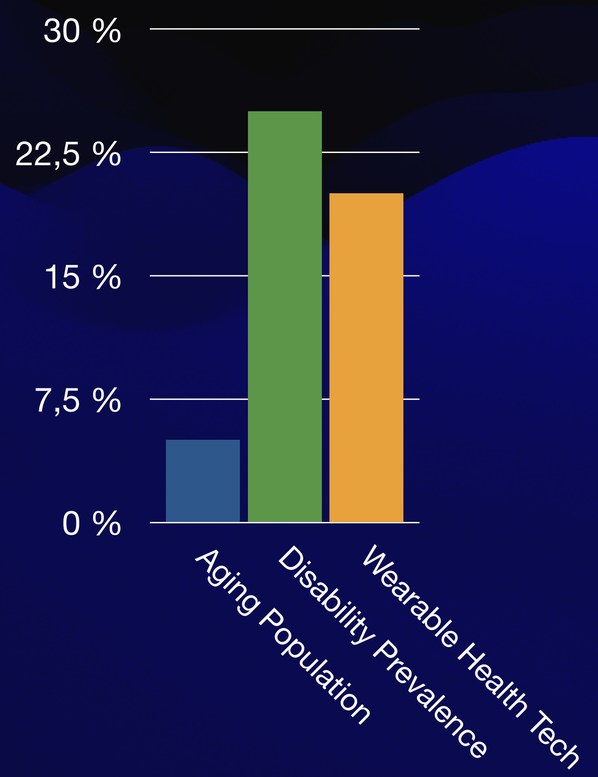
- **AI & Machine Learning**: For adaptive learning, object identification, and decision-making.
- Natural Language Processing (NLP): For human-like communication.
- **Hardware**: Sensors (e.g., LIDAR), cameras for real-time vision, and ergonomic robotic design.
- **BankID**: For secure login and user identity verification.
- **1177 API**: Integration for health monitoring and caregiver alerts.
- **eIDAS**: Enabling cross-border functionality across the EU.
- **Digital Mailbox Integration**: Syncs user data for medical appointments and reminders."
- Integrations:
  - Maps: For navigation assistance.
  - Health Directories: For accessing medical resources and reminders.
  - Emergency Response Systems: For threat alerts and emergency calls.

Business Strategy

Market Opportunity

Global Trends

- **Aging Population**: By 2050, the global elderly population is expected to double, creating demand for health monitoring and mobility aids.
- **Disability Prevalence**: Over 1 billion people globally have some form of disability, highlighting a need for assistive solutions.
- **Smart Health Devices**: The wearable health tech market is projected to grow at 20% CAGR through 2030.
- The market for assistive AI, including document scanning and personalized robotics, is projected to grow rapidly, with applications in healthcare, education, and public services."



The Demand for Assistive Technology

Target Market Segments:

- **Visually Impaired Individuals**: Approx. 253 million people worldwide need navigation and daily assistance.
- **Elderly Population**: Over 700 million people aged 65+ could benefit from health and safety monitoring.
- **Autistic Children**: Estimated 1 in 100 children globally could use structured, interactive assistance.
- **Newborn Care**: Growing demand for baby monitors and smart cribs among new parents.

Projected Impact:

- Estimated market size for assistive robotics: $8.6 billion by 2027.
- Hjälpa's modular approach can tap into multiple verticals, increasing its market share and scalability.

Differentiation in the Market:

- Accessible pricing compared to single-purpose competitors.
- Versatile functionality appealing to caregivers, families, and healthcare providers.

Competitive Advantages

Why Hjälpa Stands Out

Combines independence, safety, and health monitoring in one system.

Replaces outdated tools with cutting-edge technology.

Provides real-time updates and personalized care for users of all ages.

Hjälpa combines modularity, affordability, and personalization to provide a unique value proposition:

- **Modular Ecosystem**: App, wearables, and robots work independently or as a unit.
- **Affordability**: Lower entry cost compared to competitors.
- **Localization**: Tailored to Sweden’s infrastructure (BankID, 1177).
- **Advanced Features**: AR navigation, emotional AI, and community mode set Hjälpa apart from existing solutions."

Why Hjälpa Stands Out Among Competitors

Key Competitors:

- **ReWalk Robotics**: Focuses on mobility for individuals with spinal injuries.
- **Paro Therapeutic Robot**: Provides emotional support, especially for elderly patients with dementia.
- **Hyodol (South Korea)**: A care robot focused on reminders and monitoring for elderly living alone
- **NICOBO (Panasonic)**: A companion robot addressing loneliness and emotional well-being.

Feature	Hjälpa	ReWalk Robotics	Paro	Hyodol	NICOBO
Mobility Assistance	✔ (Indoor + Outdoor, Haptic Shoes)	✔ (Outdoor, Exoskeleton)	✖	✖	✖
Emotional Support	✔ (AI-Powered, Mood-Based)	✖	✔ (Robotic Pet Interaction)	✔ (Elderly Companionship)	✔ (Interactive Companion)
Health Monitoring	✔ (Vitals, Fall Detection)	✖	✖	✔ (Basic Vitals Only)	✖
Daily Assistance	✔ (Reminders, IoT Integration)	✖	✖	✔ (Task Scheduling)	✖
Augmented Reality (AR)	✔ (AR Navigation and Object Labeling)	✖	✖	✖	✖
Dietary Assistance	✔ (Personalized Meal Plans)	✖	✖	✖	✖
Document Scanning	✔ (OCR and Cloud Storage)	✖	✖	✖	✖
Community Features	✔ (In-App Messaging, Shared Goals)	✖	✖	✖	✖
Language Assistance	✔ (Multilingual NLP)	✖	✖	✖	✖
Target Audience	Broad (All Ages)	Adults with Mobility Needs	Elderly	Elderly	All Ages

Why Hjälpa is Unique:?

Advanced Technology:

- **AR Navigation**: Unique to Hjälpa for visually impaired users.
- **Smart Dietary Assistance**: A standout feature using AI and nutritional databases.
- **Document Scanning**: OCR capability for managing physical and digital documents.

User Experience Features:

- **Community Mode**: Social connectivity is exclusive to Hjälpa.
- **Multilingual NLP**: Enhances usability across diverse linguistic groups.

Granular Health Capabilities:

- Hjälpa's ability to monitor **vitals, fall detection, and health reminders** surpasses basic offerings like Hyodol's safety alerts.

Revolutionizing Care in Hospitals, Kommun, and Beyond

"Hjälpa is not just a product; it's a vision to transform healthcare, public services, and everyday lives."

Hospitals	Kommun	Educational Institutions	Corporates
• Patient monitoring for vitals, medication, and safety alerts. • Assisting staff with routine tasks, freeing them to focus on critical care. • Supporting patients with rehabilitation and emotional care	• Assisting elderly residents in kommun-provided housing with mobility and safety. • Providing personal care for individuals with disabilities. • Offering remote health monitoring for kommun-managed health services	• Helping students with disabilities navigate campuses • Supporting autistic children with learning modules and social engagement	• Employee wellness monitoring. • AI-enabled assistance for employees with special needs.

B2B

- Partner with hospitals, kommun, and care facilities to provide Hjälpa as a service.
- Offer subscription models for wearable devices and app access.

B2C

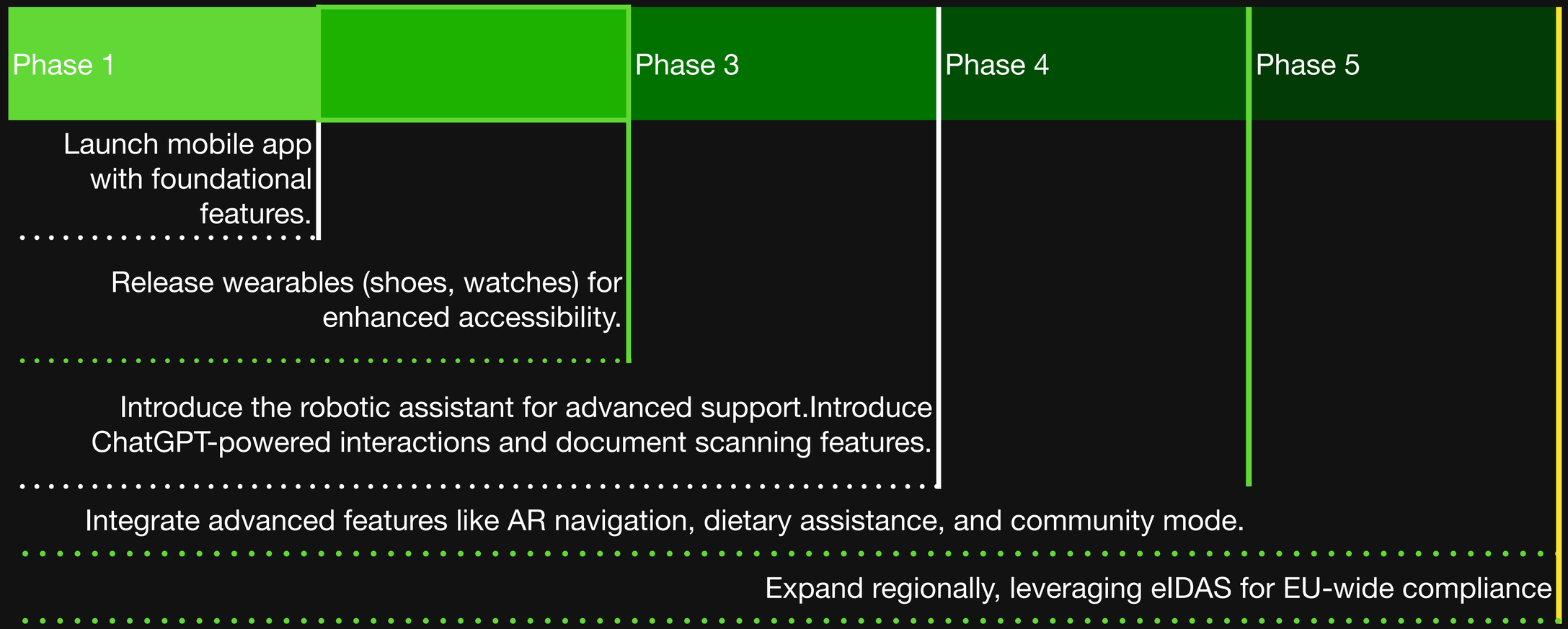
- Direct-to-consumer sales through an online platform or retail partnerships.
- Modular pricing: Sell app, wearables, and robot separately or as a bundle.

Public Sector initiatives

- Collaborate with government health programs to make Hjälpa accessible to underserved communities.
- Offer discounts for kommun and hospital partnerships to scale adoption

Roadmap

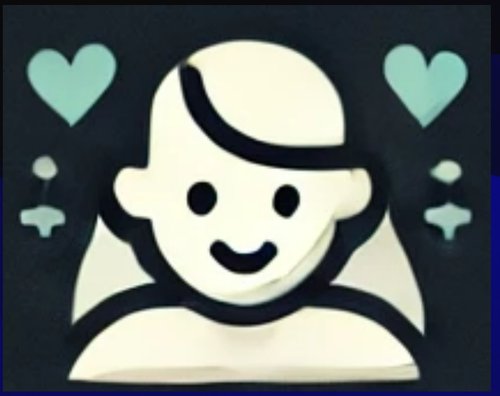
Development Milestones



Join Us in Revolutionizing Accessibility

Let’s make Hjälpa a reality!

Hjälpa represents the future of assistive technology in Sweden and beyond. We invite you to partner with us in this journey:



- **Investors**: Secure a stake in a fast-growing market.
- **Public Sector**: Collaborate to improve lives at scale.
- **Caregivers and Users**: Share feedback to refine and expand Hjälpa.

Contact us for pilot programs or investment opportunities.

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