# OPSIS EMOTION RECOGNITION AI PHASE I

COLLABORATIVE PROJECT BETWEEN TALLINN UNIVERSITY AND OPSIS

PROJECT TERMS AND GOALS

- Collaborative effort between Tallinn University and Opsis (Singaporean startup).

- **Primary focus**: Elderly care patients and their caretakers.

- **Main goals**:
  - Assess Estonia's readiness for AI-based social service solutions.
  - Train students to use Opsis AI for facial emotion analysis.

- **Adjustments due to ethics rejection**:
  - Shifted focus to interviews with specialists.
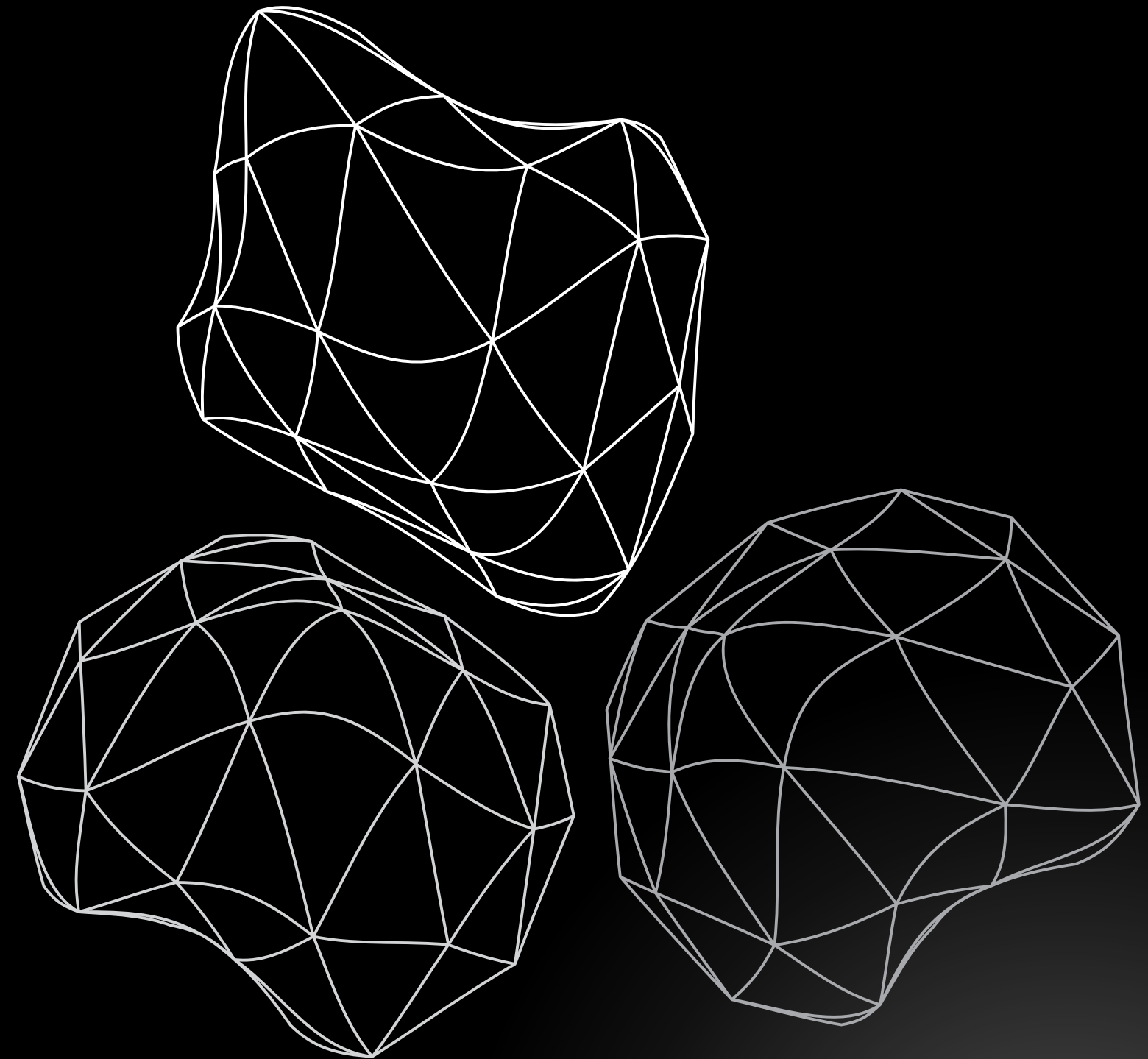
PROBLEM IMPORTANCE AND METHODS

Challenges in elderly care:
- Prevalence of depression, anxiety, and stress among the elderly.
- Traditional methods are subjective, time-consuming, and error-prone.
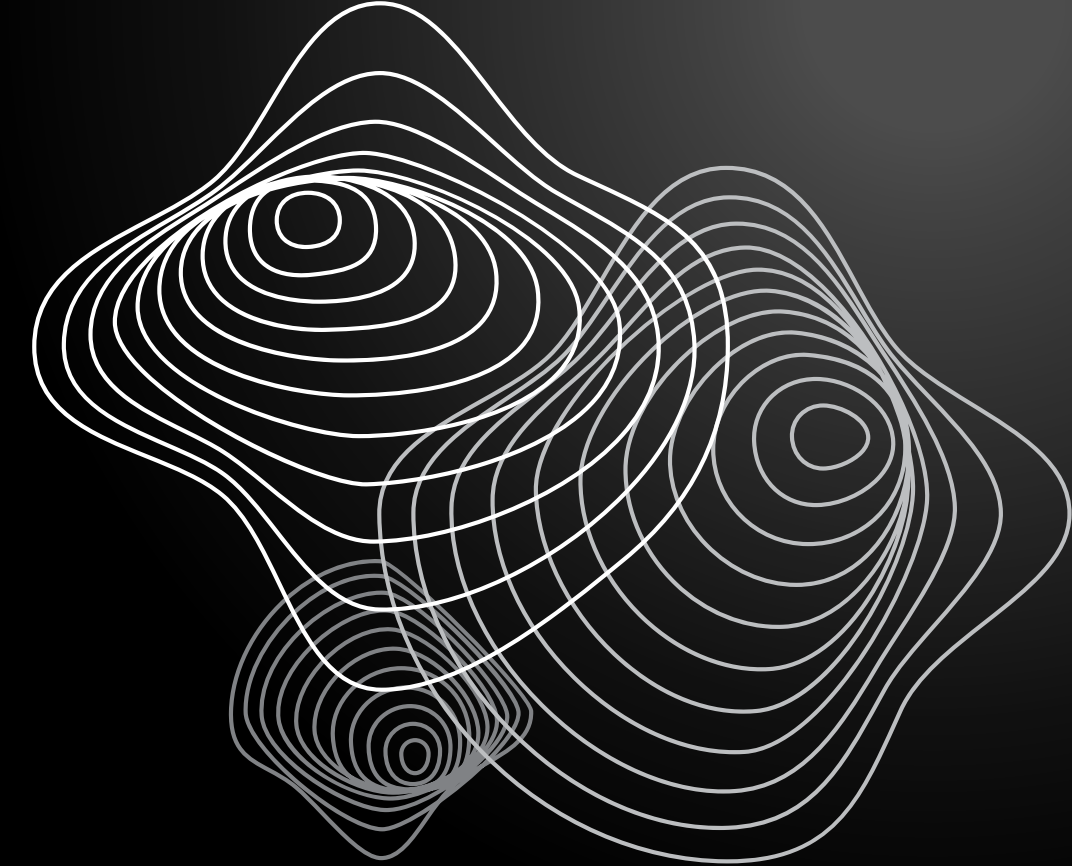
AI-ER Technology:
- Provides real-time emotional monitoring.
- Builds on global advances in AI applications (e.g., Singapore, Japan).

Methods:
- Literature review and synthesis.
- Technology Acceptance Model (TAM) for usability evaluation.
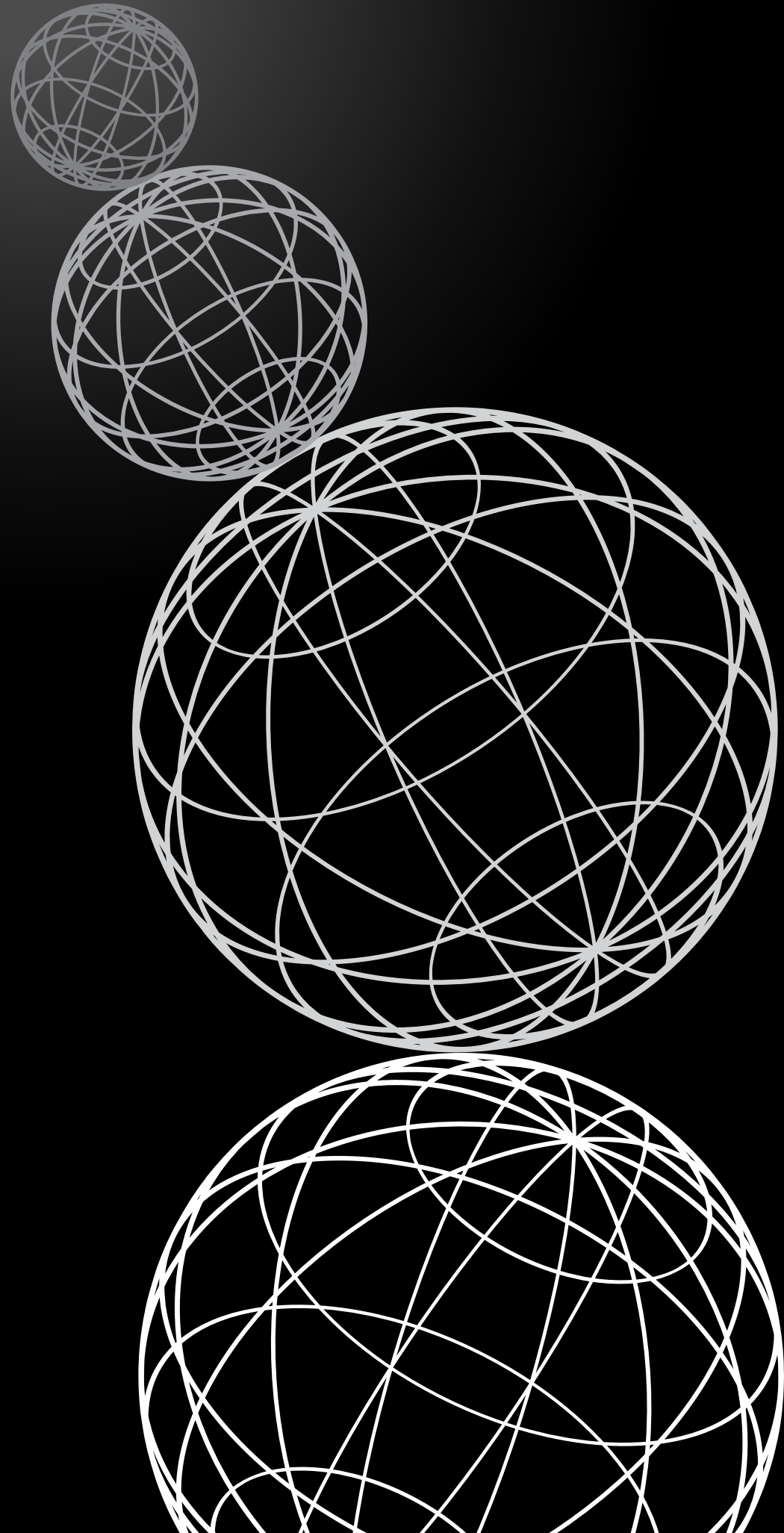
EVIDENCE-BASED PROJECT OVERVIEW

Goals:
- Explore Facial Emotion Recognition (FER) applications in Estonia.
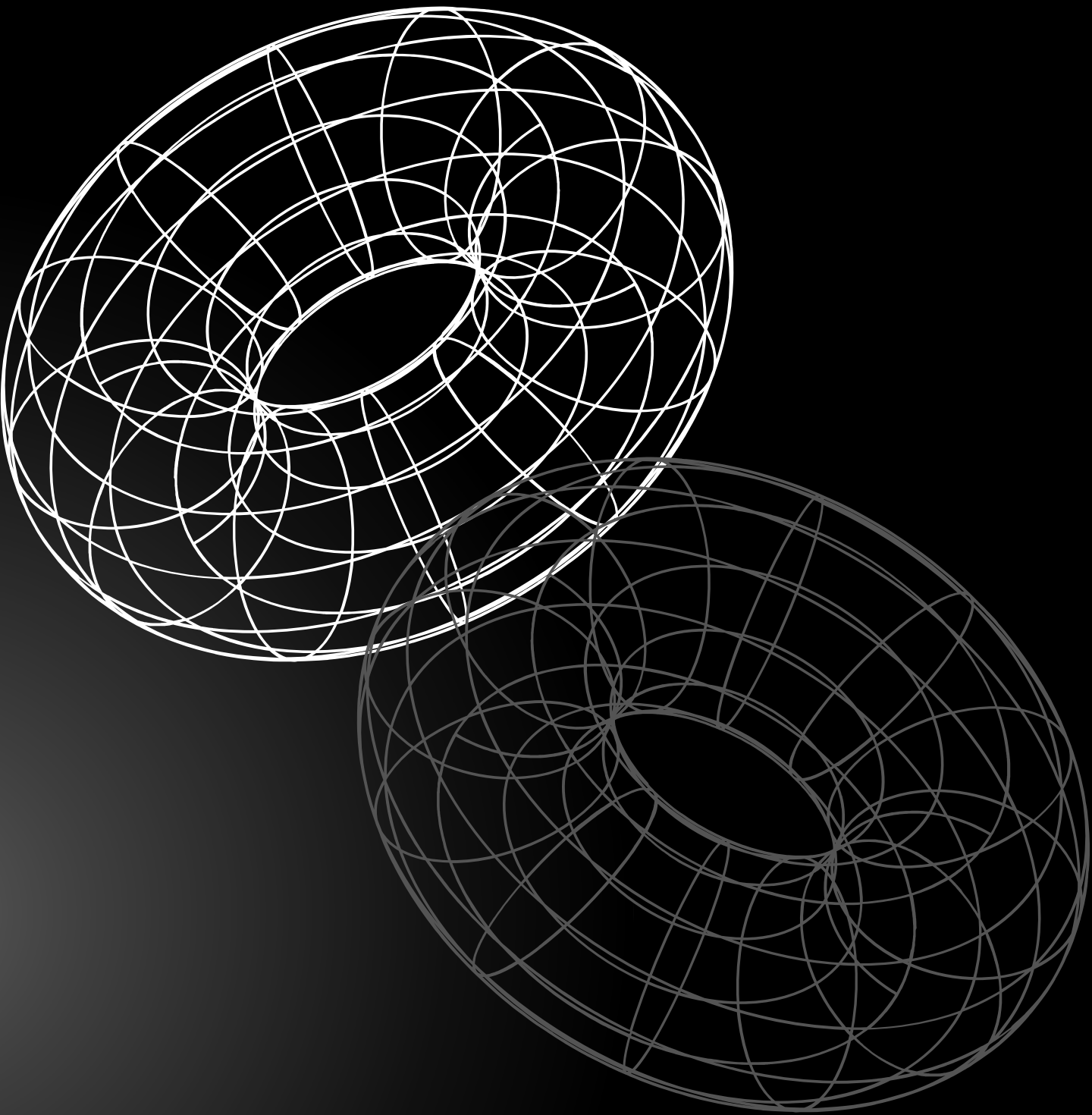- Enhance mental health assessments.

Team contributions:
- Team 1: Reviewed global AI-FER research.
- Team 2: Engaged stakeholders and handled ethics procedures.

Key challenges addressed:
- Privacy and ethical concerns.
- Bias and integration fears.

ACTIVITY AND STAKEHOLDER ENGAGEMENT

Direct stakeholders:
- Elderly individuals, caregivers, medical personnel, and families.

Indirect stakeholders:
- AI developers, healthcare institutions, and society.
- Future Activities:
- Testing FER in real-world settings.
- Training caregivers and gathering feedback.

OPSIS AI SUSTAINABILITY

- **Long-term vision**:
  - Regular training for caregivers.
  - Ongoing technical support.

- **Management**:
  - Estonian Ministry of Social Affairs and elderly care houses.

- **Collaboration**:
  - Academic institutions and stakeholders for continuous improvement.

PROJECT ACTION PLAN SUMMARY

Click here for a full action plan

- **September**- project setup, assigning roles, starting with literature reviews, creating a strategy to contact ethics committee and ministry.
- **October**- submitted ethics committee document, translating documents into Estonian and Russian, creating voting polls for group members, participating in mid-term feedback session.
- **November**- submitted letter for the ministry, preparing for the interviews.
- **December**- interviewing the stakeholders, creating LIFE portfolio.
- **January**- submitting self-reflective reports, presenting LIFE portfolio.

RESULTS AND ANNEXES

Key Achievements:

- Ethics approval and support letter from the Ministry of Social Affairs.
- Multilingual DASS21 questionnaire (Estonian, English, Russian).
- Literature review: Insights on AI in healthcare.
- Interviews: First-hand feedback from healthcare workers.
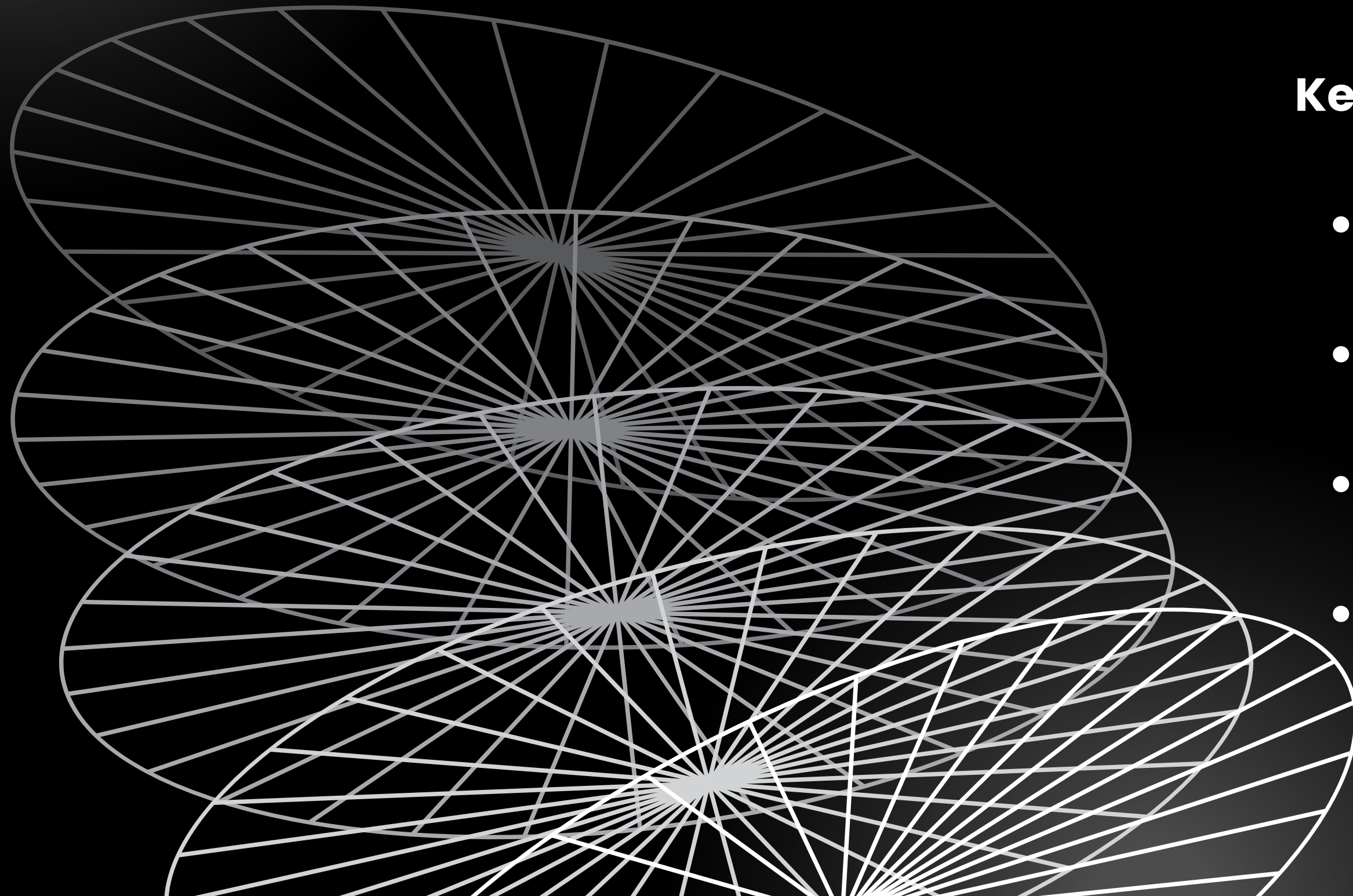
COMMUNICATION TO STAKEHOLDERS

- **Ministry of Social Affairs**: Approved the project with a support letter emphasizing its importance for social care challenges.
- **Participant Engagement**: Ensured transparency through consent and clear communication of goals.
- **Linguistic Skills**: Used multilingual abilities for translations and international collaboration.
- **Legal Report**: Addressed EU and Estonian regulations for compliance and security.
- **Team 1**: Analyzed 5 articles and sourced 5 more per participant to support project development.
- **Team 2**: Prepared ethics application and collaborated with service providers for technology integration.

THANK YOU

FOR YOUR
ATTENTION !