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LOVOT

─*a project to create well-being*

Laboratory for **W**elfare **T**echnology
Digital Health & Rehabilitation

Presentation

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Agenda

- Partners and target group
- How to design the science project (cooperation between University and Municipality)

Partners in project

- Aalborg Municipality

- Laboratory for Welfare Technology, Department of Health Science and Technology, Aalborg University

- Three residencies in Aalborg Municipality

The project is financed by The Innovations Foundation in Aalborg Municipality

Laboratory for Welfare Technology
Digital Health & Rehabilitation

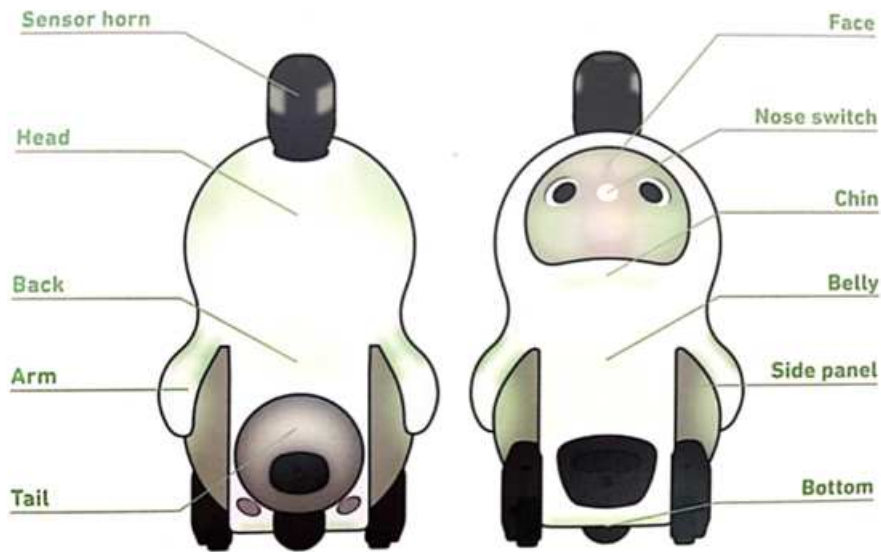BREAKING NEW GROUND
AALBORG UNIVERSITY

Who is LOVOT?

- LOVOT is a social robot developed to create joy, which is why the name is a contraction of LOVE + ROBOT.

- LOVOT is built with artificial intelligence, which makes it move in real-time and act like a human being.

- LOVOT is not designed to replace any human contact or care and has no functionality other than creating joy.

- LOVOT is developed by the Japanese company GROOVE X.

[(548) Lovot final production model hands-on at CES 2020 - YouTube](#)

Anatomy of LOVOT

Reference: Groove X, Tokyo, Japan

- **360° camera (in sensor horn)**
  - To see and recognize people
  - To create a map of its environment

- **Thermal camera (in sensor horn)**
  - Separates people from objects

- **Microphone (in sensor horn)**
  - Listens to sounds and voices
  - Can detect direction of sound

- **Sensors (whole body)**
  - Touch, pressure, temperature, etc.
  - Adapt behavior to its surroundings in real-time

Features of LOVOT

- Remember the users it interacts with
- Recognizes its name
- Comes when called on

- Develops own unique personality
- Is warm, like a living being
- Seeks contact with humans and other LOVOTS

LOVOT for citizens who are mentally retarded with autism

- Autism is a neurodevelopmental disability, characterized by impairment in areas of social interaction, communication skills and stereotypic behavior

- The severity of autism occurs in varying degrees and autism can be associated with other conditions, **such as intellectual disability**

- The deficits associated with autism impact the individuals' ability to function independently in many aspects of everyday life, such as in **social interaction with other people**

- In this project, LOVOT is tested among residents who are mentally retarded with autism and who has a cognitive/mental age fra 0-2 years, The test is in three residences in Aalborg Municipality to see which impact LOVOT will have

Aim of project

The aim of the project is to investigate:

- How citizens who are mentally retarded with autism respond to the encounter with a social robot

- Whether the social robot LOVOT can increase the well-being of citizens who are mentally retarded with autism in the present and in the long term

- Advantages and disadvantages of using LOVOT as a tool in communication with citizens who are mentally retarded and have autism

- How healthcare professionals and relatives experience the advantages and disadvantages of using a social robot in interaction with citizens who are mentally retarded and have autism

- The ethical aspects of using a social robot in interaction between healthcare professionals and resident, who are mentally retarded and have autism

Gdpr (generel data protection regulation)

- Ethics and law (National science etich komité)
- The people with autisme, who is a part of the test is cognitive from 0-2 years old
- Information- a detailed letter to all guardians
- Contracts on each persons with the guardians

Collection of data

- Challanges- how to catch the naturel interaction between LOVOT and testpersons?
- Data collection by professionels

A- schedule every second week

B- small movies 3, 6, 9 months

data – excample

How will you estimate the citizens feeling of safety?

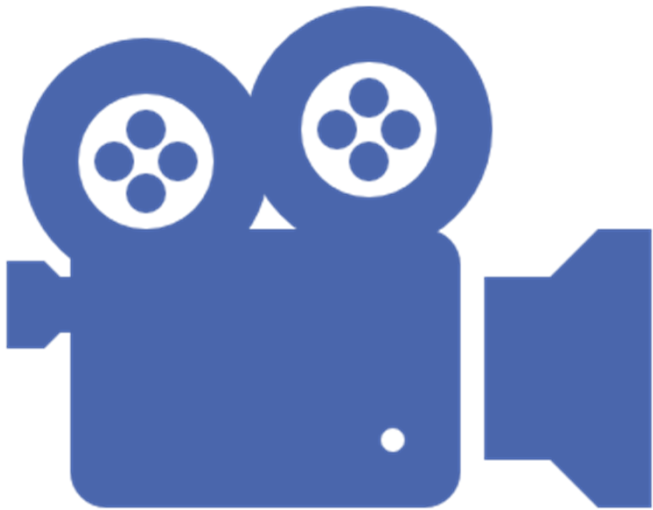| 🙁 Very bad	🙁 Bad	😐 Neutral	🙂 Good	🙂 Very good
			✖	

Excample

Movies about LOVOT

[Bip bip: Robot hjælper Astrid, som lider af demens | TV2 Nord](#)

[(548) Lovot final production model hands-on at CES 2020 - YouTube](#)

Questions?