WELCOME TO THE DANISH TECHNOLOGICAL INSTITUTE
STATUS
An independent, non-profit institution
Approved as a technological service institute by the Danish Ministry of Science, Technology and Innovation.

OBJECTIVE
The objective of the Danish Technological Institute is to address the needs of the industrial sector and society as a whole through the development and dissemination of technological innovation.
DTI HAS HUNDREDS OF PROJECTS WITHIN

- BUILDING TECHNOLOGY
- MATERIALS AND PRODUCTION
- ENERGY AND CLIMATE
- LIFE SCIENCE
- BUSINESS DEVELOPMENT
- TRAINING
- PRODUCTIVITY AND PRODUCTION (Centre for Robot Technology)

WE HAVE PRACTICAL EXPERIENCE IN APPLYING TECHNOLOGIES

WE TEST WELFARE TECHNOLOGY in relation to:

- the user's experience
- engineering and function of the technology and the physics of the user
- the public service system
- the environment and social relations
LET´S FOCUS ON THE PARO-PROJECT and its ethical aspects

THE TARGET GROUPS are people with
- no diagnosis
- different types and degrees of dementia and brain damages
- complex, multi-faceted and severely debilitating diseases and conditions
- cognitive and behavioral symptoms and loss of function.

THE OBJECTIVE of the project is to:
- document the effect of using Paro
- get knowledge about preconditions for successful interaction between humans and robots
- transfer this knowledge into improved development and use of robots in general
- contribute to the development of a generic methodology that may assess effects and use of welfare technologies.
THERE ARE MANY ETHICAL REFLECTIONS AND ASPECTS IN USING PARO

- If a person doesn’t know that Paro is not a real, living animal, but a technology, may the presentation and use of Paro be an ethical problem?
- Do caregivers or relatives press persons to use Paro?
- Can the autonomy, dignity or integrity of the person using Paro be threatened?
- Can Paro hurt (emotionally), injure (physically) or stress the person, or maybe create dependency (of Paro, of other persons help)?
- Can Paro reduce, solve or contribute to a (mental, emotional, physiological) handicap or problem for the user?
- Can Paro contribute to a more easy, safe, secure and better activity, day and life quality?

Inspired by the Norwegian project: ‘Teknologi, Etik og Demens’.
• Will the user of Paro reduce/ stop other activities, be less active or less communicating with others (short and long-term)?
• What happens to the relation and contact between the user and the caregivers/ the relatives?
• Can the privacy of the user be protected when using Paro?
• Does Paro fit to the habits and personality of the user?
• What if the ‘strongest’ users (with best mobility and most musclepower) take and use Paro from more ‘weak’ users (survival of the fittest?)
• What if there are several users profiting from Paro, but only 1 Paro?
• What if the users relatives are against and cannot accept the use of Paro?

• Are procedures, users manuals and responsibilities described and clear?
• Can a user who is dependent on Paro, have a new one if Paro is damaged/ being repaired?
Paro can be a SUPPLEMENT to, enrich and QUALIFY caregiving by giving experiences that caregivers are not able to give, i.e. Paro can evoke and catalyze (earlier, forgotten) personality, feelings, behavior, spoken language, memory etc.

Paro can NOT SUBSTITUTE caregivers (but reduce their strain), -caregivers are rather ´professional managers´ of Paro.
(ETHICAL) PERSPECTIVES, ASPECTS AND CONCLUSIONS IN THE PARO-PROJECT SO FAR:

- PROFESSIONAL caregivers must be CONFIDENT with Paro and MOTIVATED for the use and experimentation, i.e. they must learn how to use Paro (professionally and ethically) at a one-day Certification Course. Private persons can not buy Paro.

- Successful use of Paro depend on an INDIVIDUAL approach to every unique user, i.e. situation and reactions to the technology must be reflected by the caregiver.

- Paro can entertain, win confidence and STIMULATE laughter, anger, creativity, communication, discussions, (self)performance, spontaneity, dreams, caregiving etc.
FUTURE PERSPECTIVE TO `ETHICS AND TECHNOLOGY´

- Welfare Technology itself is neither bad, threatening or dangerous. But the way it is used and organized is determinating, and should be in focus.

- Let us not stop the technological development, but control it.

- Let us develop and test robots and technology to see whether, how and where it can enrich lives and life quality, support independence and reduce needs for caregivers.

- Maybe coming generations prefer to manage care by themselves, living without care given by persons sent to them, persons they do not know, or have not chosen themselves.
  Maybe coming generations -assisted by technology and accessability- can stay independent longer and keep in contact with people they prefer, -and where and when they prefer.

- Let not fear, horror scenarios and statements about technology as `unethic´ stop visions, experiments and development with robots and technology, - let us not react as programmed, simple robots ourselves.
THANK YOU FOR TODAY

- AND FOR YOUR LISTENING
EVALUATION

CAREGIVERS/ RELATIVES
- Observation studies
- Interviews: indiv/ groups caregivers/relatives
- Knowledge sharing (regionally, nationally)
- In what relations/ situations is Paro good
- Arbejdsmilieu for caregivers (psyk.)

PARO/ THE USER(S BODY)
- EEG, bloodtests/pressure, urine, stress
- Gerontopsychiatric evaluation
- Does Paro function technically

Psychology
- Casedescriptions
- Casestudies
- Interview of the users
- Questionnaire to the user
- Video- and films (fx Marte Meo method)
- Schedule with observations
- Photos/ diary
- Changes in Quality of Live (QuaL), humeur
- Interpretations
- Film- and journalist students products

Sociology
- Less situations where power/force is used
  the GBS-scale
- the DCM-method with ‘Mapping’
- Changes in what kind of care
- Changes in how much care (time)
- Changes in behavior, being, comm.
- Does Paro reduce psychiatric symptoms
- Schedules with observations
- Less medicine

Filosofi

THE USER

THE SERVICESYSTEM