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A TECHNOLOGY APPROACH TO DEMENTIA CARE

-HOW TECHNOLOGY CAN BE USED IN THE MANAGEMENT OF DEMENTIA

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STATUS OF DTI

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.

THE DANISH TECHNOLOGICAL INSTITUTE

Founded 1906 by Gunnar Gregersen

”To support Danish industry, mainly small enterprises, by providing technical assistance in the form of teaching, advice, testing and technological research”

”Technological research - developed with the necessary scientific approach, but without the means of making science. The purpose is to develop new field for manufacturing ”

Gunnar Gregersen

KNOWLEDGE PROCESSES AT DANISH TECHNOLOGICAL INSTITUTE

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Knowledge development

Develops new knowledge through R&D activities – national as well as international

Knowledge application

Knowledge application takes place through general technological services. E.g. laboratory tests, testing, calibration and certification

Knowledge transfer

In interaction with and supplying advisory services to private and public market players. E.g. consultancy, education and operator tasks

TODAYS AGENDA

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- Challenges of dementia care, that technology can help address
- Examples of low and high intelligent assistive technologies and robots
- Challenges in using technologies

CHALLENGES OF DEMENTIA CARE, THAT TECHNOLOGY CAN HELP ADDRESS

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The diagnostic criterias of dementia (inspired by the WHO, ICD-10 classification):

- Lose memory, especially new data
- Reduction of other cognitive functions (abstract thinking, planning, judgement)
- Less emotional control, motivation or social behaviour, fx
  - emotional lability
  - irritability
  - apathy
  - primitive social behaviour

The diagnosis itself, can not prescribe what technology may be helpful for the person.

People with dementia can train and learn new things and strategies.

CHALLENGES OF DEMENTIA CARE, THAT TECHNOLOGY CAN HELP ADDRESS

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<u>The person with dementia is unique:</u>

- Also people with dementia are individually different, each of them have a life history, personality, habits, preferences etc.
- It is the ´strong sides´ of the unique person with dementia, and the persons cognitive (and other) problems and handicaps, that are the basis for the judgement of, what technologies may help the person.
- Also informations from caregivers and relatives are important.

CHALLENGES OF DEMENTIA CARE, THAT TECHNOLOGY CAN HELP ADDRESS

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Remenber the ”olympic syndrome”:

CHALLENGES OF DEMENTIA CARE, THAT TECHNOLOGY CAN HELP ADDRESS

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Categorisation of technologies/ devices for people with dementia/ cognitive impairment (inspired by the norwegian ALMA-classification):

- For memory
- For communication
- For security, personal hygiene and household
- For activity and stimulation

EXAMPLES OF LOW AND HIGH INTELLIGENT ASSISTIVE TECHNOLOGIES AND ROBOTS

FOR MEMORY

EXAMPLES OF LOW AND HIGH INTELLIGENT ASSISTIVE TECHNOLOGIES AND ROBOTS

FOR COMMUNICATION

EXAMPLES OF LOW AND HIGH INTELLIGENT ASSISTIVE TECHNOLOGIES AND ROBOTS

FOR SECURITY, PERSONAL HYGIENE AND HOUSEHOLD

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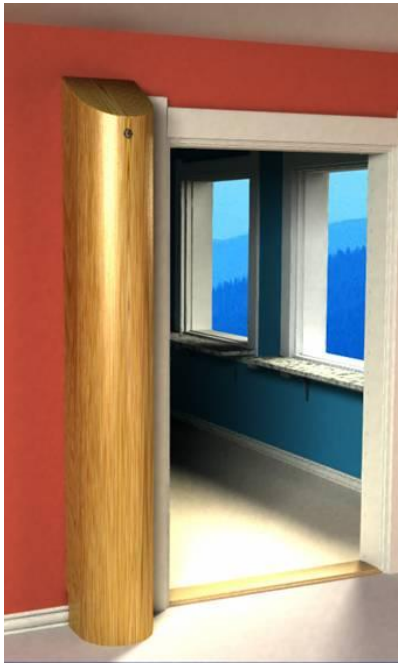

EXAMPLES OF LOW AND HIGH INTELLIGENT ASSISTIVE TECHNOLOGIES AND ROBOTS

FOR SECURITY, PERSONAL HYGIENE AND HOUSEHOLD

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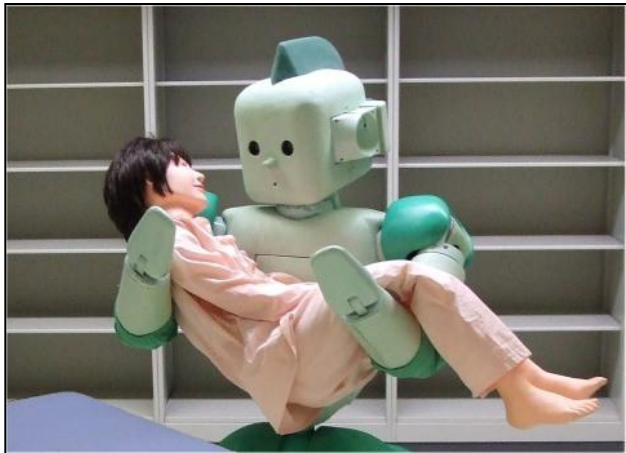
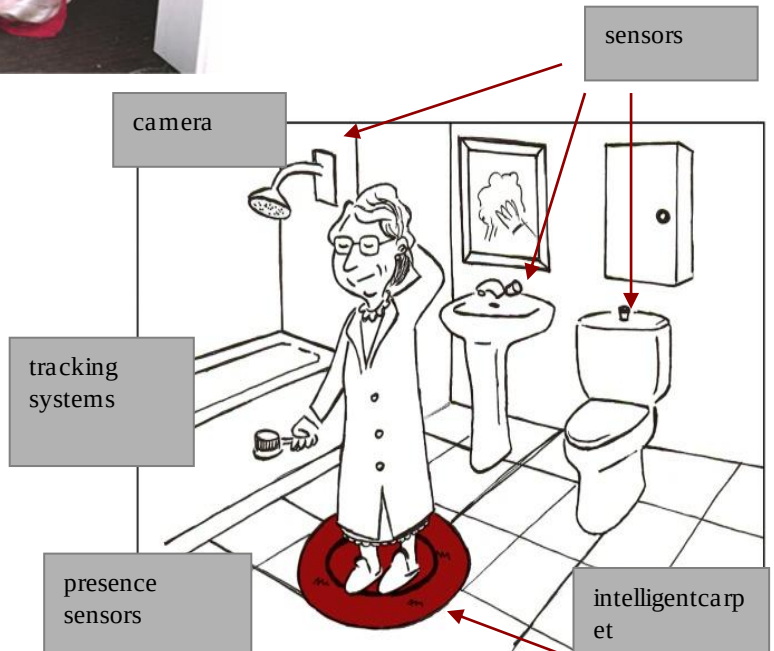
FOR SECURITY, PERSONAL HYGIENE AND HOUSEHOLD



EXAMPLES OF LOW AND HIGH INTELLIGENT ASSISTIVE TECHNOLOGIES AND ROBOTS

FOR SECURITY, PERSONAL HYGIENE AND HOUSEHOLD



EXAMPLES OF LOW AND HIGH INTELLIGENT ASSISTIVE TECHNOLOGIES AND ROBOTS

FOR ACTIVITY AND STIMULATION

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CHALLENGES IN USING TECHNOLOGIES

ARE MANY…

- Always focus on the individual person with dementia
- Little knowing about the devices/ technologies
- Technologies should be implemented early and followed up
- Ethical questions
- Political interest
- Fear, resistance and horror scenarios

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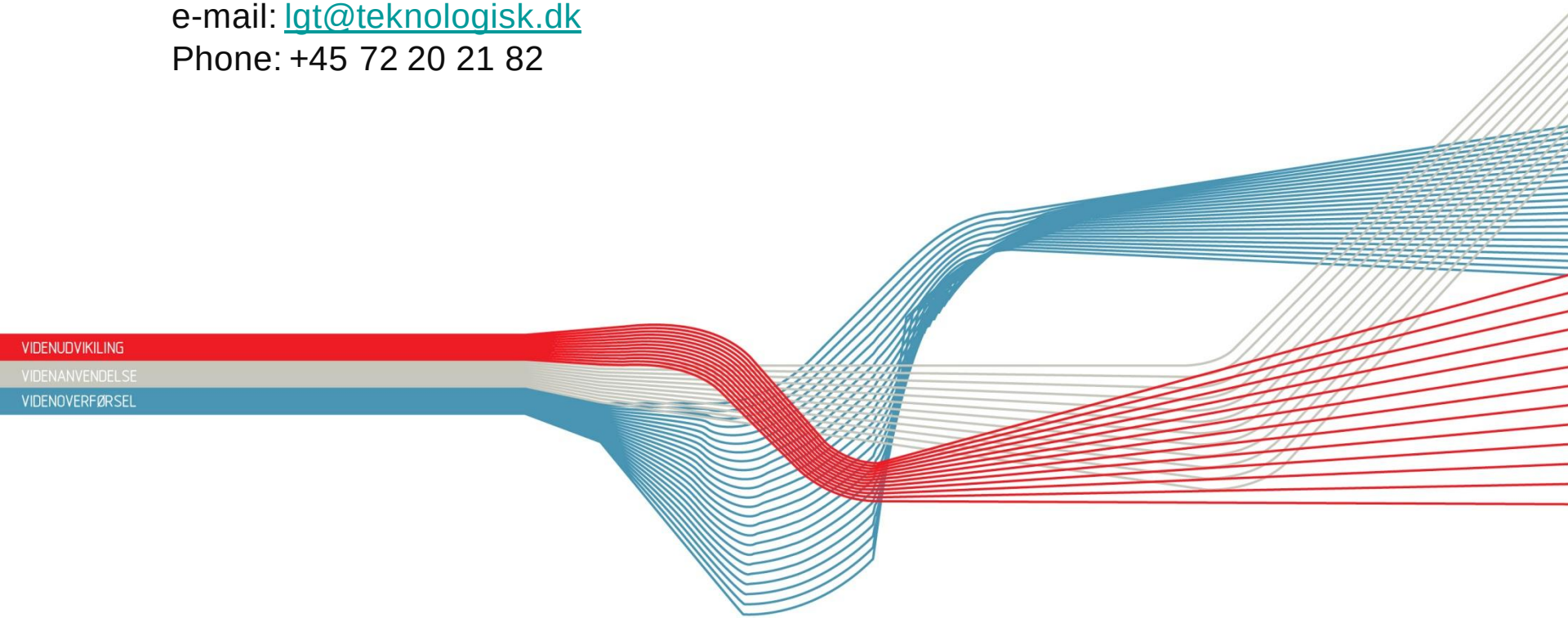
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