Market analysis - Osiris project

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Contributors   **VIA University College and CFT.**

Reviewers   **Kirsten Maibom, Michael Smærup, Mads Lund Andersen, Bodil Sørensen**

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Acronym	**Osiris**
Coordinator	**Center for Assisted Living Technology**
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About the analysis

- This market analysis is part of the OSIRIS-project, a project designed to strengthen the development of assisted living technology within the participating countries and regions as well as strengthening collaboration between the triple helix actors across borders.

- The analysis examines opportunities and challenges, strengths and weaknesses in the market for assisted living technology, the size of the market, the needs of the users, and how different actors can access essential knowledge.

- Respondents from different groups suggest improvements and solutions that can strengthen the welfare technological landscape from their perspective.

- Similar analysis has been carried out in Finland, Estonia, Latvia and Lithuania.

- We define the market as the companies, the knowledge and network organisations, and the users of assisted living technology (senior residents and care givers).

- The study was done by Center for Assisted Living Technology and VIA University College.

About the study - content

- The target group and the contributors to the analysis
- The eco-system in the region
- The market for assisted living technology
- Results from the interviews
  - The organisations for the senior residents
  - The care givers
  - The clusters
  - The business
  - The knowledge institutions.

Contributors to the analysis

- Representatives of the municipalities council for senior residents (4 councils – (9 interviews).

- Clusters and organisations providing innovation support (2 interviews)

- Business people that develop and trade assisted living technology (9 interviews)

- care givers (5 interviews)

- Knowledge institutions (7 interviews).

One interview was done by the telephone the remaining interviews(26) were face-to-face interviews using an interview guide. Other sources of information were reports from ministries and Statistics Denmark.

The themes and interview questions

- Knowledge flow – where do you get your knowledge from and do you contribute to others?
- Network – what kind of network do you participate in? Where do you find your knowledge
- Expectations to the developement of assisted living technology
- Barriers and challenges for developing and implementing assisted living technology.
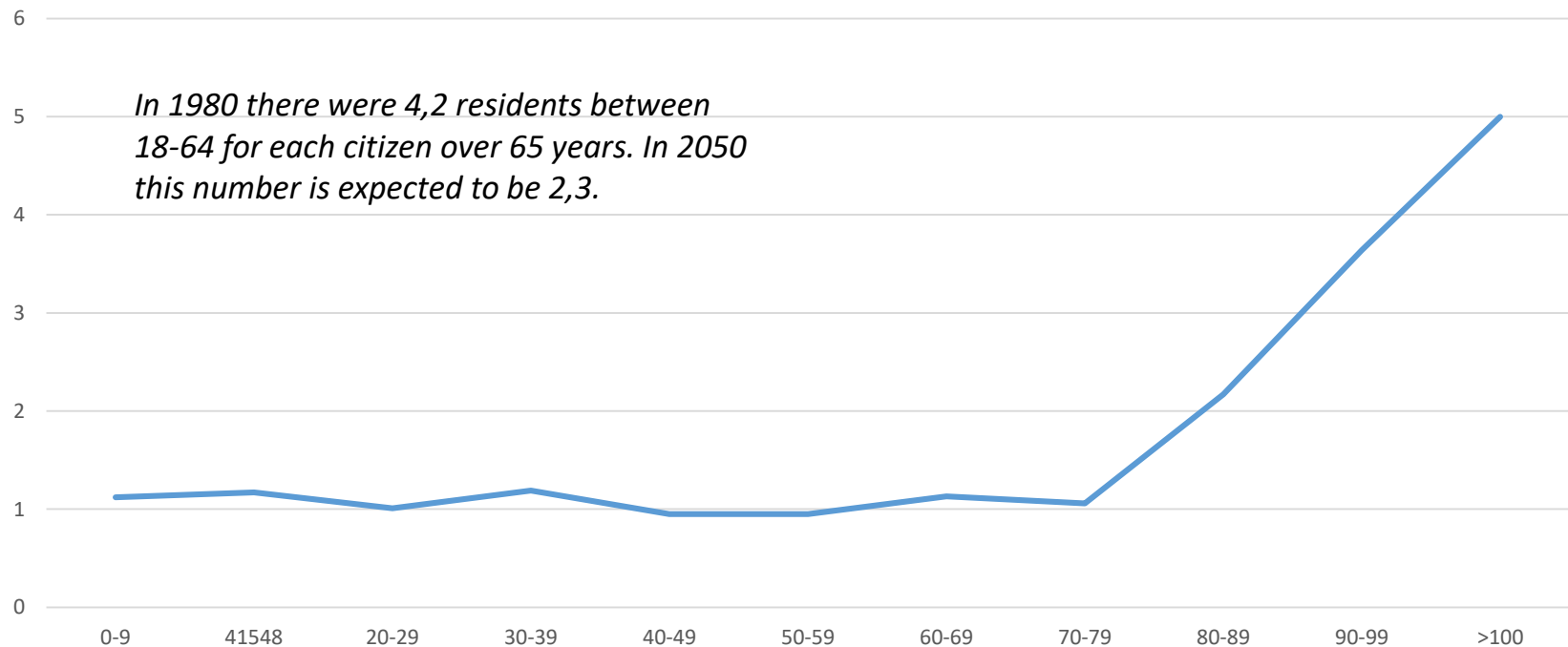- Suggestions to improve the developement of assisted living technology.

The ecosystem

The eco system – demographic projection for DK

	2019	2020	2030	2040	2050	2060
I alt	5.806. 019	5 830 928	6 073 695	6 246 612	6 350 573	6 477 922
0-9 år	618 216	616 146	694 175	715 453	681 552	722 546
10-19 år	683 669	681 984	628 306	705 460	726 854	692 696
20-29 år	783 879	786 615	759 949	706 853	781 986	803 409
30-39 år	681 161	688 933	810 773	783 304	731 558	809 011
40-49 år	762 648	756 721	680 336	798 210	771 643	721 790
50-59 år	797 775	800 958	743 384	661 206	779 471	754 782
60-69 år	662 929	664 208	757 480	706 075	630 809	750 131
70-79 år	552 058	564 192	574 780	674 084	640 642	582 975
80-89 år	219 003	226 624	364 818	390 451	482 798	476 325
90-99 år	43 640	43 506	58 457	103 400	119 211	159 055
100 år og derover	1 041	1 041	1 237	2 116	4 049	5 202

The ecosystem – the percentage increase in each age group (Statistics Denmark, 2018)

In 1980 there were 4,2 residents between 18-64 for each citizen over 65 years. In 2050 this number is expected to be 2,3.

Smart Industry and Growth drivers in Central Denmark Region

- In 2015 there were 83.000 jobs in 4.000 industrial business and smart industry is perceived a strenght in the region.

- Few of the new companies are characterised as growth companies (less than 0,5 pct.)

- Lack of venture capital and of entreprenurial competences may be the explanation for lack of succes.

- In Denmark more than 1.000 companies that develops, sells or retails assisted living technology (according to the "Hjælpemiddeldatabase" – www.hmi.dk).

Network and clusters in Denmark

- The Medtech Innovation Consortium (www.mtic.dk)
- Welfare Tech (www.welfaretech.dk)
- TUCV (www.tucv.dk)
- Care Ware (www.careware.dk)
- SundVækst netværket (www.startvaekst.dk)
- Danish Health Tech (www.danishhealthtech.dk)
- CareNet (www.carenet.nu)
- Danish Care (www.danishcare.dk)
- DokkX (www.dokkx.dk)
- AAL-network and conference. (www.all-europe.eu)

Knowledge institutions and research.

- Universitys in Aarhus, Copenhagen, Aalborg and Odense
- VIA University College
- SoSU-schools (vocational schools)
- GTS-institutes

Results of interviews. Senior residents

The senior residents and assisted living technology

- Predominantly a positive attitude towards technology – but some of them have concerns. In Denmark 20 pct. to not use digital post – a marker for the level of digitalisation and the use of smart technology.

- The seniors want to be independant and manage themselves – the technology can help them with this.

- It is difficult to find out which technologies are on the market – we think there is a lot of useful technologies. We would like to know more about it.

- Loneliness is a problem among the senior residents.

List of suggestions – examples from the senior residents (what would improve our quality of life and the use of assisted living technology)

- Solutions that helps people living in remote areas
- Solutions for cleaning etc (practical help) this help is difficult to acchieve today
- Information and knowledge to the senior residents to avoid the concerns about technology.
- The care givers should know more about the available technology and master it.
- Solutions to fight loneliness and to increase level of activity
- More knowledge sharing among the municipalities
- Start using asssisted living technology at an younger age – get used to assisted living technology.
- More cognitive training.

care givers

The care givers and assisted living technology

- The technology must make the working environment better and make the residents secure and safe.

- Some solutions make it possible for the care giver to handle the citizen alone. This is a huge advantage for both parties – more presence and intimacy

- Implementation is a challenge – its hard to get all colleguages to join the new procedures and it takes a lot of time.

- Not a lot of ethical challenges – but it is always a focus area.

- More knowledge about solutions is always welcome.

List of suggestions – examples from the care givers. (what would improve our quality of life and the use of assisted living technology)

- More residents with mulitple disease => need for an individual care, solutions and treatment – all have their unique combination of needs
- Seniors must start using asssisted living technology at a younger age – and get used to it.
- Listen to us and give us more information about the possibilities – also for things the citizens has to by themselves.
- Be aware of loneliness – the technology should not leave the residents alone.
- Be aware of the importance of the language - how we talk about the technology.

Incubator and cluster

The incubaters and clusters

- Network is important – it is crucial for us

- We must be present locally, it is very useful for the companies we help.

- Right now there is a lot going on about big data and how to prevent and predict diseases and conditions as fx bedsore

- The barriers for the companies are access to the clients in the municiplaties, access to testing facilities, financing and knowledge about (entreprenurial skills).

List of suggestions - incubators

- Strong, locally funded environments where start-ups can get the relevant help.

- Easier access to the municipalties

- Access to the knowledge from the universities

- GTS-institutes should be the mediator between companies and research, but they are too expensive for the SMVs and the big companies can afford it themselves.

- OPI-contracts helps the companies (public/private innovation)

- Implementation should be "as sexy" as innovation
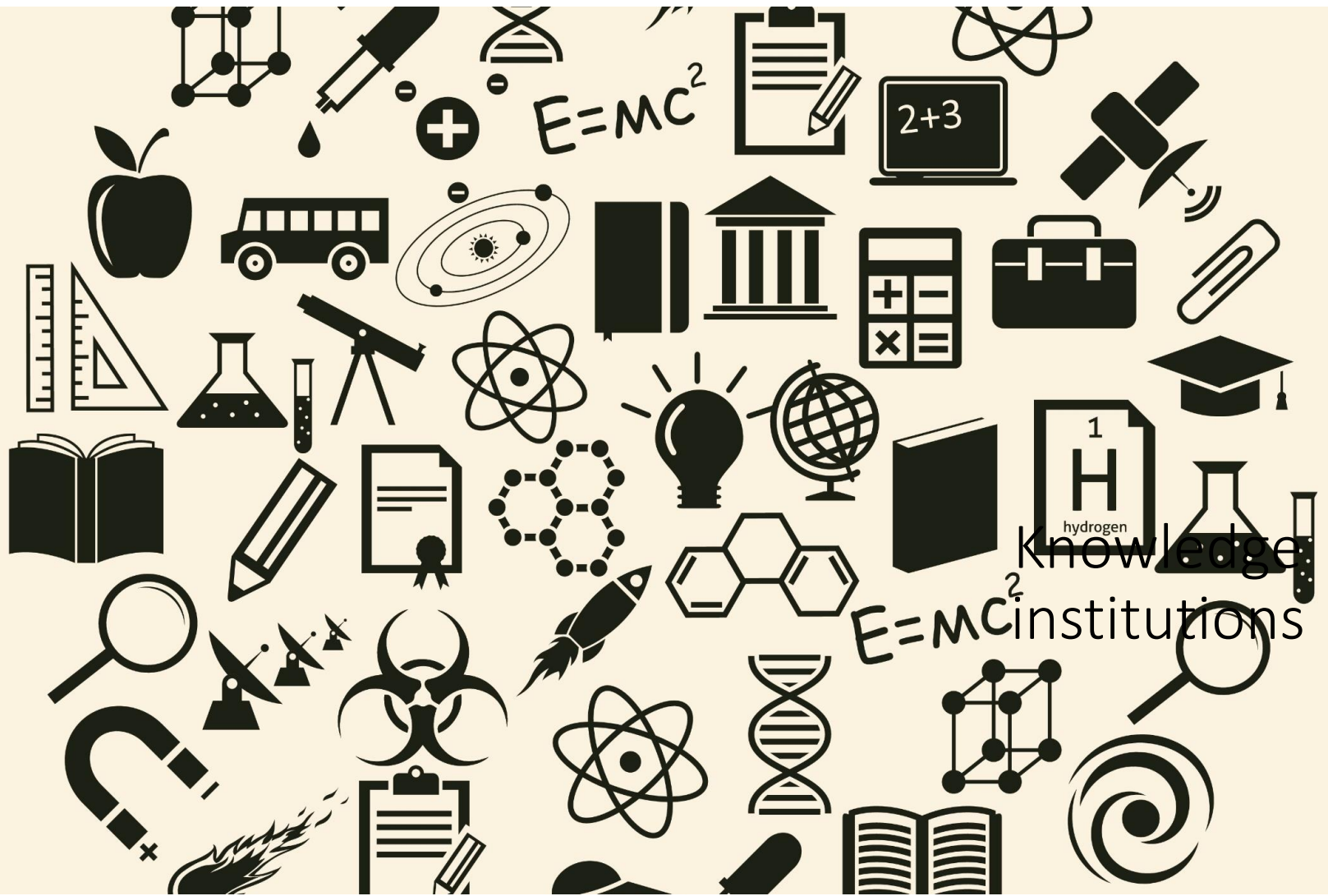
Companies

The companies

- Much more AI-solutions.
- Solutions that makes it possible to stay longer in own home and solutions for practical help.
- Solutions to make the transfers/relocation of the residents more gentle
- Virtual reality will make it possible to train and get better, while you are having fun.
- Solutions to help the memory
- Start with all this assisted living technology at an earlier age.

The companies

- In general: we are aware of ethical issues, but its not a huge problem as we see it.

- The welfare society in Denmark makes a good base for the companies (develop and test to be ready for bigger markets).

- Network is important, but sometimes you have to prioritize.

- Access to knowledge is not a problem in the developing fase.

List of suggestions – examples from the companies.

- The danish market is very focused on price – we ought to think more about durability, applicability, welfare for the employers.

- More cooperation with the users

- Focus on the procurement rules – they are tough to manage

- "Joint venture" cooperation between companies and customers (municipalities) would promote growth

Knowledge institutions

Knowledge Institutions

- The institutions in Central Denmark Region varies in level of reseach, knowledge production.

- Some of the knowledge institutions points out the same challenges as pointed out by the companies (procurement rules, investement plans in the municipalities)

- It is pointed out that we need more involvement of the users in the development phase, and we need more training og the care givers

Summary

- The cooperation and co-creation among residents, the technology, public and private actors must increase and expand.

- Use of technology by resourcefull senior residents will be a necessity in order to release ressources for the weakest groups

- Individual offers for the residents, seeing the citizen as a whole and the caretakers understanding of the often complex situation of the citizen is a must.

- Networks are often pointed towards the caregivers, the companies and researchers – there is a need for network (knowledge and information) for senior residents and their next of kin.

- The implementation proces can be improved (education, handling the changing procedures, management support, follow up, listen to objections)

- The municipalities wants the companies to provide test results and documentation for new technologies – this is a barrier for the start-ups, they do not have the financial buffer to complete this.

- Procurement rules are mentioned as a barrier for growth