WELFARE TECHNOLOGY

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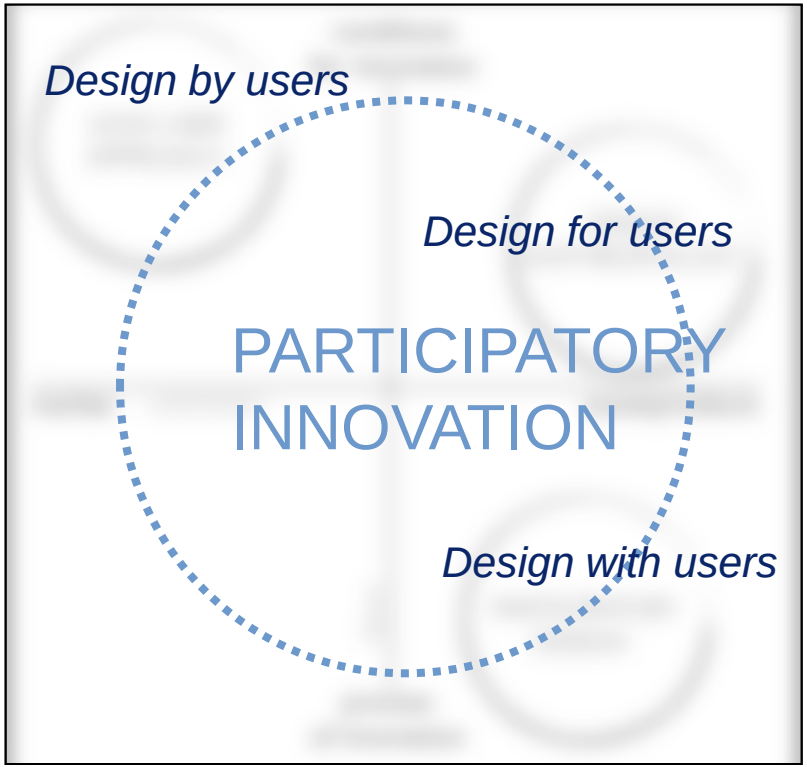
About SPIRE



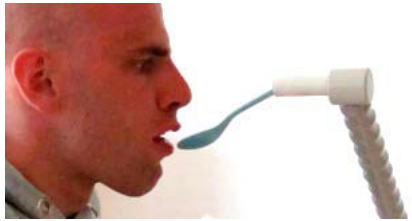
- Sønderborg Participatory Innovation Research Centre
- Supported by the strategic research fund
- Cross-disciplinary research

What is Welfare Technology?

- technological support and reinforcement of security, safety, daily living and mobility
- public or private social welfare services and products
- targeted at older people, people with chronic illnesses and people with disabilities
- focused on ensuring a better use of resources in relation to welfare benefits and/or to provide a better quality of those services for their users.
- user-centered technologies

Some examples

Telemedicine



Automated care

Training motoric skills

OVERVIEW

Ambient Assisted Living

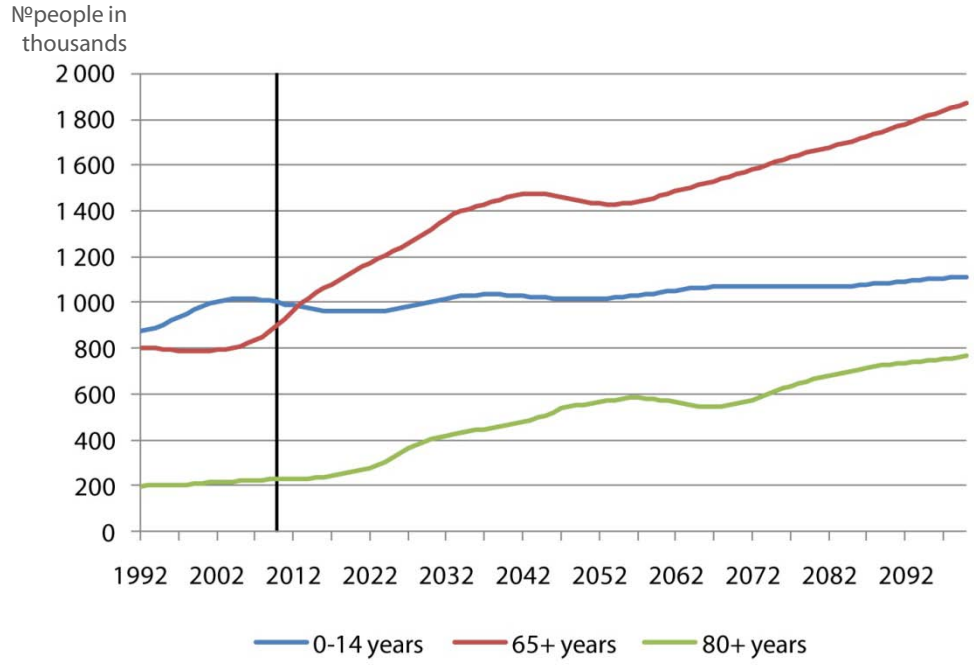
Joint Programme

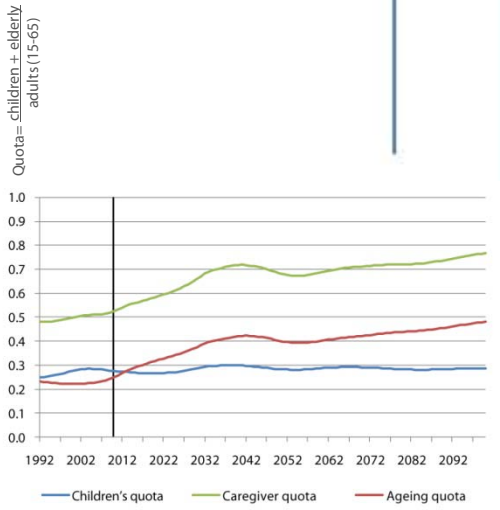
Objective: enhance the quality of life of older people and strengthen the industrial base in Europe through the use of ICT

Motivation: the demographic change and ageing in Europe.

http://www.aal-europe.eu/.

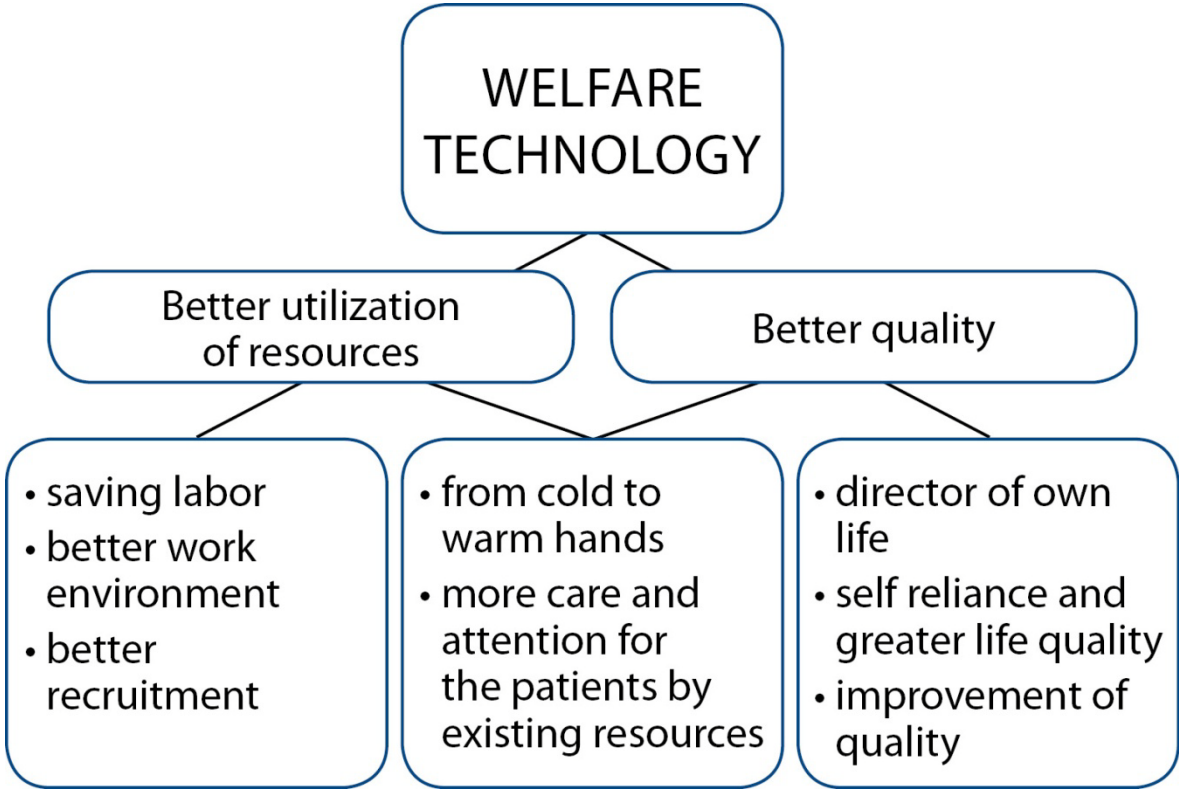
Why is it urgent?





http://www.dreammodel.dk/pdf/Befolkning2010.pdf

OVERVIEW



Modified from ÆldreForum (Oct 2011): Velfærdesteknologi nye hjælpmidler i ældreplejen.

DENMARK

IntelliCare

- Cognitive support
- Information systems - provide the citizen and the caretaker with a feeling of security and with important information
- Robots – cleaning or taking care without being a nuisance
- Culture and behavior - the user's viewpoint towards technology

http://test.hmi.dk/media/intellicare-eng.pdf

yes-group · TEKNOLOGISK INSTITUT · LEDERFORUM SOCIAL & SUNDHED · PHONAK life is on · UNIVERSITY OF SOUTHERN DENMARK · besam · SAFELINK GPS TRACKING · OK·Fonden · FREDERIKSBERG KOMMUNE · DANSK REHAB GRUPPE · KØBENHAVNS KOMMUNE · HJÆLPEMIDDEL INSTITUTTET · SPIRE

UNIVERSITY OF SOUTHERN DENMARK

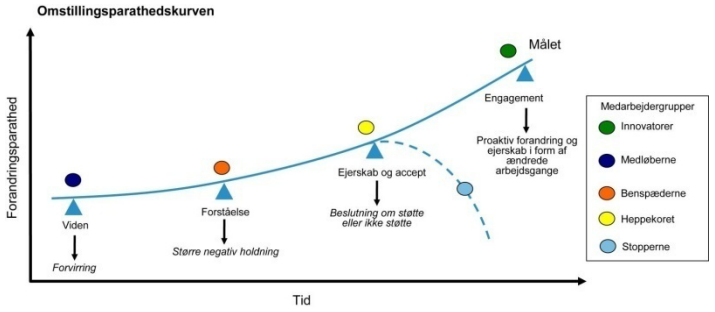
SECTORS INVOLVED

Social sector

Demystifying technology needed for staff and citizens – and focus on ethics – and then improve use of technology significantly.

Health sector

Less polarization and more commitment needed among the different role profiles within the sector.



http://velfaerdsteknologi.nu/media/153536/Kompetenceunders%C3%B8gelse%20for%20velf%C3%A6rdsteknologier%20i%20Region%20Syddanmark.pdf *(Accenture)*

Danmarks vækstråd recommendations

- National knowledge bank
- Innovation driven by public demand
- Matchmaking between public and private actors
- Service design for optimizing procedures
- Better possibilities for innovation in the public sector

DENMARK

Region Nordjylland
- Lægemiddeludvikling og medicoteknik
- Intelligente hjælpemidler
- Automatisering af støttefunktioner vha. IT

Region Midtjylland
- IT i sundheds- og
- plejesektoren
- (Pervasive health care)

Region Syddanmark
- Intelligente hjælpemidler
- Telemedicinsk behandling
- Automatisering
- IT-systemer

Region Hovedstaden
- Lægemiddeludvikling
- Medicoteknik
- Diagnostik
- Klinisk forskning

Region Sjælland

Source: http://www.velfaerdsteknologi.nu/nyheder/analyser

The region - strategy

syddansk vækstforum

Den syddanske satsning på Velfærdsteknologi og -service, Dorthe Kusk, Afdelingschef Region Syddanmark

Regional initiatives

syddansk vækstforum

- Telemedicinsk behandling af KOL-patienter
- Virtuel videns- og projektplatform
- Robotteknologisk genoptræning
- Telemedicinsk sårbehandling
- Human Care Lifter
- MedicRobotics
- Innovationsnetværket Robocluster
- Telehjertesvigt
- Servicedesign på OUH
- Welfare Tech Region
- UNIK

Velfærds:teknologi:nu

Region Syddanmark

ODENSE KOMMUNE

SERVICESTYRELSEN

SYDDANSK UNIVERSITET

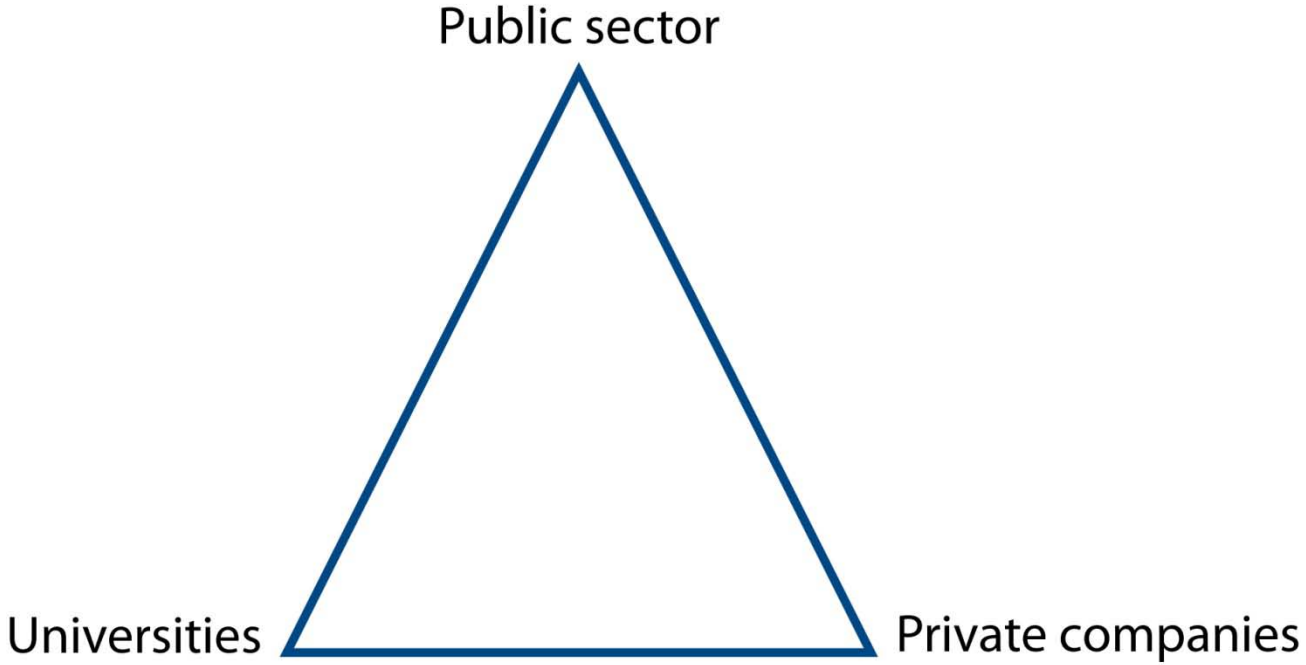
Designskolen Kolding
Center for Robotteknologi
MedCom International
INVIA - Enhed for Velfærdsinnovation
Welfare Tech Region

Robocluster
University College Lillebælt
University College Sydvest
Udviklingsforum Odense
Knowledge Lab

Vejle Kommune
Billund Kommune
Aabenraa Kommune
Væksthus Syddanmark

Den syddanske satsning på Velfærdsteknologi og -service, Dorthe Kusk, Afdelingschef Region Syddanmark

The Players

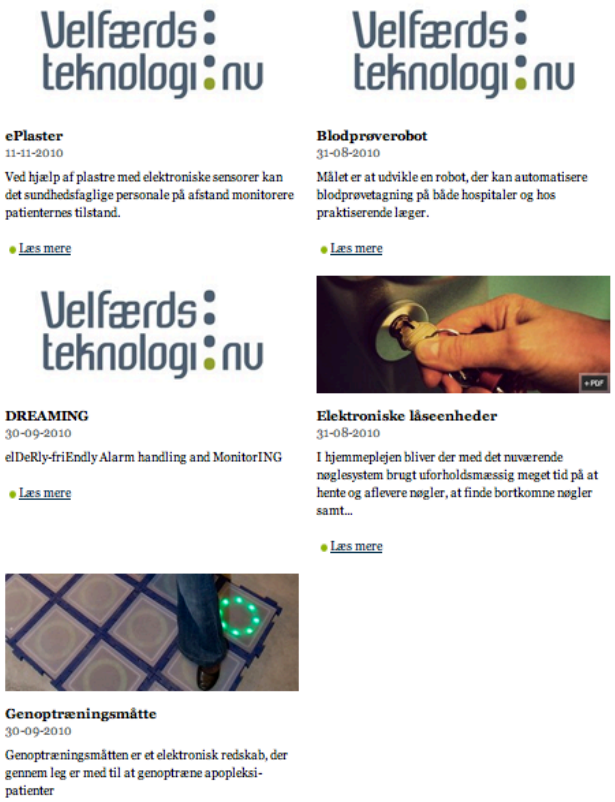


Initiatives

Welfare Tech Region

UNIK

Patients@home



Velfærds: teknologi: nu

ePlaster
11-11-2010

Ved hjælp af plastre med elektroniske sensorer kan det sundhedsfaglige personale på afstand monitorere patienternes tilstand.

• Læs mere

Velfærds: teknologi: nu

Blodprøverobot
31-08-2010

Målet er at udvikle en robot, der kan automatisere blodprøvetagning på både hospitaler og hos praktiserende læger.

• Læs mere

Velfærds: teknologi: nu

DREAMING
30-09-2010

elDeRly-friEndly Alarm handling and MonitorING

• Læs mere

Elektroniske låseenheder
31-08-2010

I hjemmeplejen bliver der med det nuværende nøglesystem brugt uforholdsmæssig meget tid på at hente og aflevere nøgler, at finde bortkomne nøgler samt...

• Læs mere

Genoptræningsmåtte
30-09-2010

Genoptræningsmåtten er et elektronisk redskab, der gennem leg er med til at genoptræne apopleksi-patienter

http://www.velfaerdsteknologi.nu/media/95977/projektoversigt_maj_2011.pdf

OPI – public-private innovation

EU public procurement of innovation policy development

Pre-2000: Efficiency, competition, reduce public spending, common market

2000: Lisbon European Council vision → the most advanced knowledge based economy.

2002: → R&D 3% of EU GDP, "impulse needed"

2003: public sector as "launching customer"

2005: public authorities "big market players"

2006: "public procurement to drive demand for innovative goods" to create lead markets; pre-commercial procurement a missing link

2007: European Council published a guide on dealing with innovative solutions in public procurement

2007-2009: OMC-PTP, STEPPIN, EC Expert Group on Public Procurement of Innovation and Risk Management, Regional collaborations.

2009: The EU Parliament noted "that strengthening pre-commercial procurement remains one way among many for Member States to raise their game in innovation and research…" Current projects: PreCo, P3ITS, ProcSouth…

'Public procurement' occurs fourteen times in the EC communication Europe 2020 Flagship Initiative Innovation Union (2010)

(Old?) Perceptions of the procurement rules

- “tension between the EU procurement rules and the need to accommodate informal co-operation in the form of user/producer interaction related to technical change” (Edquist et al, 2000, p. 308)
- Other have warned that “[t]he consequence of rigid procurement rules may be that procurement processes give rise to solutions that are price competitive, but do not spur innovation and the dynamic development for firms and society as a whole” (Nyholm et al., 2001, p. 264).
- “Hopeless”; Evolution of an informal practice; Lawsuits; Incomplete contracts, small communities; Discriminating new/ small firms?; Quality decrease when negotiation is not allowed? Too low bids (DSB First).

Conclusion: Don’t even think about trying to procure innovation! ☹

PUBLIC PROCUREMENT

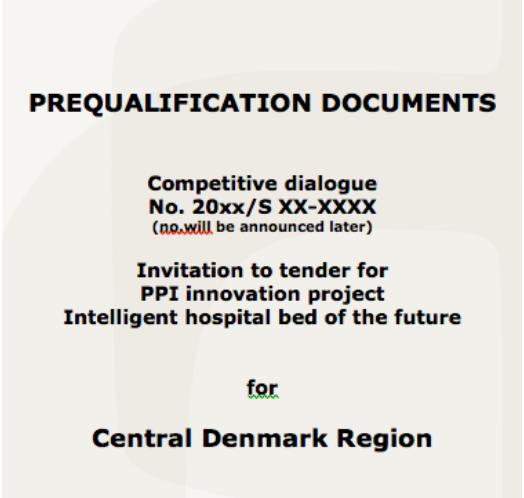
Success factors for public procurement of innovation

- Expertise on public procurement procedures and relevant law
- Technical competence for specification
- Coordinating competence for co-operative procurement
- General project management skills
- Allocation of resources for public procurers
- Political support
- Risk management
- Public support
- Supplier side understanding of public procurement procedures
- Institutional coordination
- Understanding of when there is (not) a system failure
- Method development, for instance pre-commercial procurement

(Rolfstam, M. A tentative model of a demand system for public procurement of innovation, International Conference for Procurement, August 2010 Seoul)

OPI (Public/private innovation)
An example

- To develop the hospital bed of the future
- To enter into long term innovative collaboration
- The PPI form is a learning target – the participating enterprises attain motivation and knowledge to carry through more PPI projects
- The Regional Hospital of Randers wants to purchase and use the developed products



PREQUALIFICATION DOCUMENTS

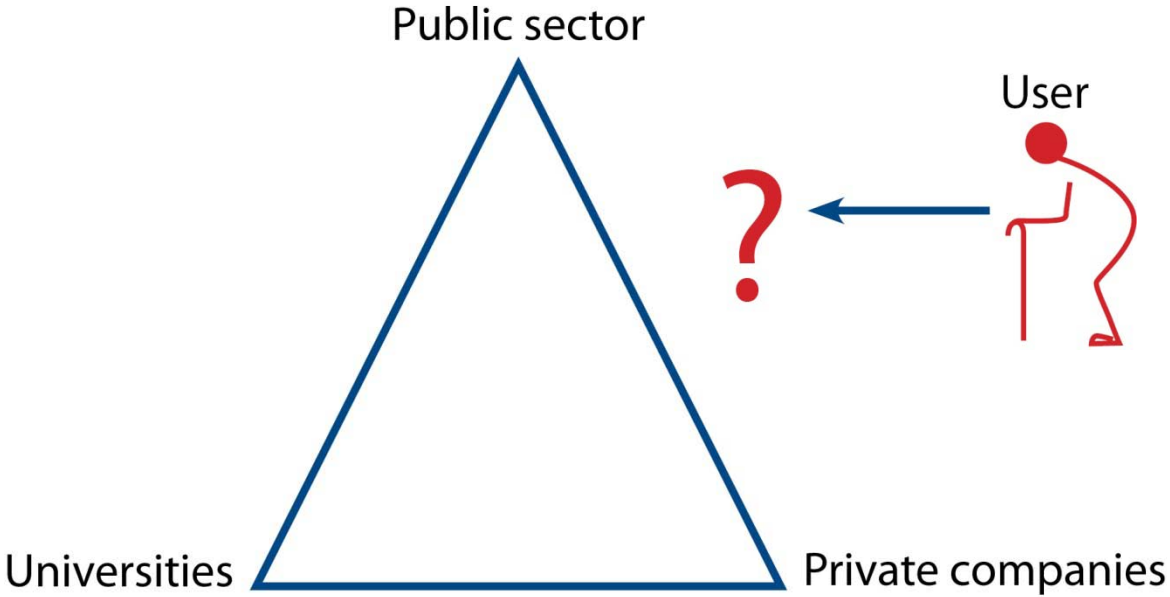
Competitive dialogue
No. 20xx/S XX-XXXX
(no.will be announced later)

Invitation to tender for
PPI innovation project
Intelligent hospital bed of the future

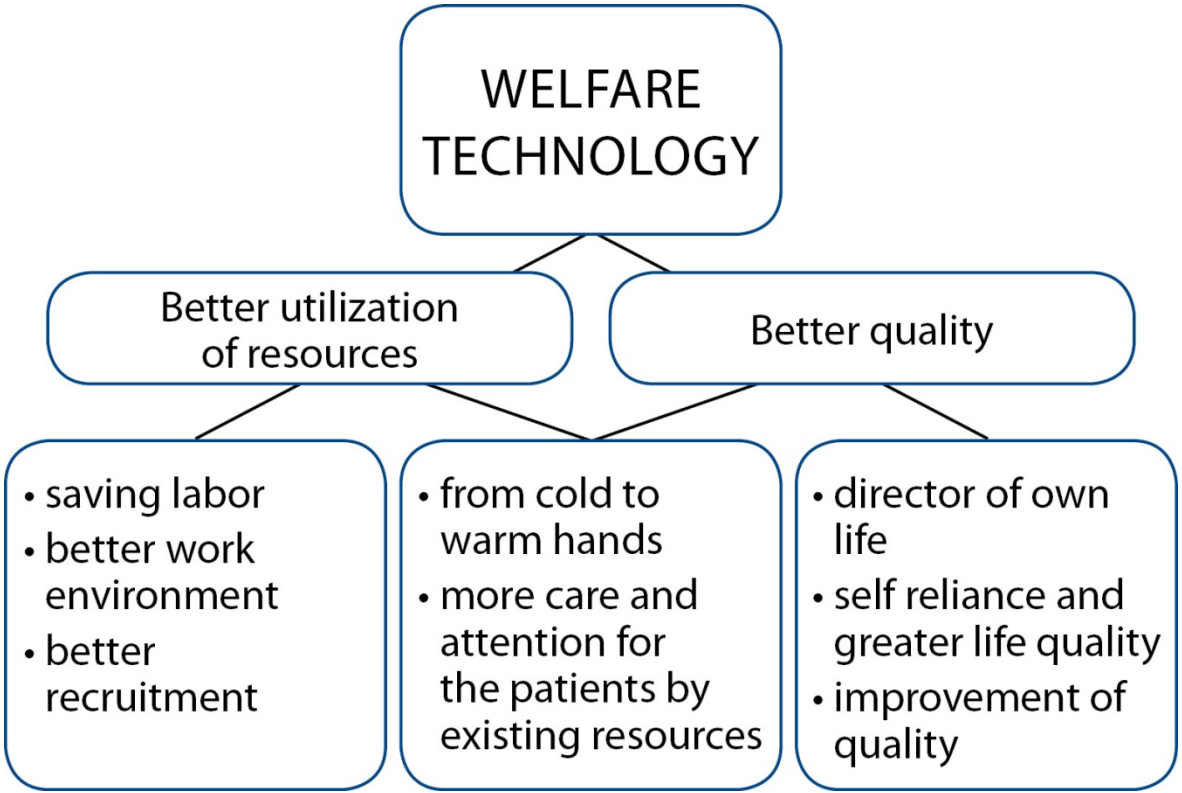
for

Central Denmark Region

Triplehelix of the region and The place of the user?



PARTICIPATORY INNOVATION



Living labs

Mayor Aase Nygaard:

We want to pull the discussion about robots and welfare technology down to earth. In the living lab product developers can meet citizens, employees, and users of welfare technology. We want to ensure that the products cover real needs as they are experienced by employees and citizen.

Welfare Tech Region, University College Syddanmark, Social- og Sundhedsskolen Syd og Teknologisk Institut.

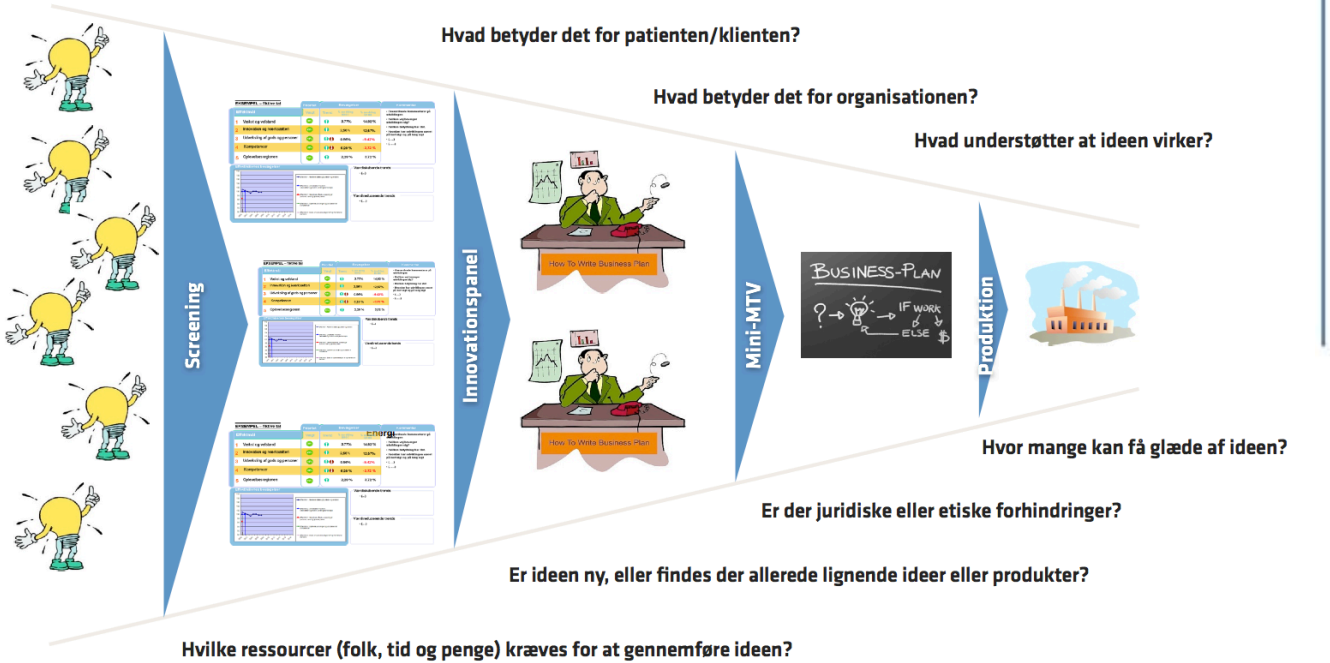
Picture from living lab Odense

PARTICIPATORY INNOVATION

EFTERSPØRGSEL

INVIA PROCES

Velfærds:teknologi:nu



www.velfaerdsteknologi.nu

University of Southern Denmark

SPIRE

VIRTUELT AMBULATORIE PÅ HOSPITALER

www,invia.nu

3 2 19

Oprettet 23. februar 2011 | S

Kunne det være en mulighed a
blot har behov for et råd efter i

Det kunne være en funktion, s
bred klinisk erfaring og kompet

27. maj 2011 kl. 13:52
INNOVATIONSPANELET
Brugerstatus: **Bruger**

Invia har været i direkte kontakt med idéindehaveren. Idéen omkring et virtuelt ambulatorium er yderst spændende, og noget der allerede arbejdes med i regionen. Sygehus Sønderjylland er ved at indgå et lignende projekt, hvor systemet Dreaming anvendes til hjemmemonitorering. Idéindehaveren har læst projektbeskrivelsen og vurderet, at denne i høj grad stemmer overens med tiltænkte idé. Enkelte elementer omkring f.eks. E-læring indgår ikke i Dreaming projektbeskrivelsen, hvorfor de tilsendes styregruppen til inspiration.

Invia arbejder ikke videre med idéen.

PARTICIPATORY INNOVATION

The strong hand

Is there a need?

Will patients be using it?

"Usability test" for a designed product vs anthropological methods/ involving user knowledge in a richer way

The need for user involvement

The Strong Hand
Video Workshop

PARTICIPATORY INNOVATION

Field Studies

Home Care setting by Trine Heinemann

Heinemann, T. (2009). Participation and exclusion in third party complaints. Journal of Pragmatics, 41(12), 2435-2451.

Heinemann, T. (2009). Managing unavoidable conflicts in caretaking of the elderly: Humor as a mitigating resource. International Journal of the Sociology of Language, 200, 103-127.

Hearing in transition

Interviews & shadowing

Video Analysis

Co-designing

Matthews, B., & Heinemann, T. (2009). Technology use and patient participation in audiological consultations. Australasian Medical Journal, 1(10), 36-43.

Kjeldsen, M. P., & Matthews, B. (2008). Talking about hearing: designing from users' problematisations. In Gulz, A., Malmborg, L., & Magnusson, C. (eds.): NordiCHI '08: : Building bridges (pp. 531-534). ACM Press.

Future Challenges

- Welfare technology challenges general ideas about innovation
  - f. ex how to collaborate
- How can we enable the public sector to take a strong leading role?
- How to take user involvement seriously?