



# TRAIL

## Technologies for Rurality, Ageing and Independent Living

Good Practice in North of Ireland

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# Outline



- Vision and Objectives
- Current Activities
- Case Studies
- Directions





# Vision & Objectives



- Develop participative methods that identify the unmet or ill-met health-related needs of ageing citizens in rural locations in the region of the North of Ireland.
- Conduct community-facilitated and user-driven methodologies that create service and product innovations that will enable rural and age-impaired citizens to live independently in the heart of their communities.





# Current Activities (€25 Million)



- International Support
  - **Nestling Technology Initiative**
  - CellPhone
  - WAD
- EU RTD Support
  - COGKNOW
  - CASCADAS
  - (BRAIN)
- EU Structural Support
  - Netwell Project
  - **MyHealth@Age**
- UK/Northern Ireland Support
  - McElwaine Smart Technology (with Bosch)
  - MemoryPrompt
  - Northern Ireland Housing Executive (Assistive Technology)





# MyHealth@Age: Improved Health and Safety for Elderly People



MyHealth@Age aims to improve health and safety for elderly people living in urban and rural areas in the Northern Periphery region.

Through participatory research in close co-operation with elderly people, healthcare and welfare organizations, ICT-companies and Universities in Northern Ireland, Norway, Sweden and Finland, new products and services are being developed

The products and services focus on mobile safety alarms, prescribed self treatment and context aware dynamic social networks.

Through consecutive field trials, the products and services will be evaluated and enhanced.





# MyHealth@Age: Objectives



## Elderly people

- Improved Social Life
- Improved Health and Safety
- Stimulate physical activity

## Science and technology

- Develop and evaluate new research methods
- PhD studies in areas of healthcare, welfare and business innovation

## Balanced co-operation

## Healthcare and Welfare Organisations

- Make elderly, friends and relatives more active participants in healthcare and medical treatment
- Make it easier to manage appointments and feedback
- Reduce the workload

## Commercial

- Commercialisation of Research Results
- Create and evaluate new Products and Services
- Expand Business and Staff





# Main Project Partners



## Human Factor Analysis and ICT Research

- Luleå University of Technology/CDH (Lead partner)
- Norwegian Centre for Telemedicine (NST)
- Ulster University

## Healthcare and welfare organisations to be involved in the field trials

- City of Luleå
- County Council of Norrbotten
- Social Welfare Department of Tromsø
- Social Welfare Department of Ulster

## Companies and organisations that provides products and services

- |                      |                    |                   |
|----------------------|--------------------|-------------------|
| • Arctic Group       | • Nelilab          | • TeliaSonera     |
| • Attendo Care       | • McElwaine SMART  | • Tunstall        |
| • Blue Tree Services | Technologies (with | • Visma Offentlig |
| • IntelliWork        | Bosch)             | Sektor & Helse    |
|                      | • Telenor R&D      |                   |





# Nestling Technology Initiative



- Nestling Project in Dundalk, Ireland is exploring how ‘place-centred-ageing’ and ‘structure preserving transformation’ can be applied in a new community-orientated demonstration project for older people.
- The project is a collaborative initiative between a wide range of public, private, voluntary, community and educational stakeholders in the Dundalk area.
- Centred on a new housing scheme and care model for elders in Barrack Street, the project is establishing a place-based evaluation framework to develop our understanding of how a combination of community cooperation, more integrated care service delivery, sustainable environmental change and technology for increased awareness, can improve individual and community outcomes.
- The results will have implications across a broad range of policy areas affecting seniors, and may impact on human-factors research theory in geron-technology.
- As the project is still at the start-up stage, early learning is related to background research, planning, design, process and capability development.



elements

# Nestling Technology: barrack st., details



16 units

Out-reach centre

1 unit transition

Primary care centre

## space features

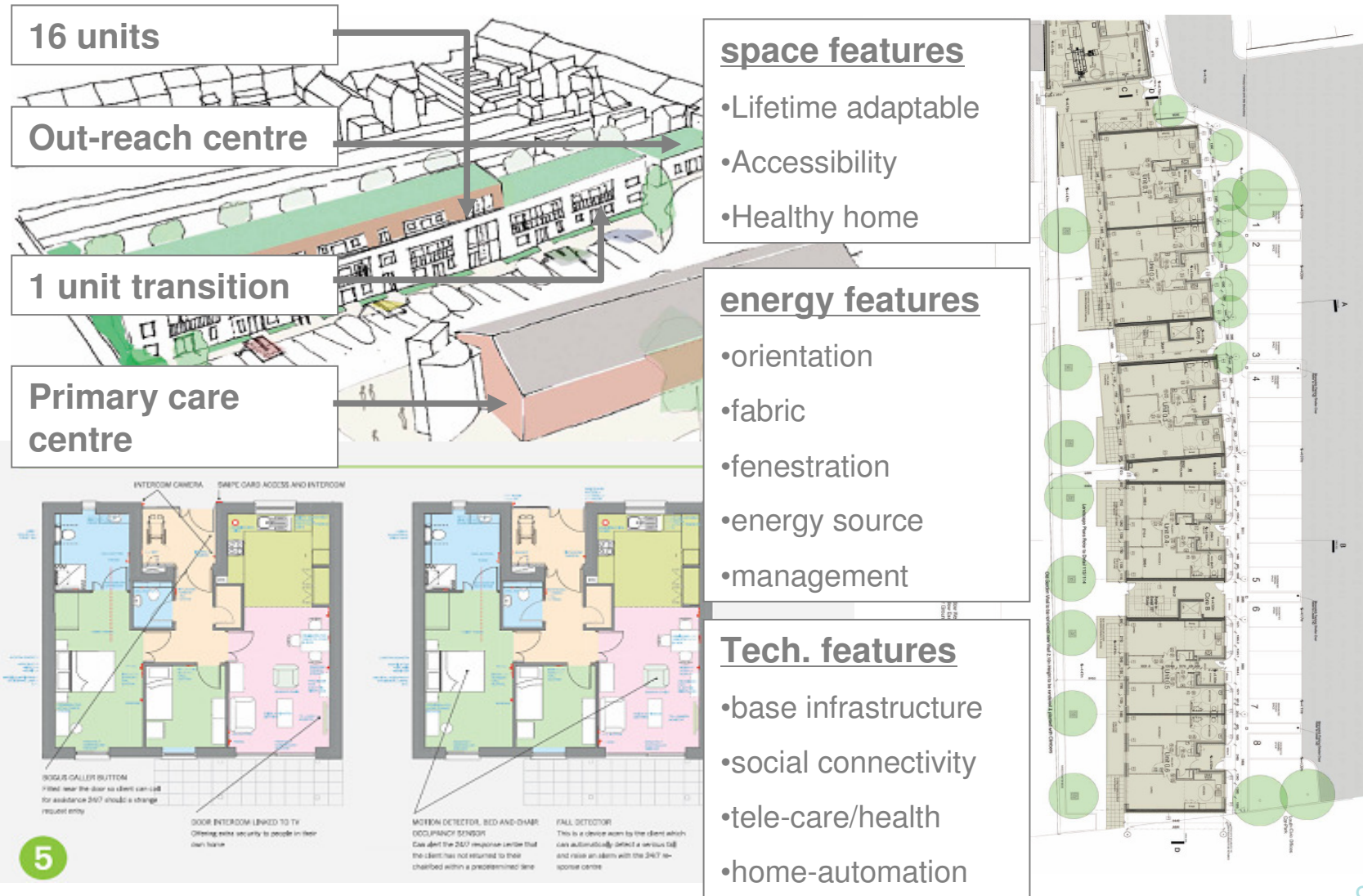
- Lifetime adaptable
- Accessibility
- Healthy home

## energy features

- orientation
- fabric
- fenestration
- energy source
- management

## Tech. features

- base infrastructure
- social connectivity
- tele-care/health
- home-automation



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INTERIOR CAMERA, SMART CARD ACCESS AND INTERCOM

EMERGENCY CALL BUTTON  
 Fitted near the door so clients can call for assistance 24/7 should a change request entry

DOOR INTERCOM LINKED TO TV  
 Offering extra security to people in their own home

MOTION DETECTOR, BED AND CHAIR OCCUPANCY SENSORS  
 Can alert the 24/7 response centre that the client has not returned to their chamber within a predetermined time

FALL DETECTOR  
 This is a device worn by the client which can automatically detect a serious fall and raise an alarm with the 24/7 response centre





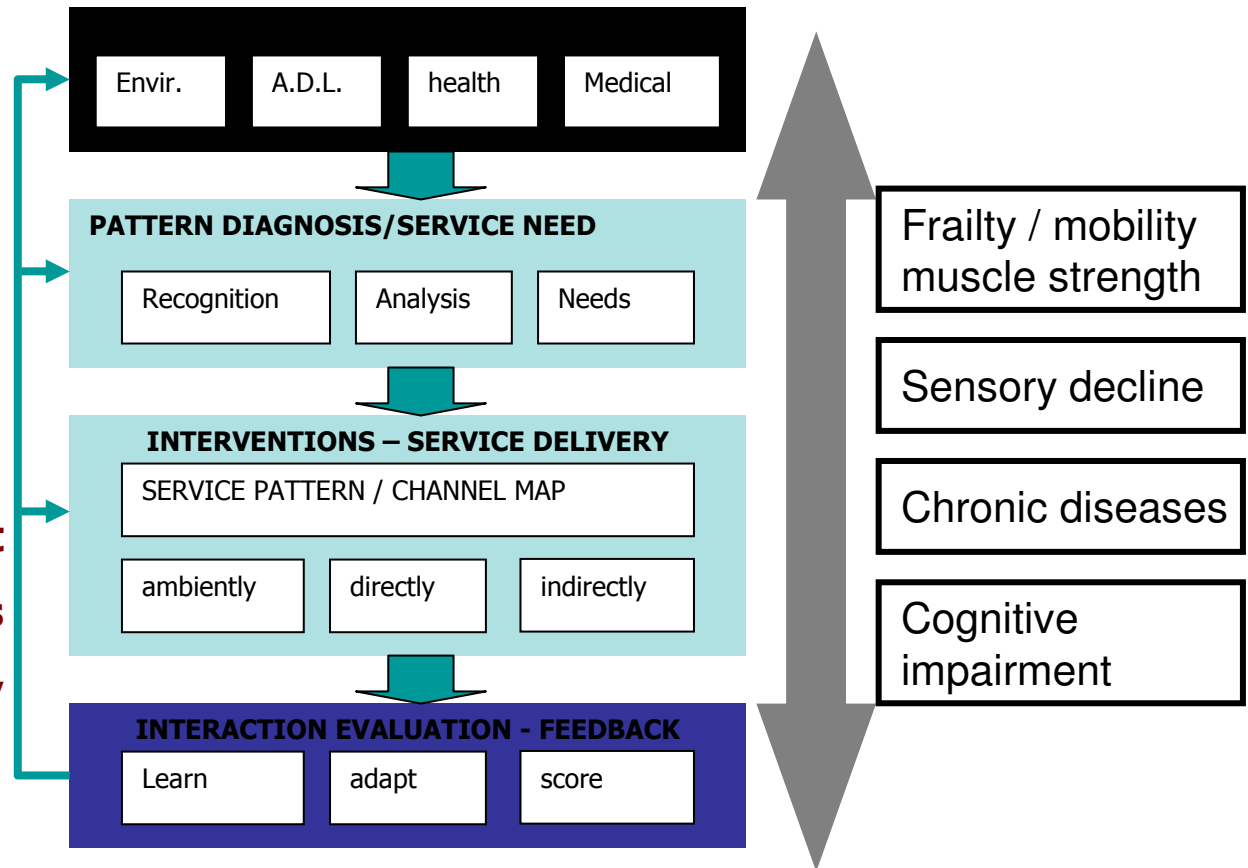
ICT elements

# Nestling Technology: an aware care services model



**Early detection**  
**Early diagnosis**  
**Early intervention**

**Continuous assessment**  
**Preferred interventions**  
**Orchestrate delivery**





## Nestling Technology: some lessons to date



- Resources
  - Re-aligning, optimising existing resources
  - Shifting capital and operational funding
  - Doing some new things - some existing things better
- Capacity
  - Collaboration – within and between agencies
  - Trust – the voluntary sector
  - Participation – engagement with older people
- Time dimension
  - Older people's experience of time
  - Valuing older people's time as we do our own
  - The key to design and dignity for older people





# TRAIL: Direction



- Connected Healthcare ([link](#))
- Open Innovation
  - Business
  - Community (inc Health & Welfare)
  - Academic
- User-centered:
  - Balance design versus engineering
  - Avoiding technological determinism
- Setting up:
  - Innovation models that are socially inclusive
  - Using social funding to bring the lab to the people





# TRAIL: Direction



- Living Lab
- Social programs
- Demonstrate leadership in Ireland/UK
- Create roadmaps for service provision innovation for service evolution
- Trusted partner in connected health and policy activities
- Open European networks up to local healthcare partners

