



# **Co-creating an Alertness Training Programme:** The Power of Participatory Design

Flip van den Berg & Brian Caulfield AAL forum, 16 September 2010



#### What is TRIL?

- Active collaboration between researchers in academic, clinical and industry setting.
- Multidisciplinary ageing research, clinical expertise, and enabling technology development to support independent living.
- Focused on conducting research experiments with real older people in their own homes to understand how technology can enable health & social care in the community & home.
- Underpinned by a design-ethnography process that facilitates the development of research prototypes for home-based research experiments. TRIL platforms enable translation of hospital and lab based research to the home/community.















# **Alertness: Training for Focused Living**

- Alertness training for older adults is important as state of mental alertness influences any complex mental functions and is related to accidents and falls.
- Use of biofeedback from galvanic skin response (GSR) can be a valuable component of an alertness training programme.
- Participatory Design process with 7 older adults to develop the best suitable biofeedback device.





## The Participatory Design process

#### Iterative involvement of end-users throughout the whole design process





technology



Developing and evaluating new biofeedback technology



Exploring chosen form-factor

Getting the design right













## **Pilot study**

- 20 participants
- 4 week independent training
- Guidebook lead training programme
- Support on demand via phone







"While using the technique, the line appeared to rise and when I returned to normal breathing it levelled out."

"I don't think I have any problem using the device but interpreting the line on the screen so far eludes me"

"When I was using the device this evening I noticed the line going higher up the screen"

"A bit of a 'break through' today; For every time [using the technique] the line went up and after 6 goes it ended at the top of the screen."





#### **Lessons learned**

- Participatory Design is a process, not a design technique
- Keeps a clear focus on the use in context
- Successful when the user group is specific
- Participants must be willing to co-design
- Careful facilitation of process required
  - Working in the participants private environment
  - Setting the stage for critical feedback
  - Challenging the limitations of imagination





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