



Textiles for Ageing Society: The carers perspective

6th International Carers Conference – Gothenburg - Sweden

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“The research leading to these results has received funding from the European Union’s Seventh Framework Programme (FP7/2007-2013) under grant agreement No. 290494.”

The TAGS Project / 1

- Textiles for Ageing Society (TAGS), is a research programme coordinated by the University of Innsbruck, carried out by a consortium of European institutes, and funded by the European Commission, as part of the Seventh Framework Programme (FP7).
- January 2012 – December 2015
- Consortium: 10 members from Austria, Germany, UK and Italy



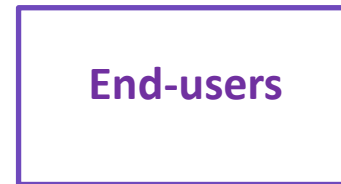
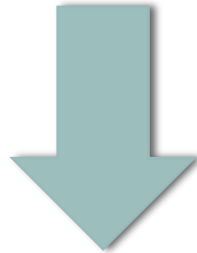
The TAGS Project / 2

Research and
technology transfer
institutions



Social and medical
care institutions

Manufacturers and
industry



TO IDENTIFY:

The specific textile **requirements** of the elderly, their carers and care institutions

The latest developments in materials science and technology

Strategies to **incorporate** developments in future **manufacturing chains**

Expected impacts

- Initiation of **research and innovation activities** to develop new materials and products for the elderly.
- To improve the **quality of life for older persons** and to also improve the **work quality of people involved in caregiving**.
- Increase competence in a given field.
- Support the establishment of new contacts and co-operations.
- To assist or initiate European enterprises to compete in the global marketplace.
- **Establish new co-operations** and **strengthen existing innovation networks**.

Research areas and focus

1 BEDDING

Focus: Absorbance, breathability, reduce friction and pressure, sensors, disposability, temperature regulation, layered systems, easy care, cost, antimicrobial, SMART textiles.

3 HYGIENE

Focus: Disposability, time release function, range of products for independent and dependent people, ease of use, maintenance, durability.

2 CLOTHING

Focus: Absorbance, breathability, sensors, disposability, temperature regulation, layered systems, easy care, cost, safety, discrete incontinence systems, SMART textiles, odour management, adaptive clothing.

4 THERAPEUTIC

Focus: Drug delivery, physical therapy, cognitive therapy, heating, cooling, skin health and condition, light therapy, electro-therapy, compression therapy, lymphatic drainage, micro encapsulation.

Carers involvement

In the framework of the project, formal and informal carer's from Austria, Germany, Italy and UK have been hugely involved through focus groups and interviews, as an important source of information to:

- Understand the **requirements** and demands regarding textiles for their care recipients
- Identify **standards and specifications** for products
- Formulate **recommendations**
- To assess the scope and boundary conditions for innovation and identify the **barriers** which prevent progress

Bedding Textiles (Jan 2012 – Jun 2013)

- **Quality of sleep determines the level of personal recovery** which subsequently influences the emotional state/condition of the older persons and also their level of mobility and personal independence (Van Someren 2000).
- Sleep in older adults with Alzheimer's disease can often be extremely fragmented, thus disturbing normal sleep-wake rhythms. This **poor-quality sleep is challenging for caregivers** and frequently results in admitting older adults to long-term care institutions. (Song 2010).
- Providing care to a family member with dementia has significant impacts on sleep quality. A study on 90 older women who were family caregivers of adults with dementia reported **more sleep complaints than similarly aged healthy adults** (Wilcox and King, 1999).
- Hence **bedding textiles are an important component to help support the emotional and physical condition of older persons** (Zbikowski & Loker 1992) **and their carer's.**

Bedding Textiles – Results / 1



Hospital-like appearance



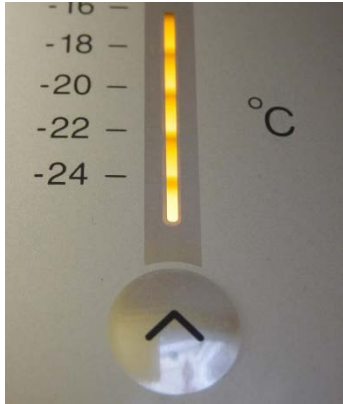
Cotton is the most commonly used fibre in bedding textiles



Little expectations in functionalities of bedding and lack of knowledge of alternative materials

Bedding Textiles – Results / 2

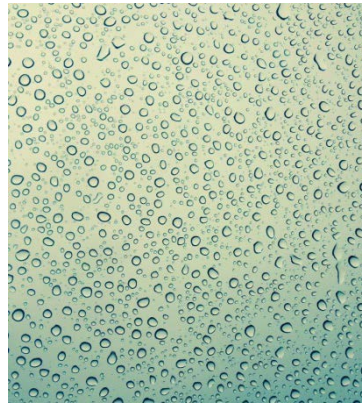
Desirable vs. Actual functions



**Bed climate
regulation**



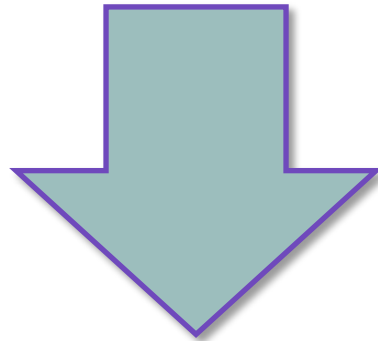
**Flame
retardancy**



**Improved hygiene
liquid management
properties**



**Prevention of
decubitus ulcers**



Use of sensors and electronic devices

Bedding Textiles – Results / 3

Barriers to innovation

- Caregivers are often **not included in early stage product development**. The development of new products requires involvement of caregivers/providers who formulate needs and expectations as a basis to initiate well targeted product development.
- For caregivers, **the assessment of products** available in the fragmented market **is complex and difficult**, thus introduction of innovative products is dependent on the individual engagement of a caregiver thus wider more general approaches cannot be expected.
- It will be important to develop **supportive material** which explains the importance of advanced bedding textile concepts for health, quality of sleep and quality of life for the elderly and information tools which enable caregivers, the elderly and textile developers **to understand each other's needs** and formulate opportunities for new concepts in bedding textiles.

Clothing (Jun. 2013 – Jun. 2014)

- Alzheimer's caregiving literature acknowledges dressing as a major daily stressor. Results suggest that caregivers would benefit from more proactive dressing counseling to shorten the trial and error periods, dressing aids are more relevant for dementia and more knowledgeable helpers. (Mahoney, 2011)

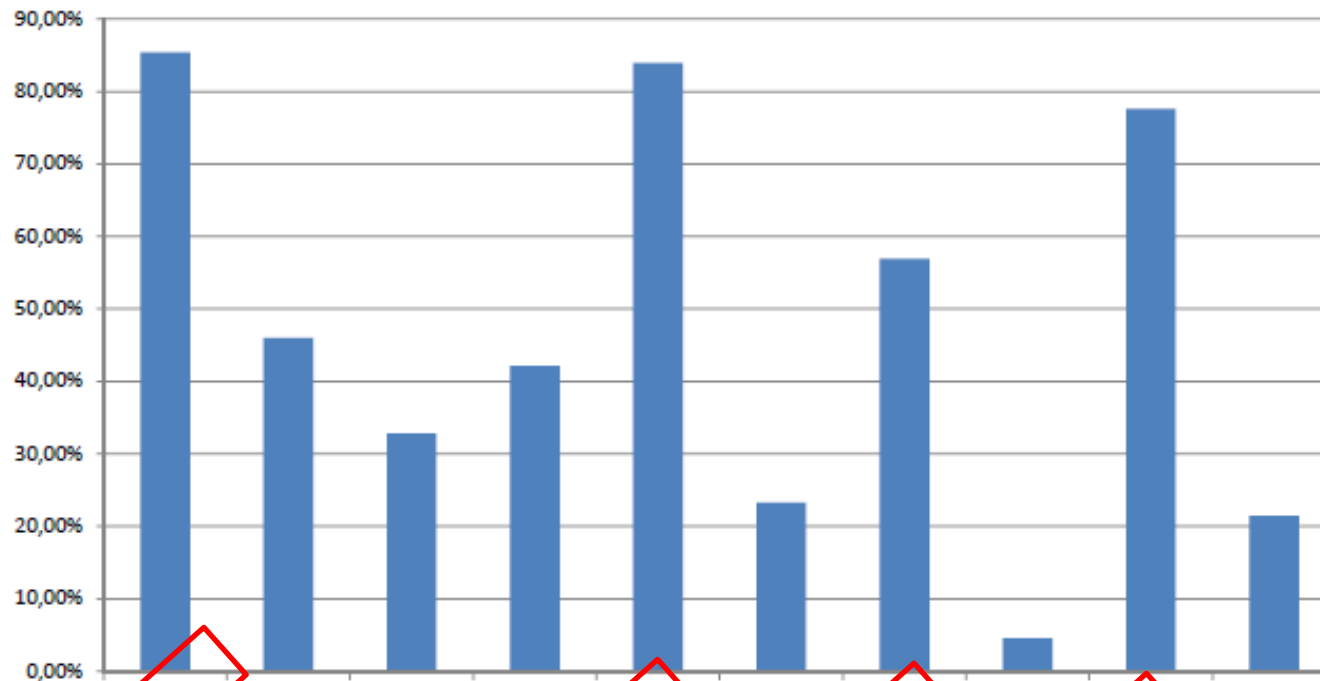


- Dressing is among the earliest ADL to be lost (WHO)



Clothing (Jun. 2013 – Jun. 2014)

Caregiver's complaints with clothing



1. Not fitting care-receiver's body

2. Inappropriate trouser length

3. Inappropriate sleeve length

4. Colour

5. Comfort

6. Style/appearance

7. Design of fasteners (zips, buttons etc.)

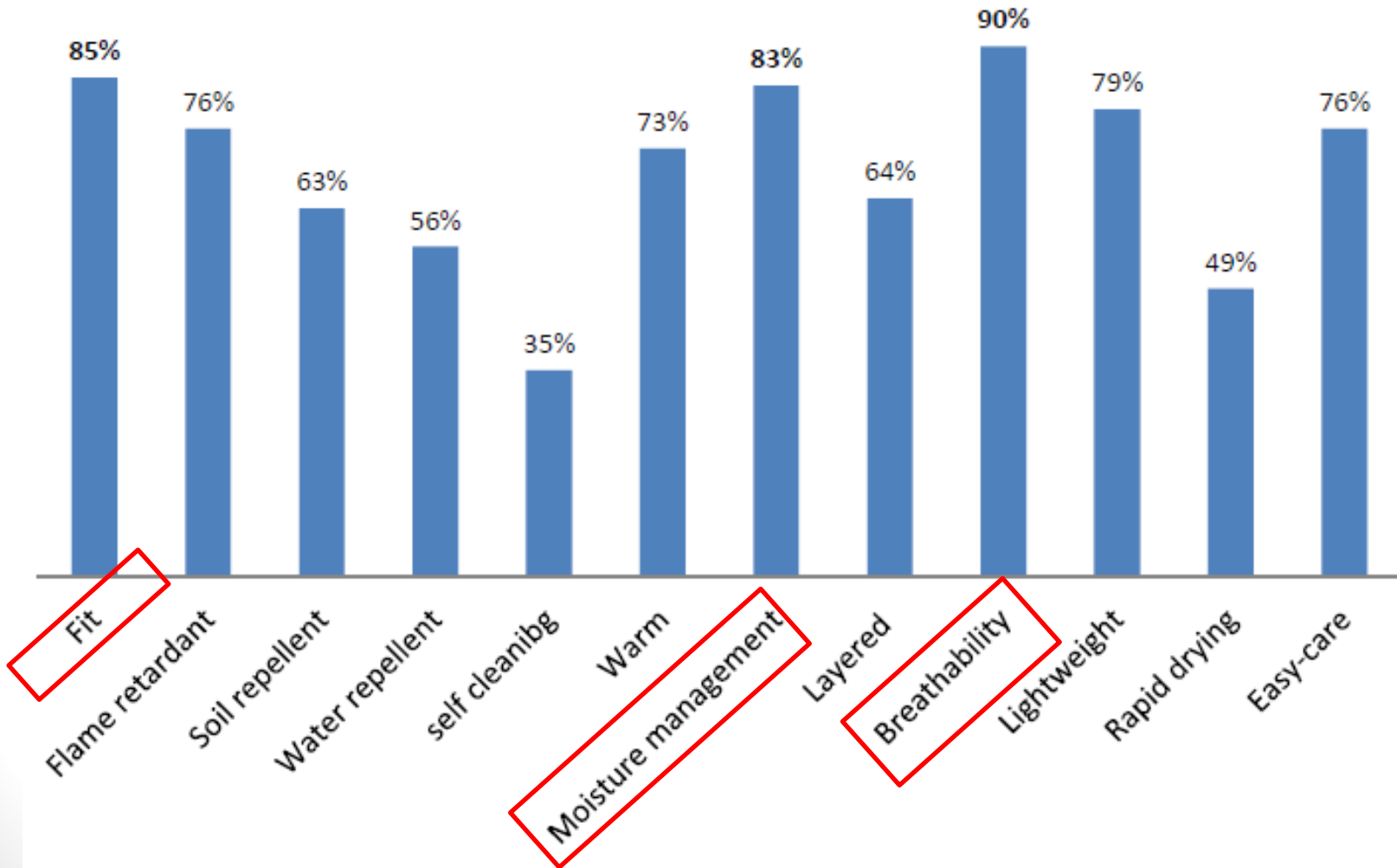
8. Durability

9. Functionality

10. other

Clothing (Jun. 2013 – Jun. 2014)

Functionality in clothing



The “perfect” clothing for an older person

- Correct fit (appropriate cut)
- Lightweight (Fleece)
- Soft material (e.g. micro fibres)
- Warm material (e.g. wool)
- Light colours – (deliver safety and visibility)
- Integrated Support (Navigation, emergency call)
- Flexibility / Elasticity
- Easy fastening
- Respect traditional background



Barriers which prevent the development of new products

- **Current marketing** techniques are not appropriate primarily because being old is not perceived well!
- Brands are hesitant to enter the market for the elderly as often it does not fit with their branding: **new brands** have to be developed.
- Younger people will probably not buy clothing designed for elderly, however the younger will be interested in excellent high value, high performance products.
- **Over-functionalization of products** (keep prices reasonable).
- Caregivers **MUST be involved** in development activities

Hygiene & Personal Care Textiles (Jun. 2014 – Jun. 2015)

The topic of hygiene and personal care textiles cover a wide variety of products which include: wipes, incontinence products, ostomy products, wet and dry products, flannels, towels and other textiles which are used as part of a daily hygiene routine.

Aspects such as reusability and disposability were also considered as part of our research.



Textile products for hygiene and their assessment by caregivers

With decreased mobility and decreased autonomy in terms of personal hygiene, conventional textile washing products are replaced by disposable products like wipes. Caregivers report that **disposable products are extremely good to handle and save time if care is given to immobile people**, thus, they are preferred to the durable or reusable product.

However, some disposable product received a **negative rating** by carers:

- Paper-Products such as toilet paper, handkerchiefs, napkins are too hard, rough, too small
- Bibs are not aesthetic, not functional; weaken in wet state, difficult to fasten



Textile products for hygiene and their assessment by caregivers

- **Cost** remains, of course, a factor when it comes to product selection.
- It is evident that poor purchasing decisions are made across care channels due to cost constraints, however the vast array of products can also be overwhelming causing people to make **ill-informed choices** such as choosing the maximum quantity of a product at the cheapest price.
- Solutions to overcome such factors would be to **create information exchange platforms** where carer's can share their experiences of certain products and to access information where they can better learn about a products functionality and how it performs.

Therapeutic Textiles (on going)

How can textiles be therapeutic?

- Cognitive: knitting, weaving
- Haptic: feelgood-textiles
- Smell: aromatherapy
- Stimulating the blood flow: heating/cooling textiles
- Visual: phototherapy
- Compressing: stockings, garments
- Sensitising: electrical impulses
- Physical: lymphatic drainage, taping
- Protecting: hip protectors



We welcome your ideas!

Our work is still in progress - we welcome your ideas and invite you to join us for discussion!

Please visit www.textilesforageingsociety.eu and get in touch.



Thank you for your attention

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