

The TAGS project – aims and first outcomes

The Seventh Framework Programme for Research and Technological Development

TAGS
“Textiles for Ageing Society”
Grant Agreement Number 290494
FP7 – NMP – 2011 – CSA - 5



TAGS Meeting, 23th – 24th of May 2013, Carpi (Italy)



NMP.2011.1.2.3-4 Networking of materials laboratories and innovation actors in various sectors for product and process innovation

Call Identifier: FP7-NMP-2011-CSA-5

Technical Content / Scope:

- **New alliances** to mobilise and bring together all the right actors and to broker collaboration between **materials research and industrial entrepreneurs**.
- To stimulate the creation of dynamic alliances between material researchers and “creative industries“
- Determination of the added value, aiming at **constituting teams of innovators**, able to **close the loop** from the laboratories to a product, or a novel industrial process.
- Actors competent in other aspects **boost competitiveness and accelerate success** (metrology, standardization, socio-economic, health or environmental impact, regulation)

Ageing society – Driving Force

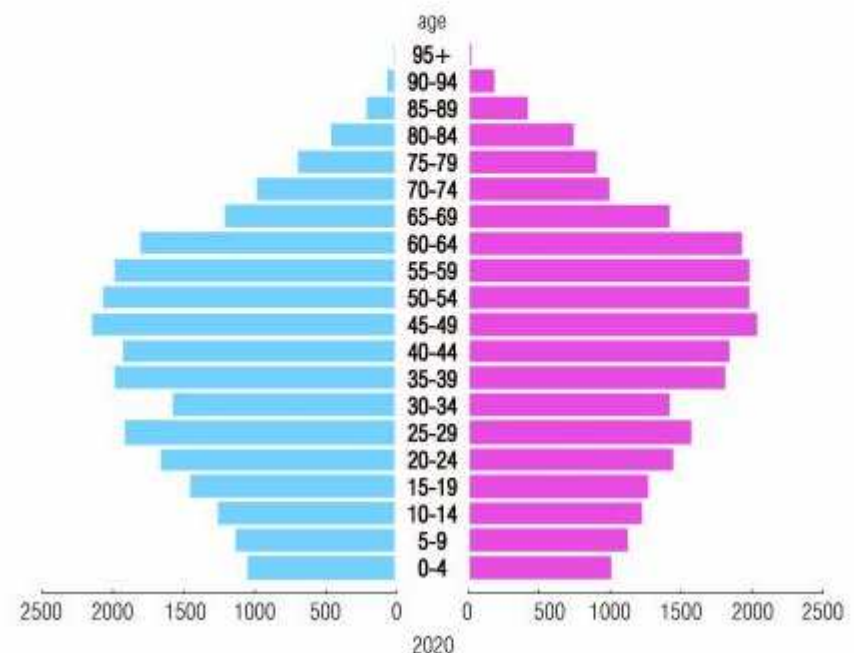
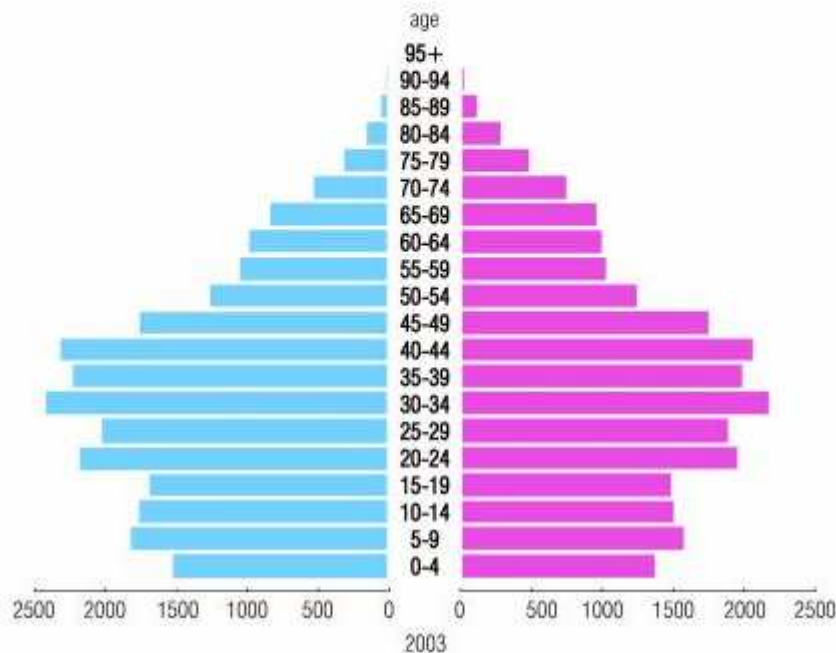


i2010: Independent Living for the Ageing Society –

Nearly **14% of the EU population is over the age of 65** and this figure is expected to double by 2050. By then we will have 80 million older Europeans

For the EU-25, 22% of the population will be aged over 65 by 2025, rising to almost 30% by 2050. This represents an increase of 60 million people between 2004 and 2050, to a **total of 134.5 million**.

The proportion of **very old people (aged 80 and above)** in the EU-25 will grow, from 4% in 2004 to reach 6% by 2025 and **10% by 2050**.



Target audience:

Policy makers; Manufacturing concerns; Institutions involved in the care of elderly, handicapped and infirm; Public; Research institutions

Expected Impact:

- initiation of **research and innovation activities** to develop new materials and products in the context of ageing people
- improvement of the **quality of inhabitants lives** and also improvement of **work quality of people involved in care-giving**
- foster the ability of European enterprises to compete in the global marketplace
- increase of competence in given field
- support establishment of new contacts and co-operations
- establishment of new co-operations and **strengthening of exiting innovation networks**

The consortium



Acronym	Participant legal name	Country	Organis. type
1-UIBK	University of Innsbruck	AUT	University
2-TITK	Thüringisches Institut für Textil- und Kunststoff-Forschung e.V.	GER	Research organiz.
3-NIRI	Nonwovens Innovation and Research Institute, Ltd	GBR	SME
4-WarmX	WarmX	GER	SME
5-TEXVER	Textilverein – Registered association of textile SMEs	AUT	Non-profit Organiz.
6-FLORIDA	Tessitura Florida S.R.L.	ITA	SME
7-CONN	Connexia – Gesellschaft für Gesundheit und Pflege gem. GmbH	AUT	End-User
8-KHBG	Vorarlberger Krankenhaus-Betriebsgesellschaft m.b.H	AUT	End-User
9-ANS	Anziani E Non Solo società cooperativa	ITA	End-User
10-DCS	Democenter-Sipe	ITA	Inn./Tech.T ransfer Org.

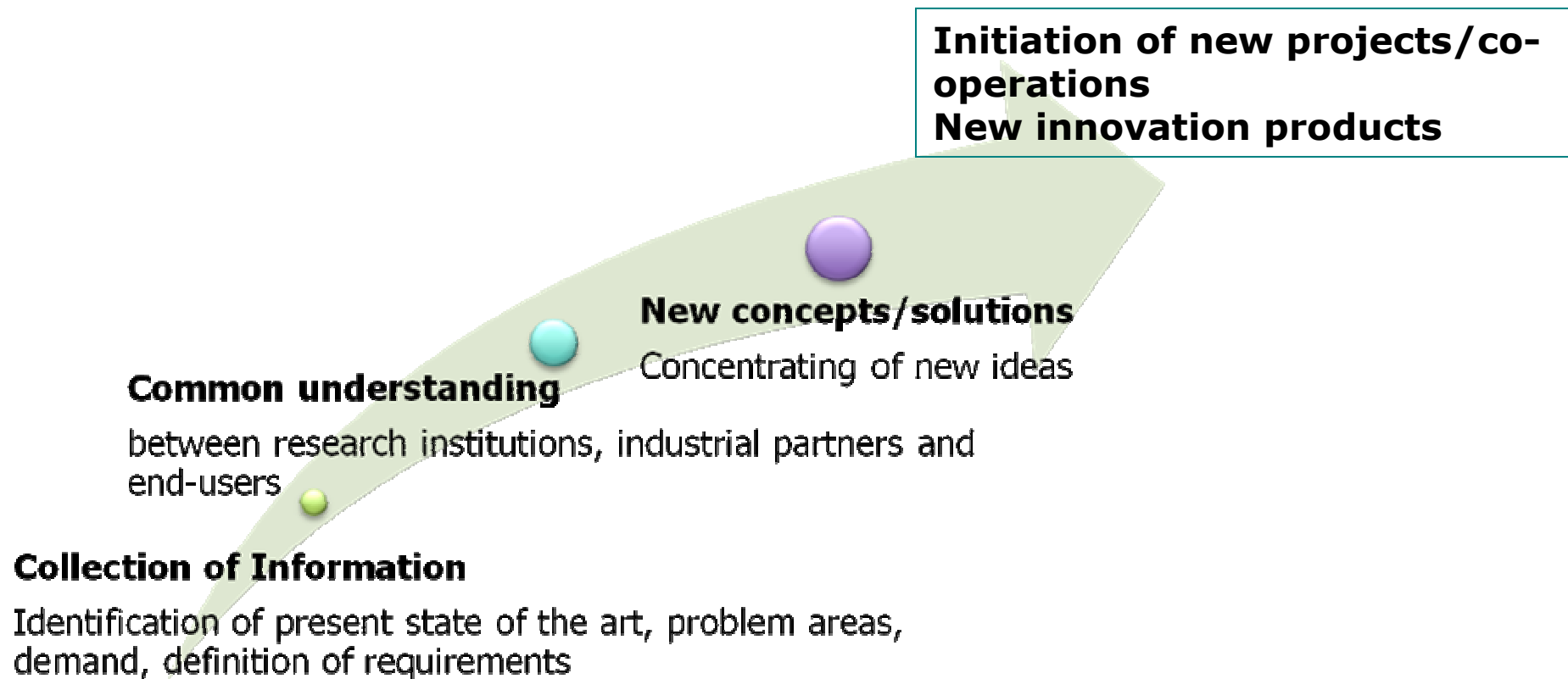
Research coordination

Manufacturing

Care

Transfer

Companies, manufacturers, institutions, etc. outside TAGS are welcome to join!
Information on aspects of production (chem. consumption, effluents, sustainability)



- **Scientific partners**

Share knowledge from their areas of expertise
(e.g. textile chemical processing, structure-property relationships of materials)

Contribute with their ready access to literature

- **Manufacturers**

Share knowledge and expertise on processing of textile products

Provide information on limitations related to the process/technology,
environmental, legal regulations and price

- **Care-givers / End users**

Share information on requirements for textiles and clothing for the elderly

- **Technology transfer organization**

Identify elements along the innovation chain, provide contact with policy makers

Tasks are centred on four main product groups with increasing complexity:

T1 - **Bedding** textiles: bed sheets, blankets, ..

T2 - **Clothing**: clothes for daily use, underwear, socks, ..

T3 - Textile products for **hygiene and personal care**: towels, incontinence pads, ..

T4 - **Therapeutic and recreation (leisure) textiles**: bandages, decubitus pads, compression stockings, sport clothes, ..

A Report (1st Bedding textiles) will contain:

- Contributions from researchers: materials and processes, aspects of production, modification of material properties, state of the art for materials, procedures, processes, techniques used for manufacturing of textiles and clothing.
- Contributions from manufacturers: aspects of production such as chemical consumption, cost, emissions, effluents, aspects of sustainability and recycling.
- Contributions from End-users: results of the survey on the product requirements, their use, and care of products, garment design, non-technological barriers

Work package 1

Work package 2

Work package 3

Work package 4

- The aim of WP1 is to **obtain information from end-users**
- Identify **limitations and challenges which elderly people and care-givers are facing** in every-day use of textiles
- Manufacturers provide **information on their demands**. process and technology
- Researchers contribute with knowledge on **new materials and processes**
- **Possibilities for changing properties of materials** by incorporating of functional components; changes in construction of textile structures.

This includes:

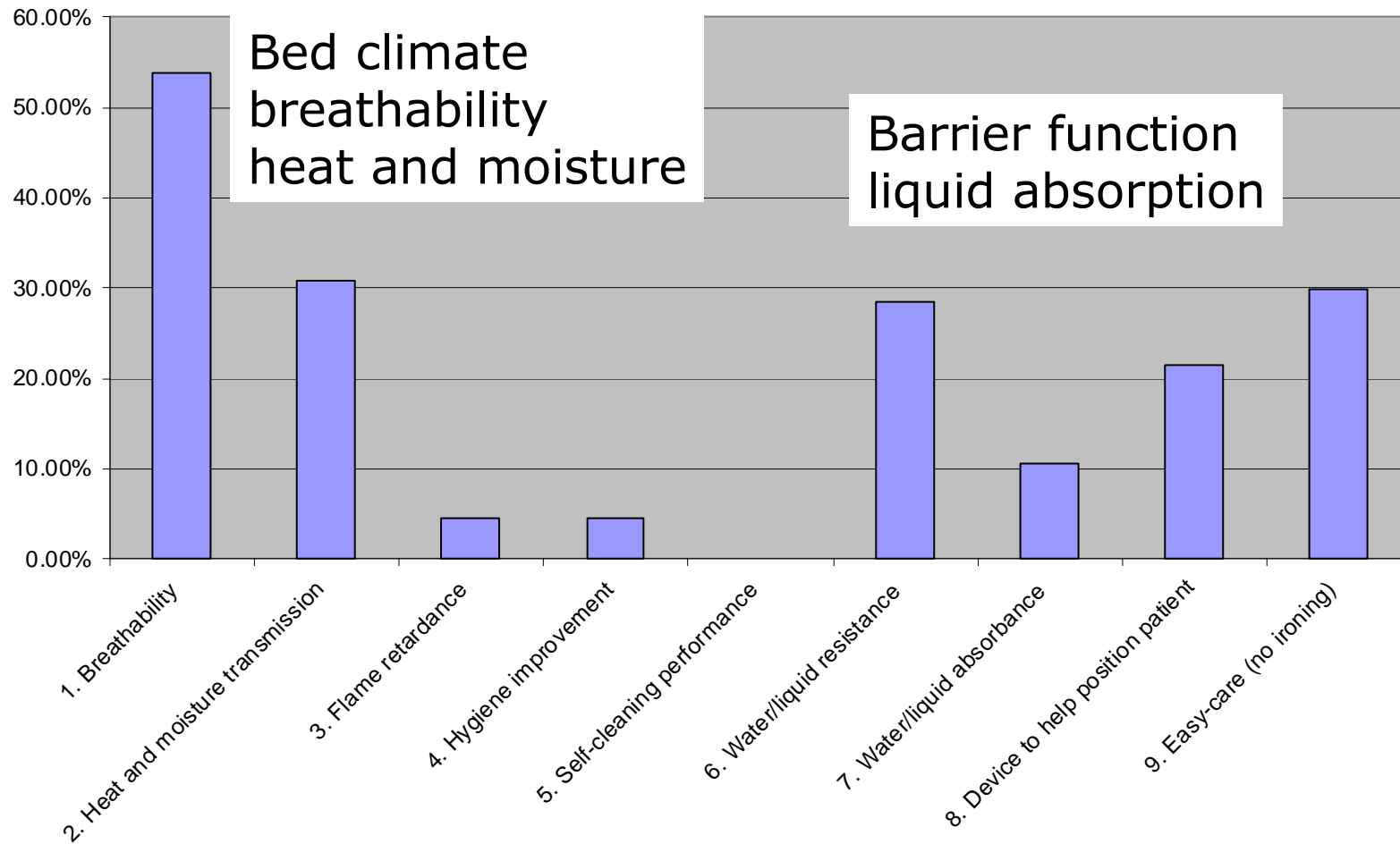
- The **present state of the art** for materials, procedures, processes
- Non-technological (cultural, psychological, etc.) **barriers preventing development**
- **Survey research, questionnaires and personal interviews** of the elderly and care-givers in order to obtain information on desired properties of products
- **Demands and requirements on material**, product, processes, and garment design
- Information on general aspects of **production** such as chemical consumption, cost, emissions, effluents, aspects of **sustainability and recycling**
- **Comparison and benchmarking** of available products, processes, and performance will be made.

Representative results



Questionnaire with care-givers, total persons represented >700

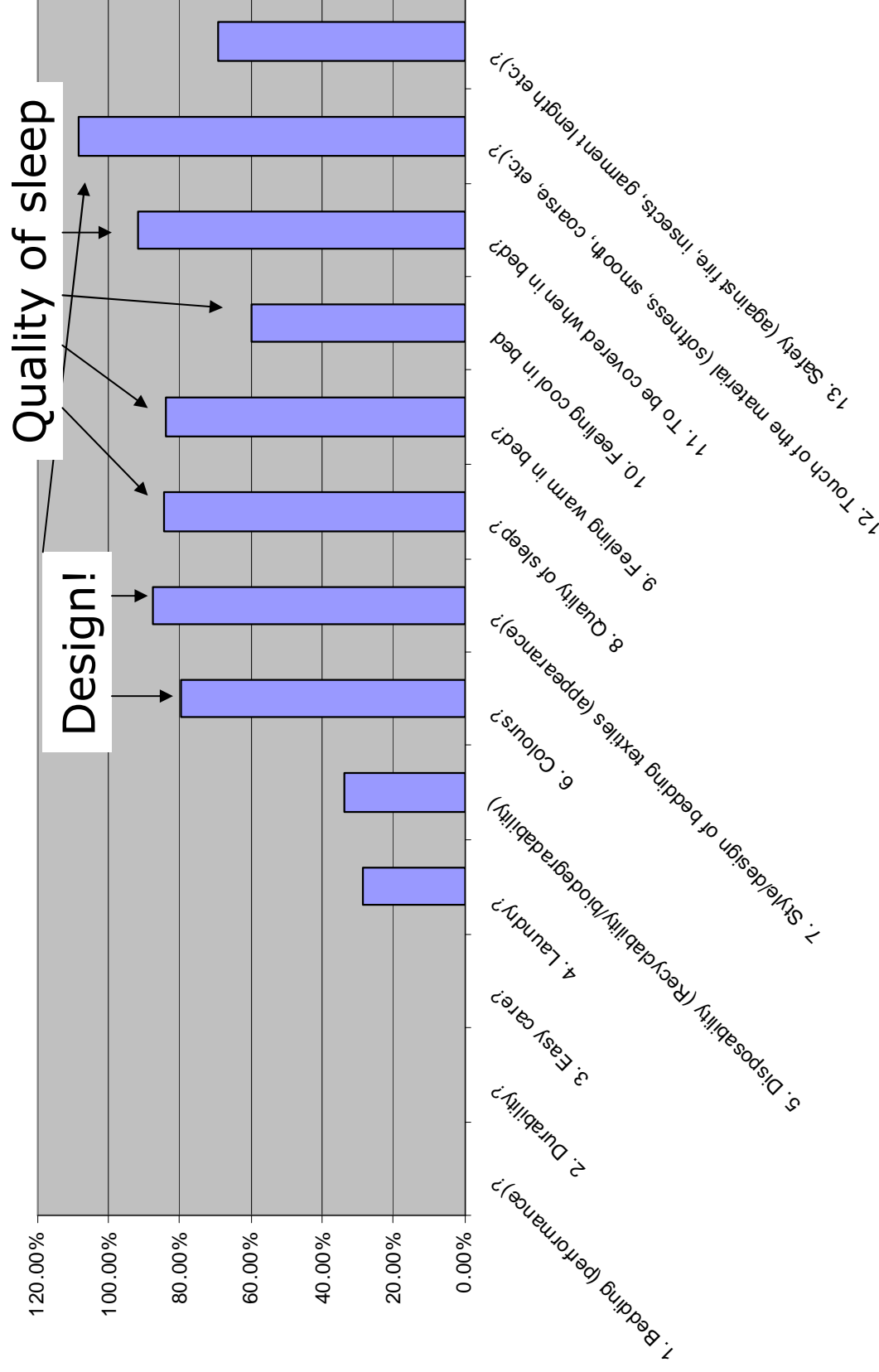
Which functionalities you find most often in bedding?



Representative results



Which functionalities would you like to have?



Work package 1

Work package 2

Work package 3

Work package 4

The goal of WP 2 is a **mutual understanding of all participating actors**

- **Visits** between researchers-manufacturers, researchers-end-users, manufacturers-end-users
- **Themed workshops, seminars, and discussion rounds** with invited experts
- Understanding of **product implementation in practice**, demands, potential for realization and technology development
- Identification of **barriers preventing innovation** between the sectors (research-industry-end-users).

- **Overcoming of barriers** between end-users, research institutions and industrial partners.
- **Generating mutual understanding** between partners with regard to potential for innovation, requirements and limitations of materials, products and processes.
- Increasing **diffusion of knowledge between network partners** with regard to technical feasibility, boundary conditions for product/ process innovation, definition of material quality relevant properties.
- **Extraction of information from different related platforms** (e.g. European Innovation Partnership on Active and Healthy Ageing, Euratex – European Apparel and Textile Confederation)



Ingrid Eyers

“Its been a hard days night...” An insight into care home life for both older people who live there and those employed to provide care

Ingrid Eyers (Dr.) has been involved in the care home sector for over 30 years.

Financial issues are striking, limited financial capacity, affordable smart textiles/materials

There are regional differences! (e.g. legislation for funding and financial support)
It needs to show to care givers: How textiles actually improve their work

Residents are checked every hour - disturbs the sleep considerably

Incontinence pads are uncomfortable and pulled-off!
Incontinence sensors should reduce the physical disturbances of sleep!

Nappies available with blue sign when wet – no chance to see it during night

It requires: **work together** with the care organisation, care givers towards innovations



Representative results:



Barriers:

Bibs, nappies are ugly

Care givers do not trust the technology, if technology fails, the quality of care will be questioned – care givers and managers do not accept sensors

Sensors = is something wrong with me?

There is no communication between people who define standards and people who are responsible for funding of care. Care providers should be on board

“As we do not have access to the laundry (rented bed cloth) we cannot improve”

COSTS

Companies are afraid that products for elderly could damage the image of their brand.

A new product label – A new product understanding has to be generated

Towards new solutions: WP3 and WP4



Work package 1

Work package 2

Work package 3

Work package 4

- **Identify focus areas for brainstorming sessions** based on information collected in WP1 and WP2.
- **Demands and requirements** to formulate a base for **creative process**.
- Identification of focus areas leads to **new ideas and approaches** .
- Outcome of **creative brainstorming** process will be filtered and summarized in '**Brainstorming Reports**'

The objective of WP 3: **generating of innovative ideas** and proposals for solutions. **Brainstorming sessions** project partners, **external experts** such as medical doctors, psychologists, anthropologists, social scientists, product designers, specialists for health and care, experts for materials and production technology..

Outcome of brainstorming activities:

Bed climate - Modern fibre concepts

An **improvement of the thermophysiologic perception** is expected from an introduction of modern fibres.

Dependent on region elderly people complain **cold** feeling and **heavy blankets**. Improved functional concepts with regard to breathability, bed climate, weight of the blanket are required.

Fasteners

There is lack in **appropriate fastener concepts**.

Velcro concepts are quite useful, their **limited washability** restricts the wider use.

A further **improvement** of such fastener concepts is *requested*.

Brainstroming report: section 2.7 Staff qualification

There is a clear need for **additional qualification of staff** involved in the production/use of textile products in care of elderly.

Mutual knowledge about materials, material properties, requirements in care (care givers, homes for elderly, hospitals) has to be provided

Aspects of material sciences, production techniques, construction and performance, care, physiology of elderly and medical aspects, costs, and most important perceived comfort of elderly have **to be considered**.

The **information flow between elderly, care givers, purchaser, producer and material scientist** has to be improved.

Long time testing and observation is required and **access to information should be easy**.

Work package 1

Work package 2

Work package 3

Work package 4

The objective of WP4: **plans for collaborations** between industrial sector, research partners and end-users.

These collaborations will include two or more institutions from the network, and **may include other institutions from outside the network** if additional competencies are sought.

Possible **topics of interest for future projects** between end-users, researchers and industry will be identified.

New projects among partners from the network and projects involving partners from outside the network will be initiated.

Proposals for new projects are collected and distributed among the partners.

Examples for proposals:

Preparation of training materials to improve knowledge about textiles in care

- Improvement of **flame retardancy** with use of intelligent modern fibre concepts
- **Design** in bedding (colour and appearance)
- Prevention of **odor development** in bedding
- Improvement of **bed-climate**
- Invisible washable **sensing for wetness, moisture** (hygienic, textile, cheap and simple use)
- New materials and concepts for **highly absorbing material**

Representative results



Training for experts in adaptive clothing and smart textile

Key Words:

Training - Exchange of trainers

Funding Scheme:

LLP - Leonardo

Proposed by:

- | | | | | |
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| <input type="checkbox"/> FLORIDA | <input type="checkbox"/> CONN | <input type="checkbox"/> KHBG | <input checked="" type="checkbox"/> ANS | <input type="checkbox"/> DCS |

Short Description:

At vocational level / training for adults there are no experiences of curricula focused on design of adaptive clothing - neither producers are aware of the potentialities offered by the application of smart textiles to their products. The project might develop and test a curriculum of "expert on clothing for dependency" to create professionals able to work on this specific field.

Further Details (project structure, partners, concepts, etc.):

The project might include exchange of trainers as well as of students among different EU countries. The CV might be developed according to ECVET methodology to support European mobility of students and professionals. A secondary school for fashion in Carpi has already expressed its interest in being involved in a proposal of this kind.

Representative results



Control of odor development

Key Words:

material, moisture, odor

Funding Scheme:

open

Proposed by:

- UIBK TITK NIRI warmX TEXVER
 FLORIDA CONN KHBG ANS DCS

Short Description:

People in care-homes often tend to feel cold. To compensate for this room temperature often is elevated and care-givers are much afraid to open windows, because of potential health risks of the residents. As a result odor development due to reduced air circulation (not as result of hygienic problems) often is a problem.

Further Details (project structure, partners, concepts, etc.):

Textile materials can help to improve the situation by two ways:
1. By appropriate construction of textiles the feeling cold should be reduced and health risk during air exchange (period of open window) should be reduced.
2. Textile materials also can prevent odor development / contribute to positive perception e.g. by

- formulation of product requirements and demands of ageing people and care providing institutions
- formation of scientific database for producers, users, caregivers
- assessing of needs in garment design to improve functionality
- disseminate the results, themes through meetings, conferences, workshops
- writing publications
- distribute information material to the target groups
- initiate trials in care-giving institutions
- providing information about legal constrains, regulations
- information source for enterprises, policy makers, social institutions

There remains one request:

Please communicate with the project members

e.g. visit our website: <http://www.textilesforageingsociety.eu/>

and let us participate in your
experiences, opinion, proposals, demands and comments.

This will help us to better position the outcomes and recommendations
of the project to the needs of elderly and care providers.

Thank you for your attention,

We want to thank all partners and all involved persons for their engagement.

In particular we thank all care giving persons for their interest and support of our initiative to improve quality of life of elderly.

“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.”

Implementation:

Governing Board

- one delegate/participating institution
- decision making and arbitration body
- meets at least every 6 months
- strategic orientation of the project
- organization and coordination of the project
- checking the progress of the work in WPs
- IPR issues
- preparation and final approval of all reports prior to the submission
- dissemination policy, etc.

Project Management Team (PMT)

- Project Coordinator and Project Manager
- controlling
- reporting
- administrative and organizational matters
- distribute payments from the EC between project partners
- maintain contact with Project Officer

Work Package Leader

- coordination of WP group
- subdividing the work of project into deliverables
- collection of reports from the work done within WP
- monitoring and coordination of the development within the WP
- reporting to the PMT, handing out deliverables on time
- providing P1-UIBK with all reports for uploading to consortium intranet

