SHAPES – FORESIGHT EXERCISES
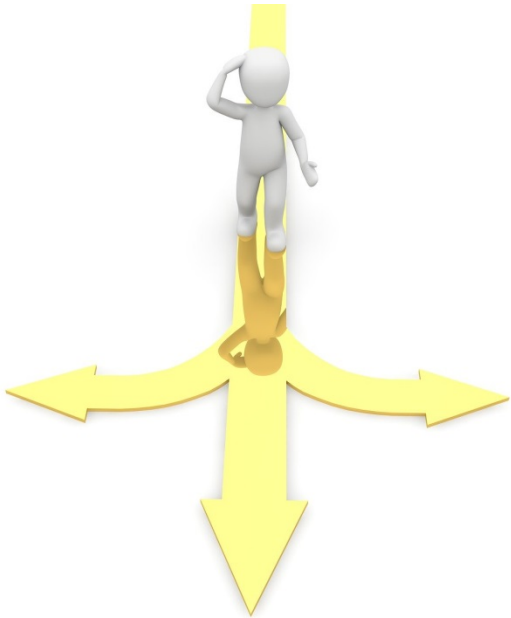
Awareness Week – Wednesday

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Wednesday
29.04.2020

27.04. – 01.05.2020

Relevant Foresight and Research Studies
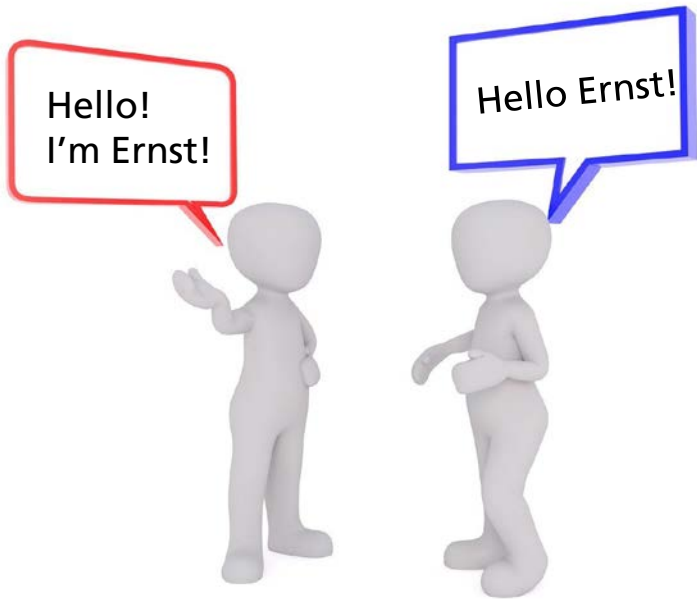
? Which foresight studies should be analyzed and how?

! During the next three days we will provide you with some first relevant studies, which are published by research institutes, governmental bodies, industry and so on. Such foresight studies can provide hints for relevant trends and innovations as well as of changing environments for current and future SHAPES solutions.

! In order to do so, we will use the seven pilot themes (PT) and personas in SHAPES as a guideline. The seven PT together, provide a clear understanding of the reality of European health and care systems and enable the validation of cost-efficient, inter-operable and reliable innovations capable of effectively supporting healthy and independent living of older individuals within and outside the home.

Relevant Foresight and Research Studies

? What are Personas and what are they for?

Hello! I'm Ernst!

Hello Ernst!

! The Personas where developed in work package 2 of the SHAPES project. Personas represent user groups addressed by SHAPES. They are distinct characters with detailed attributes, attitudes, behaviors and characteristics within their respective environments. This should make it easier to get a feeling for the respective needs, e. g. within the PT. In total eight Personas were developed, which roughly represent the different PT.

! Personas can be used in the context of the analysis of foresight studies to understand the users specific needs. Hence, it can be easier to identify specific technological features or influencing factors, that influence the effective performance of relevant tasks, within foresight studies.

! SHAPES Personas will be presented during the workshop!

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Relevant Foresight and Research Studies

Today we will show some studies which are relevant to pilot themes (PT) 1, 2 and 6 and which include some relevant influencing factors or technologies:

! PT 1: Smart Living Environment for

Healthy Ageing at Home

! PT 2: Improving In-Home and

Community-based Care

! PT 6: Physical Rehabilitation at Home

Relevant Studies concerning PT 1

! Smart Living Environment for Healthy Ageing at Home

➤ Influencing Factor – Ambient Assisted Living

AAL refers to a fusion of ambient intelligence and assisted living that contains characteristics of the living space and social service area. (Donghyeog Choi, Hyunchul Choi & Donghwa Shon; *Future changes to smart home based on AAL healthcare service*, Journal of Asian Architecture and Building Engineering (2019) 18:3, 190-199, DOI: 10.1080/13467581.2019.1617718)

➤ Technology – Robot-Assisted Medication Sorting

Medication management is a significant challenge for older adults, robot assisting can help to manage this medication sorting task. (Wilson, Jason R.; Lee, Nah Young; Saechao, Annie; Tickle-Degnen, Linda; Scheutz, Matthias; *Supporting Human Autonomy in a Robot-Assisted Medication Sorting Task*, International Journal of Social Robotics (2018), 10, 621-641, DOI: 10.1007/s12369-017-0456-1)

Relevant Studies concerning PT 2

! Improving In-Home and Community-based Care

➢ Technology – Event Driven System

Real-time observation of the environment and the resident's activities using an event-driven system. (Md. Zia Uddin, Weria Khaksar and Jim Torresen, *Ambient Sensors for Elderly Care and Independent Living: A Survey*, Sensors (2018), 18(7), 2027, DOI: 10.3390/s18072027)

➢ Influencing Factor – Participation in physical activity (PA) by user-centered program design

A multifactorial approach addressing a range of predisposing, reinforcing, and enabling factors is likely to be necessary to enhance engagement in organized PA by socially disadvantaged and underrepresented older people. (Tracy Nau, Genevieve Nolan, and Ben J. Smith, *Enhancing Engagement With Socially Disadvantaged Older People in Organized Physical Activity Programs*, International Quarterly of Community Health Education (2019), 9:34, 257-267, DOI: 10.1177/0272684X18821301)

Relevant Studies concerning PT 6

! Physical Rehabilitation at Home

➢ Technology – Wearable Sensors and Systems

The integration of wearable and ambient sensors is discussed in the context of achieving home monitoring of older adults and subjects with chronic conditions. (Shyamal Patel, Hyung Park, Paolo Bonato, Leighton Chan and Mary Rodgers, *A review of wearable sensors and systems with application in rehabilitation*, Journal of NeuroEngineering and Rehabilitation (2012), 9:21, DOI: 10.1186/1743-0003-9-21)

➢ Influencing Factor – Estimating the rehabilitation need

Many of the data, which estimate the rehabilitation need, collected measure impairment; however this does not fully capture rehabilitation need, as rehabilitation aims to improve performance. (Francesca Gimigliano, Stefano Negrini, *The World Health Organization "Rehabilitation 2030: a call for action"*, European Journal of Physical and Rehabilitation Medicine 2017, April;53(2):155-68, DOI: 10.23736/S1973-9087.17.04746-3)

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