

Second Sheld-on conference meeting  
Solutions for ageing well at home, in the community and at work  
**Proceedings Book**

Ohrid 17th October 2019

### **COST Action CA16226**

Indoor living space improvement: Smart Habitat for the Elderly

### **Sheld-on**

Furniture, Habitat, Active and Healthy Ageing, ICT, Healthcare

Proceedings of the COST Action CA16226 conference meeting,  
Ohrid, North Macedonia, 17th October 2019.

Edited by Rafael Maestre, Jake Kaner, Birgitta Langhammer, Petre Lameski, Michal Isaacson, George Ntalos, Nuno Garcia, Carlos Valderrama, Ciprian Dobre, Michael Burnard and Francisco Melero.

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The Organizers would like to acknowledge the scientific committee of the second COST Action CA16226 Sheld-on Conference meeting:

Aleksandra Popovska Mitrovikj – North Macedonia

Petre Lameski – North Macedonia

Ivan Chorbev – North Macedonia

Eftim Zdravevski – North Macedonia

Rafael Maestre – Spain

Jake Kaner – United Kingdom

Birgitta Langhammer - Norway

Michal Issacson – Israel

Nuno Garcia – Portugal

Georgios Ntalos – Greece

Carlos Valderrama – Belgium

Ciprian Dobre - Romania

Michael Burnard – Slovenia

Francisco Melero – Spain



Technical Research Centre  
of Furniture and Wood  
of the Región of Murcia

**CETEM**

## Preface

It is our pleasure to welcome you to the Second Sheld-on Conference Meeting promoted by the COST Action CA16226: "Indoor living space improvement: Smart habitat for the elderly". This time it will be held in Ohrid, North Macedonia, on the 17th of October, 2019, collocated with the 11th ICT Innovations Conference 2019.

This conference follows almost two years of active collaboration under three different working groups focused in vertical areas of knowledge. This paved the way for a new horizontal working group that aims for deeper interdisciplinary interactions and knowledge interchange considering the broad concept of "Solutions for Ageing Well". Due to its broad spectrum, its structure contains three subworking groups looking into narrower areas of application, specifically at home, work and the community. A fourth one focuses on the important topic of "Technology Adoption". The proceedings and conference parallel tracks reflect this new approach.

This conference brings together researchers not only from Sheld-on members, but also from other institutions that work in related fields, some of which bring results achieved during the Short Term Scientific Mission granted by Sheld-on during the last year. A total of 31 papers cover a wide range of topics within the scope of Sheld-on, including IoT, BIM, connected health, features of the elderly and their relation to technology, applications of robots, and many others such as social aspects, climate change and artificial intelligence. Each work has been peer-reviewed by two carefully selected experts.

This event will be a great opportunity not only to plan for the action work in the near future, but also to advance the Sheld-on collaborative effort to build new solutions that contribute to the well-being of older adults and their caretakers, while addressing the socioeconomics concerns related to a worldwide aging population.

We would like to thank the local organization staff from the Association for Information and Communication Technologies and the Sts. Cyril and Methodius University in Skopje, North Macedonia, the members of the scientific committee for their review work and suggestions for improving the papers, the authors for contributing their research results to the conference, and all Sheld-on members for supporting and publicising the event.

Special thanks to the COST association that has made possible all activities of the Sheld-on Action, including this conference, and has initiated other derived initiatives and fruitful collaborations.

On behalf of the core group,  
Rafael Maestre, Working Group 4 Leader  
Francisco Melero, Action Chair

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# **Solutions for ageing well at work**

## Sub-Working Group 4.3 Proceedings

Vice-Leader: Petre Lameski (MK)



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# Reverse mentoring as an alternative strategy for lifelong learning in the workplace

**Nežka Sajinčič<sup>1</sup>, Andreja Istenič Starčič<sup>2,3</sup>, Anna Sandak<sup>1,4</sup>**

- <sup>1</sup> InnoRenew CoE, Livade 6, 6310 Izola, Slovenia
- <sup>2</sup> Faculty of Education, University of Primorska, Cankarjeva 5, 6000 Koper, Slovenia
- <sup>3</sup> Faculty of Civil and Geodetic Engineering, University of Ljubljana, Jamova 2, 1000 Ljubljana, Slovenia
- <sup>4</sup> Faculty of Mathematics, Natural Sciences and Information Technologies, University of Primorska, Glagoljaška 8, 6000 Koper, Slovenia

nezka.sajincic@innorenew.eu, andreja.starcic@pef.upr.si,  
andreja.starcic@gmail.com, anna.sandak@innorenew.eu,  
anna.sandak@famnit.upr.si

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With advances in technology, many jobs are fading and new ones are emerging. Knowledge gained years ago can, in today's world, become quickly obsolete, so the ability to stay up-to-date is more important than ever. Due to the ageing population and increase in proportion of older workers, employers need to dedicate their attention not only to the development of the young and upcoming, but also to senior employees. However, cognitive changes such as slower processing make storing and retrieving information from long-term memory harder for older employees (Ford and Orel 2005), and they may benefit from a more individualised, slower-paced method of learning. A meta-analysis also found that older workers are less willing to participate in training and career development activities (Ng and Feldman 2012). Consequently, there is an increasing need to find alternative education strategies that are effective and suitable for older workers.

A popular option for knowledge sharing is a mentoring relationship, where a mentor, often an experienced senior professional, helps a mentee, typically a new junior employee, learn and develop their career with psychological support and role modelling (Chen 2013). In addition to developing explicit knowledge, mentorship can also enhance mentees' psychological capital, especially their self-efficacy (Luthans and Youssef 2004) and resilience (Istenič Starčič and Mikoš 2019). As learning through one-on-one interaction may be more appropriate for older workers than training, we consider an alternative way to promote knowledge transfer to seniors – reverse mentoring. The main functions remain largely the same as in traditional mentoring (Chen 2013), only it involves a younger employee acting as mentor and sharing expertise with an older colleague (Murphy 2012).

The first organization to formally implement the concept was General Electric Corporation in 1999, where 500 upper-level managers were paired with technologically-savvier younger employees who successfully tutored them in using the internet (Murphy 2012). Reverse mentoring can be useful for senior workers not only to learn about current trends and obtain new technical knowledge and skills (e.g., technological improvements, use of social media), but also to gain valuable generational insights from direct social interactions (Harvey et al. 2009). However, even if the main idea behind reverse mentoring is building competencies for the older workers' future careers, the program is also beneficial to the mentors, who develop leadership and communication skills and business knowledge, and the organization, who, by using an innovative and cost-effective strategy, encourages relationship development and promotes organizational learning, cooperation, and the dismantling of age-related stereotypes (Murphy 2012).

As with any other (mentoring) relationship, there may be challenges that can hinder its success. In planning the mentoring program, organizations must define its objectives, address the potential lack of time, and consider individual differences in personality, values, and participants' willingness to make mistakes and look past their seniority and authority (Murphy 2012).

Empirical research on reverse mentoring is still in its infancy, but results look promising and its potential benefits are making the model increasingly popular. As older workers are intrinsically motivated to further develop their digital skills (Kaše et al. 2019), reverse mentoring seems like an attractive option to encourage the lifelong learning of those employees who may be hesitant to participate in training programs.

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