Active Older Adults @ Workplace

D5.04 – Socio-economic and main benefits to older adults at works

Project Deliverable

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Work Package:	WP5
Due Date:	31/05/2017
Submission Date:	18/07/2017
Start Date of Project:	01/12/2014
Duration of Project:	30 Months
Responsible of Deliverable:	INOV
Version:	1.0
Status:	☒ Final ☐ Draft ☐ Ready for internal Review ☐ Task Leader Accepted ☐ WP leader accepted ☒ Project Coordinator accepted
Author name(s):	Gabriel Pestana	Tiago Rocha da Silva
Reviewer(s):		
Nature:	☒ R – Report ☐ P – Prototype ☐ O – Other
Dissemination level:	☒ PU – Public ☐ RE – Restricted

Revision history			
Version	Date	Author(s)	Changes made
0.1	01/05/2017	INOV	Final version and asking for contributions
0.2	08/05/2017	HSG	Contribution included
0.3	10/05/2017	ATOS	Contribution included
0.4	30/05/2017	INOV	Final version
1.0	31/05/2017	ATOS	Quality review and ready for submission to the CMU.

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1. Executive Summary

This document is the deliverable "D5.04 - Socio-economic and main benefits to older adults at works" for the Active@Work project. This document results from the output of T5.04 – "End User results analysis - Phase 2" in accordance with in the latest final version of the Active@Work project DoW [2].

The main objective is to evaluate the overall performance of the Active@work solution focusing in socio-economic aspects of the system and the impact of Active@work from the end-user perspective based on surveys and questionnaires provided to the users along the project lifetime.

This deliverable is intrinsically linked to:
- D2.2 Requirements Specification and User Story
- D2.3.2. Consolidated requirements, pre-evaluation and scenarios
- D5.2 Operational Scenarios results – 1st Phase
- D5.3 Operational Scenarios results - 2nd Phase

The conclusions are that this project contributes to well-being and quality of life of the workers which tested it. There has been detected a significative difference between the needs of white collar workers and blue collar workers. Not all the designed modules were useful for both pilots. On the other hand, big companies could already have their own communication and training platforms between employees so there is a need of further development and improvements of the existing modules in order to be adapted to corporate infrastructures in order to be competitive in the market place.

2. Introduction

Active@Work is a solution able to help senior workers to be aware of their physical well-being status at workplace; it prevents them from any risk derived from fatigue or stress in their jobs. The project has been deployed in two pilots briefly described below:

- Indoor Pilot: deployed in a multinational company in Spain in two phases. The participants were 10 white collar workers, involved in administrative and management activities, with high level of stress and frequent travellers with an age range of 40-55 years old.

- Outdoor Pilot: deployed in a leisure park located in Belgium in two phases. The participants were 15 blue collars workers (cleaning ladies) with an age range of 40-55 years old.

Both pilots are very different in terms of target groups, environments and socio-economic status, so the consortium has counted with multiple points of view and has faced very interesting challenges that have allowed us to analyze the results not only in a particular context but a wider range of uses cases.

This deliverable is organized in the following chapters:
- Chapter 3: Socio economic inequalities in the older population;
- Chapter 4: Project Impact: how Active@Work solve inequalities
- Chapter 5: Conclusions
- Chapter 6 contains the references list.

3. Socio-economic-inequalities-in-the-older-population

According with the Equality and Human Rights Commission, Socio-economic inequalities are defined as inequalities that relate to differences in income, social class, occupational background, educational achievement and neighbourhood deprivation. These are distinguished from socio-demographic differences, which relate to factors such as age, gender, ethnicity, marital status, number of children, household composition and living arrangements. Systems as Active@Work with the goal to help the senior employees who are going through this phase of life to spontaneously do their daily duties at work and deal with psychological and physiological demands of normal aging are one crucial aspect to improving the lives of older people a contribution to a new vision "a world in which older people flourish"[2] . Old policies have not focused on inequalities that result from class differences and other socio-economic factors (Burchardt, 2006). This is despite a solid base of evidence that shows that people of all ages from lower socioeconomic groups generally have worse outcomes; they are more likely to be in poor health, drop out of school, be unemployed, to live in poor housing and go to prison (Wilkinson and Marmot, 2003). Recent developments confirm that socioeconomic inequalities are rising up the agenda. In January 2009 the UK Government published a White Paper on social mobility called "New Opportunities: Fair Chances for the future" in line with the London School of Economics (LSE).

European Commission has now a strategy [3], strategy for smart, sustainable and inclusive growth:

"Employment is a key policy component of the Europe 2020 strategy. Paid employment is crucial for ensuring sufficient living standards and it contributes to economic performance, quality of life and social inclusion, making it one of the cornerstones of socioeconomic development and well-being."

Key messages, in line with Active@Work and can help on achieved:

- Young people aged 15 to 29, non-EU citizens and people with low educational attainment are some of the most disadvantaged groups on the labour market, exhibiting low employment rates;
- Women, especially those aged 55 to 64 years, and older people in general still have considerably lower employment rates than men and younger groups, respectively;
- Increases in the employment rate, especially for women, older workers and young people, are needed to compensate for the expected decline of the working-age population (aged 20 to 64) by 4.3 million people by 2020;
- Recent projections show the EU is relatively well on track to match educational achievement to labour market needs, with labour supply exceeding the demand for all qualifications types. However, potential skill mismatches such as over-qualification gaps could be expected in the future;
- The number of employed persons in age group 20-64 grew fastest in the professional, scientific and technical sector and the administrative sector, but declined the most in the construction and agricultural sectors.
- Unemployment levels of people with low educational attainment were also high at[U+202F] 17.4 %, compared with 5.6 % for people aged 15 to 74 with a tertiary education.

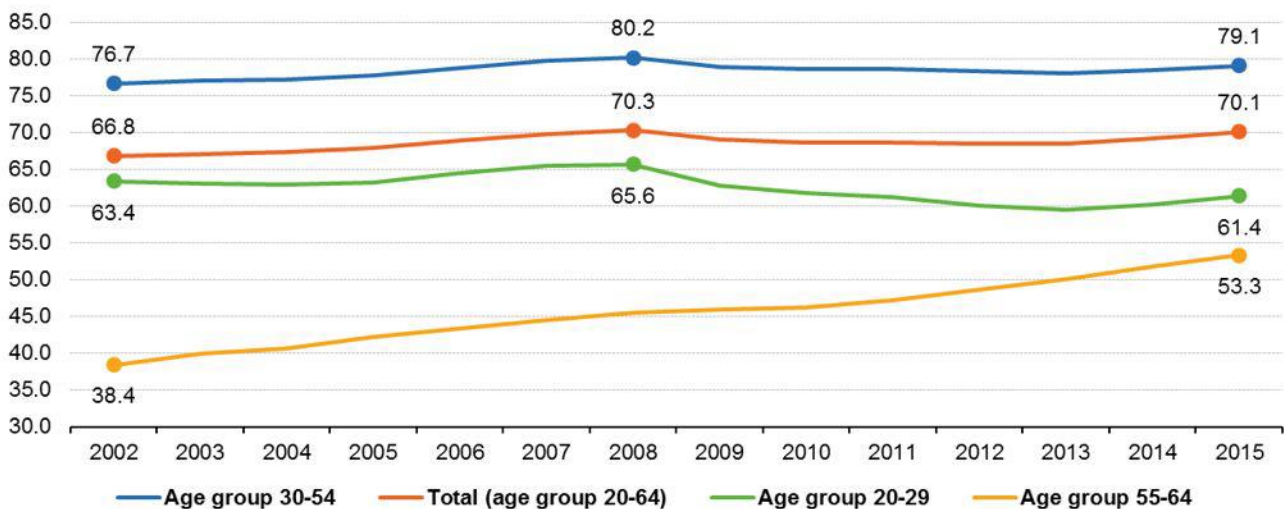Younger and older people have lower employment rates

Figure 1 - Employment rate, by age group, EU-28, 2002-15 (%) Source: Eurostat online data codes (lfsapganws), (tsdde100)and (t202010)

The group aged 55 to 64 years has by far the lowest employment rate among the working-age population. Employment in this group has risen more or less continuously over the past decade, increasing by 14.9 percentage points between 2002 and 2015. Growth was even more pronounced for older women at 17.8 [U+202F] percentage points compared with 11.9 percentage points for

men. This age group was also the only one to experience employment growth since the onset of the crisis, rising by 7.8 percentage points between 2008 and 2015. These increases over the past decade could be linked to structural factors such as cohorts with better educational attainment moving up the age pyramid[4].

Increasing employment levels among older workers has also been influenced by recent pension reforms, such as increasing the pensionable age, the age for early retirement and length of contribution. This has led to longer working lives for both women and men[4].. The duration of working life is measured as the number of years a person aged 15 is expected to be active in the labour market. Over the past decade, this has risen in the EU by 2.4 years, from 32.9 years in 2002 to 35.3 years in 2014. The rise was higher for women (+[U+202F]3.2 years) than for men (+[U+202F]1.6 years). However, in 2014 men could still expect to stay in work much longer (37.8 years) than women (32.7 years)7. Other factors that have improved the duration of working life include flexible working time and work organisation, access to training by older workers and long-term care and childcare provision [4].

These trends reaffirm the focus of the Europe 2020 strategy on the population group of 55 to 64 year old men and women to boost the overall employment rate: 'A longer working life will both support the sustainability and the adequacy of pensions, as well as bring growth and general welfare gains for an economy. Higher employment rates among older people are also a precondition for the EU's ability to reach the 2020 target, just as adequate pension systems are a precondition for the achievement of the poverty reduction target'.

Educational attainment levels are another reason for the variation in employment rates between different labour groups, Higher education levels increase employability.

Integrating the older people and migrants in the labour market might be challenging since a large portion of them tend to have low levels of education [5]. Against future projections for increased demand for high-skilled labour, these groups are therefore more likely to join the less skilled part of the workforce. In this respect, it would be imperative for Member States to design and put in place active labour market policies combined with targeted policy measures for lifelong learning and comprehensive integration.

Enabling mobile people to better capitalise on their formal qualifications would also enhance their employability and improve growth prospects.

According with studies presented by Longitudinal Aging Study Amsterdam (LASA) [6],

> *"Education, occupation, and income are often referred to as the three most important indicators of Socio-Economic Status (SES). Socio-economic status affects the quality of life of older adults. It is known that in almost all countries, those with low SES have worse health and higher mortality rates than older adults with higher SES1). Those with higher education and income also report higher general well-being and life satisfaction2). It has been shown that not only adulthood SES, but also SES of one's parents may affect physical, mental and cognitive well-being in older age. Additionally, older adults with low SES tend to be less socially active within society. As a result, low-SES older adults form a risk group when it comes to health care as well as social integration."*

The Active@Work project is not only in line with the Europe 2020 Employment strategy, to help the senior employees with higher SES and motivate the improvement of their skills, but as well important for employees with low SES, usually associated with works with great physical effort, the Active@Work demonstrators cover these two areas, with different SES level:

- Higher SES Level: ATOS – 4th Floor, office employees;
- Low SES Level: Holiday-park Erperheide

4. Project Impact: how Active@Work solve inequalities

Once the pilots finished, the end-users - employees and employers - highlighted the influence that Active@Work could have on their jobs and the benefits that they have found. Full evaluation conclusions are included on previous deliverables (D5.2 and D5.3)

The following section presents the methodology carried out on the pilots and the results based on the evaluations performed in both phases.

4.1. Methodology

To derive the expected impact from the end-user perspective, we focused on two main user groups: employers and employees. To do so, a qualitative design was adopted to conduct two rounds of semi-structured interviews at the project pilot sites. On September 21st, the first round of interviews was carried out with ATOS participants in Madrid. The interviews were done in English language. The participants in this round were 9 employees on average, 48 years of age and had worked for approximately 12 years in their current positions. Three of the respondents were working in management positions and nine had no management responsibilities. The second round was conducted on June 26th, in Belgium with the Centerparcs participants. The interviews were done in Flemish language and later translated to English language. The participants were four employees including two persons from cleaning staff and two from technical staff. Each interview lasted approximately 60 minutes. We began the interviews with broad questions related to their perception of their wellbeing, pilot company's current occupational health program and participants' previous personal experiences with similar technologies. We then presented how Active@Work solution is going to play role in interviewees' work environment. By asking permission from interviewees, the interviews were recorded and were transcribed verbatim to systematically analyze the transcripts later. Within the result section, the expected impacts from Active@Work are synthesized and presented in the form of what employees expect that Active@Work would afford to offer them. More details on user expected impact could be fined in the following publication: (Yassaee and Winter 2017).

4.2. Results

Employees point of view:

- **To afford the possibility of increasing self-consciousness**

The main expected impact from the employee's point of view was the possibility of being more self-conscious. "We are not conscious of our health [and] in particular our stress. Maybe it [would be] interesting to have [a] different point of view, even it is from a machine.

- **To afford the possibility of detecting and preventing health issues**

The other employee expected impact was the possibility of preventing health issues. "Stress is something important in our job and [a] precondition for our health. I had some people with [a] high level of stress for [a] long time and I saw how their health [was] impacted by that.

- **To afford the possibility of changing behaviors at work**

Another expected impact for interviewees was long-term support in managing their health and changing bad habits. "It can be an assistance to improve and manage my health. I am now 40 but when I am 55, I do not know if I can handle this level of stress. Right now [a] high [heart] rate is acceptable but when I am 55, it is not. If I cannot manage it right now, it will be a big problem when I become older. I think pre-venting and changing my [bad] habit[s] in this stage will help me when I am old. I [would] also like to know the things that maybe I do not know now."

- **To afford the possibility of receiving economic benefits**

Some interviewees expected some economic benefit from using Active@Work. "You can sell the data to who is interested in it. Now companies like Nike or others use the data generated by people [for] free [and] it should not be free."

Employer point of view:

- **To afford the possibility of detecting and preventing the root causes of health issues**

For most of interviewees in management roles, the main expected impact was the possibility of possibility of detecting and preventing the root causes of health issues.

- **To afford the possibility of finding patterns in employees' work behaviors**

One manager from ATOS believed that finding such patterns would be the main functionality of the system. However, to detect these patterns, she did not expect that the monitoring of employees and their environments is required for a long period of time: "We do not need to monitor employees and their environment for one year. Maybe with one month, we can detect things in [the] working environment to change or working pro-cess that might improve. In big companies like ours … we cannot be with everyone … detecting patterns that can improve the[ir] quality of life."

- **To afford the possibility of mitigating health-related risks and injuries**

While the interviewees in management role all expected to mitigate health related risks and injuries by using such systems as Active@Work, they could assume that this impact is mainly dependent to

effective use of system by employees: "I think the performance of individual[s] and [the] organization is interrelated. Since we cannot force them to use the system, we should motivate them with [a] small bonus or whatever. It can be small or stupid but it can change a lot. Something weird or fun like having breakfast with the boss. It should not be something important but motivating … giving the feeling of belonging to a group and making people happier."

5. Conclusions

This deliverable describes the socio-economic aspects of the project, in terms of inequality and impact of the project impact. The conclusions drawn are:

1. The Active@Work project contributes to economic performance, quality of life and social inclusion, making it one of the cornerstones of socioeconomic development and well-being.

2. There is a great difference between the needs of white collar workers and blue collar workers. Not all the modules are useful for both pilots:
   - Indoor pilot can use the entire solution in their jobs. (cognitive module, collaborative module and skill development module)
   - Outdoor pilot can use just the cognitive module due to the fact that the cleaning ladies spend most of their time outdoors performing manual tasks; they rarely use the desktop computer so the rest of the modules are not useful to this environment.

3. Some large institutions already have their own communication and training platforms so there is a need of further development and improvements for the existing modules in order to be competitive in the market place.

4. Finally, based on the evaluation performed during the pilots, the white collar workers stated that the added value of Active@Work in comparison to other existing platforms is to give the user a tool that could cover all the aspects of social, physical and mental well-being in one consistent package. They particularly highlighted the benefits of becoming aware of the stress peaks that they got. On the other hand, the blue collar workers are not so familiarised with new technologies, but they found the cognitive module useful enough to keep using the system for the coming months. Their supervisors found very useful the possibility of controlling the time spent by task and the distribution of work to avoid overload to their employees.

6. References

[1]   Active@Work consortium, "Active Older Adults @ Workplace - Part B Final DoW", Amedment II
[2]   Age Concern England (source www.ageconcern.org.uk last visit 12-05-2017)
[3]   "Europe 2020 indicators – employment", Eurostat, May 2017.
[4]   European Commission, 2016, p.16 (source
       http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=7859&furtherPubs=yes)

[5]   European Commission,2014, (source ec.europa.eu/europe2020/pdf/europe2020stocktaking_en.pdf)

[6]   LASA, Longitudinal Aging Study Amsterdam, source http://www.lasa-vu.nl/themes/demographics/ses.htm

[7]   Yassaee, M., & Winter, R. (2017). Analyzing Affordances of Digital Occupational Health Systems. Paper presented at the Hawaii International Conference on System Sciences, Big Island lava coastline,