

Developing optimal workplace environments catering for workers of all generations

The OptimaSteel project developed at Groupe PSA Mangualde Plant aims at providing leading-edge technologies and methods to improve the quality of life of older adults

The world is facing a new paradigm shift on its demography. On one hand, the dwindling population growth is inverting the pyramid, with the elderly soon outnumbering the younger generations. Secondly, with medical and lifestyle improvements, people can expect to have longer, healthier and productive lives, no longer limited on their working age. Together, these demographic shifts require sustainable long-term solutions for countries and states' economies alike. Considering the demographic changes and the main workforce issues identified for the steel industry, the OptimaSteel project aims at identifying, assessing, demonstrating and disseminating state-of-the-art technologies and methods to improve the quality of life of older adults on their working environment. For the project, a case study was leveraged, Groupe PSA Mangualde Plant (PSA Mangualde).

The cost of inaction is a challenge companies cannot ignore. If no action is taken, economies will become increasingly unable to sustain fewer active working young people, coupled with the cost of providing for an increasingly large population of pensioners. The solution to current health, safety and wellbeing of the steel industry workforce therefore does not rely on a single technology or a new development. A holistic approach to improve the wellbeing and quality of life at the workplace of older adults can be developed only by combining physical, ergonomic, nutritional and stress management aspects.

Aiming to identify the workers' needs and areas for improvement, a questionnaire was elaborated and presented to 100 workers with +50 years old. The questionnaire was designed to cover the four pillars of concern for the project, workplace ergonomics, stress management, physical training and nutritional balance.

The majority (58%) of the participating employees are included in the age range 50-54, 41% in the 55-60, and only one respondent is more than 61 years old. Importantly, almost two-thirds of the workers (64%) believe that they cannot continue to perform their tasks or similar ones until they are 66 years old. Indeed, almost everyone (87%) mentioned that their jobs in the production line involve tiring positions and repetitive hand or arm movements; they spend most of the time standing up (92%) for around 6 to 8 hours per day.

Additionally, more than a third of the workers (34%) feel emotionally distressed at work, and the assembly line is the most affected by stress. Notably, a substantial fraction of the participants (39%) practice little physical activity, considering "few" as never, once per month or twice per month. A representative number of the participants (78%) considered a healthy diet of utmost importance for their wellbeing. However, a vast part of the workers is overweight and/or obese (71%) and 44% have hypertension.

Generally, working in Groupe PSA factory is characterized by a high number of hours standing, repetitive movements, and carrying heavy loads in hot environments and exposed to chemical substances. These conditions are characteristics of this type of work, and even though protective equipment and other measure have been practiced, there is space to improve comfortability at the same time ensuring safety. The analysis of this questionnaire will allow to set the base for the necessities identified at the Groupe PSA and find suitable solutions to improve the physical and mental health of the older steelworkers.

Project partners

The main goal of the project's partners is to build on state of the art solutions from top-end technology developers and research institutes across EU, to provide well-balanced and holistic systems that are able to meet the steel industry needs and offers benefits and an enhanced quality of life for older adults at the workplace. The project partners include INOVA+ (www.inova.business), PSA Group (<https://site.groupe-psa.com>), Joanneum Research (www.joanneum.at/digital/) and EWF (<https://www.ewf.be>).



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About the European Federation for Welding, Joining and Cutting

EFW is a pioneer in implementing a harmonized qualification and certification system for joining professionals. Through European projects EFW has been innovating in training methodologies and involved in the development of new technologies and uses for joining. Through its member organisations, EFW has established a firm link to the local industry, providing knowledge and training as well as participating in research initiatives that address the most pressing questions and challenges in the field of joining technologies.

<http://www.optimasteel-project.eu/index.html>