

The Factory2Fit project is part of the European Horizon 2020 Research Program. The project aims to develop adaptive automation solutions with the focus on the workers in order to increase productivity, decrease stress as well as foster job satisfaction, safety at work and health. With the worker in the center, the developed concepts are derived not only from the technical requirements, but also from the requirements concerning the workers. Additionally, the workers will be enabled to enlarge their own competences and participate in designing their own workplaces.

Designing factory processes in the context of industry 4.0 has to include the worker as an important factor. As part of the project we investigate the industrial requirements for implementing worker-centered adaption of automation. In close collaboration with an industrial pilot partner, the first step was to assess the requirements and needs for the implementation of adaptive automation and its possibilities.

2 METHOD

- 4 focus groups with factory workers and 1 interview with the industrial council
- Collection of ideas, follow-up discussion and ranking of most important issues (each participant could distribute 3 points)
- Transcription and qualitative content analysis
- 21 workers (engineers, lathe operators, shift foremen and quality control inspectors)
- 18 male, 3 female

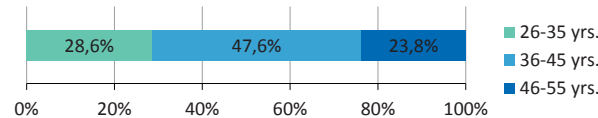


Figure 1. Age distribution of focus group members.

The participants were asked:

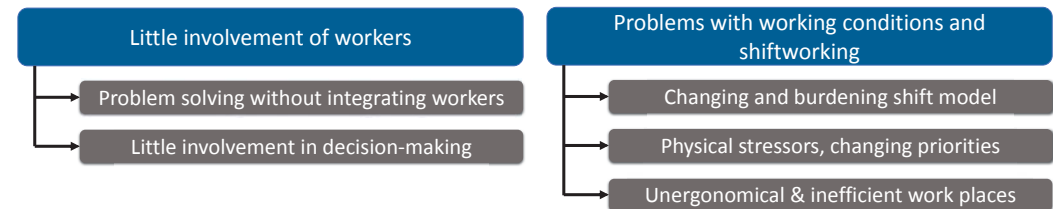
- What are problems at every day's work and what reduces satisfaction?
- Do you want to be more involved into planning and organization of work and processes?
- What do you think about adaptive automation?

3 RESULTS

The main topics for possible improvement include information gathering and information distribution within the factory as well as between different hierarchical levels and working areas. The workers demand immediate access to the latest data.



3 RESULTS (continued)



Solutions mentioned by the workers to increase job satisfaction are a participatory design and further digitalization of information processes. The interview with the industrial council emphasized the challenges stated by the workers. It revealed their support for the solutions mentioned, if equality amongst the workers and data security will be guaranteed.

4 SUMMARY

- One goal of the Factory2Fit project is to develop adaptive solutions based on the requirements of the workers. Therefore, a qualitative approach had been chosen to get a first impression of the perspective of factory workers and get a first insight about improving factory processes to foster job satisfaction, safety at work and health.
- The focus groups revealed the subjective feeling of lack of critical information. The workers want to be more involved into decision making and designing their workplaces. Additionally, challenges concerning the shift model and stressors at work were mentioned.
- Even though the generalization of this study is limited, a first impression about possible improvements has been gained.
- Further steps of the Factory2Fit project include the conception of a use case based on this study and the development of a new information system with a continuous participation of the affected workers.

PROJECT PARTNERS