

COMBINING THE EXPERTISE OF WORKERS WITH OBJECTIVE MEASURES

WHAT WAS THE PROBLEM?

Encouraging participation: Ergonomists combine the experience of people at the workplace with their own measures and knowledge to obtain comprehensive improvements in well-being and performance.

CRITICAL ISSUES

The inclusive development process is most suitable for enterprises which have physical work (manual operations), as it is not always easy to see the consequences of interventions in real workplaces without detailed knowledge of the job and its context.

THE DEVELOPMENT GROUP

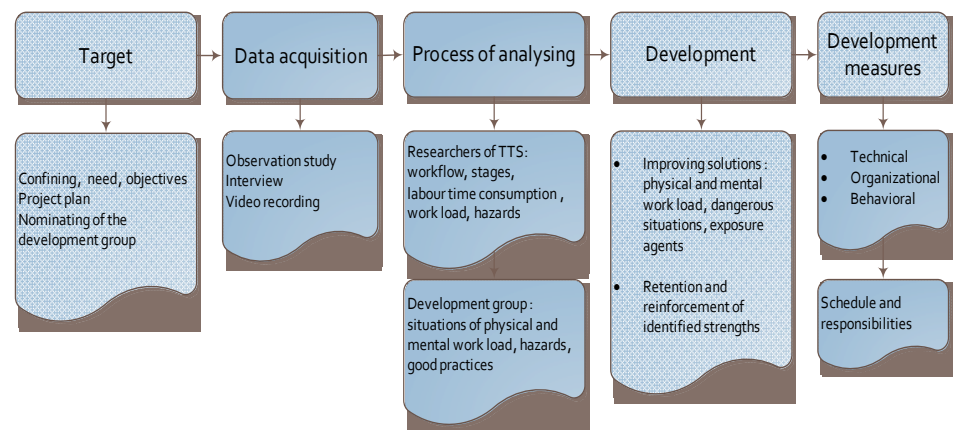
At the beginning of the process a development group is formed. This group consist of 3–6 persons representing the whole staff of the enterprise, including the health and safety representative. It plans the timetable and makes decisions concerning the development process. The researchers act as facilitators and produce data for the development group.

DEFINING THE TARGET

The target is defined in the beginning of the process by discussions and interviews, the process confined and the objectives defined. First a flow chart is drawn to describe the work processes.

THE WORK STUDY

Labour time consumption, stress factors, hazards and good practices are described with the help of a work study. The work study consists of an observation study and video recordings of the work. Some simple measurements (distances, weights, volumes, number of pieces, etc.) are also including in the work study. The work study is carried out over a few normal working days by 2–4 researchers.



Situations of physical and mental work load as well as hazards and good practices are recognized on the video by the researchers and independently by the development group. The most valuable notes are given by workers who know best the work and the situation. Vidar software is used to register this information. A risk index for manual lifts is defined by the researchers (based on the NIOSH lifting equation) as well as postural work load (OWAS, RULA) in the most harmful situations.

Analysis of the labour time – as a result of the observation study – identifies situations in the workflow in which disturbances and hold-ups appear and reasons for them. It also shows how much time each work stage takes and those tasks that are the most time consuming.

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EVALUATION

The development group receives all the data to decide which challenges to solve. Both economical, technological and human aspects are taken into account.

DEVELOPING SOLUTIONS

After the development targets have been identified by the development group, solutions are formulated; how to improve the recognized weaknesses and how to reinforce the strengths. Additionally, researchers take part in a brainstorming.

Solutions are grouped into three groups: technical, organizational and behavioural (methodological) solutions. The implementation of each solution is scheduled and the person in charge named. Some solutions may be put into use immediately or very rapidly (if related to way of acting), some need more time to plan, to compare alternatives and to arrange financing. In one development process up to 250 solutions were named.

OUTCOMES

The outcomes are checked afterwards.

These include:

- *clarified processes and workflow*
- *more open-minded discussions among the work community*
- *strengthened mindset for occupational safety*
- *improved familiarization of workers*
- *more responsibility to the workers*
- *improved control of work*
- *more value to the health and wellbeing at work of the staff; seen to be an essential part in productivity*
- *improved fluency of workflow => improved productivity*
- *more meaningful sensibleness of the work to the worker*
- *improved know-how and increased willingness to educate oneself*
- *improved quality of work*
- *recruiting of workers has become easier*
- *increased utilization rate of machinery*