

Quality in Prevention

Quantitative Impact of Workplace Prevention Measures

1. Project Aim

The most recently developed form of prevention balance sheet sets company spending on health and safety in the workplace against its benefits, all from the point of view of an individual company. In this way, the effects of prevention work should be structured in the form of a corporate return on prevention. This project discusses the theoretical elements and applies empirical testing of prevention accounting.

2. Project

A prevention balance sheet is defined as a impact-based comparison of prevention costs (input) and prevention benefits (outcome). As a means of calculating the economic return of prevention measures, it describes the return on prevention within a certain period of time. Impacts which occur over several periods can be divided up into periods. The prevention balance sheet describes the impact of prevention work within a specific timeframe.

Incidents can only be described if they take place. However, through the implementation of prevention work within a company, these incidents (e.g. accidents, occupational illnesses, stoppages, time spent catching up after stoppages) are prevented. Therefore, the measurement and evaluation of the impact of corporate prevention work can only be indirectly (e.g. through the evaluation of subjective estimates) carried out and with the help of equivalent variables (e.g. through the reduction in the number of stoppages). The evaluation method takes the form of a survey (e.g. in the form of an interview). To be able to compile the benefits of prevention work, impact relationships between the prevention work and the company target values need to be examined.

3. Quantitative Impact

To be able to analyse the relationship between prevention work and company target values, it is necessary to calculate the share (estimate) of turnover, for which the impacts of workplace prevention measures are accountable. According to initial measures within a company and the corresponding interview-based survey, it

can be assumed that there will be a positive impact on the company.

The following are details from a sample company. In response to the question asking how important prevention work is within the company, the following answer was given: "Due to training and qualification, staff motivation events and training vehicles, the company rates prevention work very highly. Thanks to prevention work, the accident rate has strongly dropped and meetings with the quality management team and safety experts and engineers regularly take place. Furthermore, department meetings take place with the use of different medias.

This company evaluated its spending on prevention, per employee annually, as follows:

- 150 EUR for personal protective equipment
- 20 EUR for company medical support and guidance on safety technology
- 50 EUR for specific prevention training measures
- 210 EUR for organisational and documentation costs as well as payroll costs of company doctor, safety officer and safety experts
- 10 EUR for start-up costs during the introduction phase of prevention measures

The following is the estimated prevention benefit per employee annually:

- 400 EUR cost savings generated through prevented stoppages. The accident rate was previously very high. After having intensified the prevention work within the company, the rate was strongly reduced. Through the implemented measures, productive working days could be gained and costs due to loss of production and spending on quality management could be prevented.
- 200 EUR added value generated by increased employee motivation and satisfaction. For example, it was suggested by employees that better

(and more expensive) personal protective equipment should be purchased. The company supplied the new equipment, which resulted in a notably positive effect on the working atmosphere within the company.

- 200 EUR added value generated by a better corporate image. For example, supplier evaluations of the company gave above average results. Company efforts to implement prevention work as in integrated aspect of quality management, was greatly appreciated and favourably looked upon within the company.

As a result, the company spends 440 EUR on prevention costs per employee annually but makes a total saving of 800 EUR through prevention benefits. That implies a net profit of 360 EUR per employee on a yearly basis.

4. Summary and Outlook

In the interest of its employees, it is a statutory requirement that a company implements measures of prevention, as well as all necessary measures for health and safety in the workplace. In light of this example it is obvious, that corporate prevention should also be implemented in the interest of the company itself.

Brief summary of the project can be found at www.dguv.de/bgag/de/forschung/forschungsprojekte/qdp/index.html

*Dipl.-Vw M.P.H. Katrin Mehnert
Prof. Dr Dietmar Bräunig
Justus-Liebig-Universität Gießen
Email: katrin.mehnert@dguv.de*