Psychosocial Risks in Construction

A good practice guide to assessing and reducing psychosocial risks

For all Stakeholders:
Employers, Workers and Worker Representatives, Clients, Project Supervisors, and Coordinators.

European Federation of Building and Woodworkers

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The content and production of this guide is the combined and joint work of the project steering group and their external experts actively involved in the project, namely Jean Marie Branstett, Marie-Amélie Buffet, Domenico Campogrande, Enrique Corral, Mario Dobernowsky, Rolf Gehring, Richard Habgood, Cristina Garcia Herguedas, Veronika Jakl, Aleksandra Kaydzhiyska, Jacob Munk, Veronique Le Paige, Hanne Sanders, Martin Sonnberger, Ulrik Spannow, Laura Mesa Lopez, Tiina Nurmi-Kokko and Jolanta Walusiak-Skorupa.

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INTRODUCTION

Whether it is the homes in which we live or our workplaces and educational institutions in which we learn, and the hospitals, medical centres and government buildings, and the roads, rail, air, water and all underground services that we use, including all of the supplies upon which we rely, construction activity, past and present, affects every single aspect of our daily lives.

Indeed, this industry accounts for almost 30 % of industrial employment (14.5 million workers within approximately 3.1 million enterprises, 95 % of which have fewer than 20 workers and 93 % of which have fewer than 10 workers)[1], so we cannot underestimate its importance to those living in the EU 28, if not the rest of the world.

Construction activity today offers a source of work for a wide variety of trades and professions and is a fundamental component and contributor to our combined well-being and our economic and social infrastructure.

According to the EU-OSHA ESENER Survey, and quoting the UK's Health and Safety Executive: "psychosocial risk factors are things that may affect workers' psychological response to their work and workplace conditions (including working relationships with supervisors and colleagues). Examples are:

- high workloads,
- tight deadlines,
- lack of control of the work and working methods."[2]

All three of these examples may be found within a typical construction project and require positive stakeholder focus on worker well-being, if only because each example can lead to psychosocial risk, a hazard in its own right.

It is worth noting that although no two construction projects are ever alike, and even though they can be diverse, complex and demanding, we acknowledge that every construction activity has similar characteristics that require a consistent stakeholder approach towards worker well-being, including the reduction of psychosocial risks.

The unintended consequence of a poorly planned and managed construction activity by any and all stakeholders could lead to problematic situations and psychosocial risks such as:

- workers having little control over their work or work methods (including shift patterns);
- workers being unable to fully utilise their skills;
- workers being excluded from making decisions that affect them;
- workers being expected to only perform repetitive and/or monotonous tasks;
- work being machine or system paced (and potentially being monitored inappropriately);
- demands that are perceived as excessive;
- creating work systems or working patterns that limit opportunities for social interaction;
- high levels of effort not being rewarded or appreciated (resources, remuneration, self-esteem, status).

1 FIEC – *Key figures – Activity 2017 – Construction in Europe* (Edition 2018)
2 EU-OSHA Esener-2 Survey

HOW DOES STRESS WORK?

Looking at the course of human evolution, the response to stressors is the body's biological reaction. In order to be able to respond to a stress factor (such as the threat posed by a Stone Age predator), the body quickly mobilises all of its reserves to allow for a physically appropriate, rapid response (e.g. fight or flight).

The following diagram shows such a reaction within the body. If someone encounters a stress factor, this information is passed on via the nervous system. Amongst other things, this causes the adrenal glands to secrete hormones such as the 'escape hormone' adrenaline and the 'attack hormone' norepinephrine. These hormones accelerate the heartbeat and affect circulation. For example, sugar and fat reserves are mobilised, blood pressure rises and muscles tense up. At the same time, the body switches off functions not needed to respond to stressors. This releases cortisone, which throttles the digestive system and shuts down the body's immune system.

The body has a significant biological response to stress factors. However, this protective mechanism, which was adequate in the early days of human history, is problematic in today's world of work. As such, constant stress repeatedly triggers metabolic processes, which in turn endangers the body in the long term and can lead to health problems. For example, the fat and sugar reserves mobilised are not adequately degraded or stored in the body, which in the long term can cause health issues.

THE STRESS MECHANISM

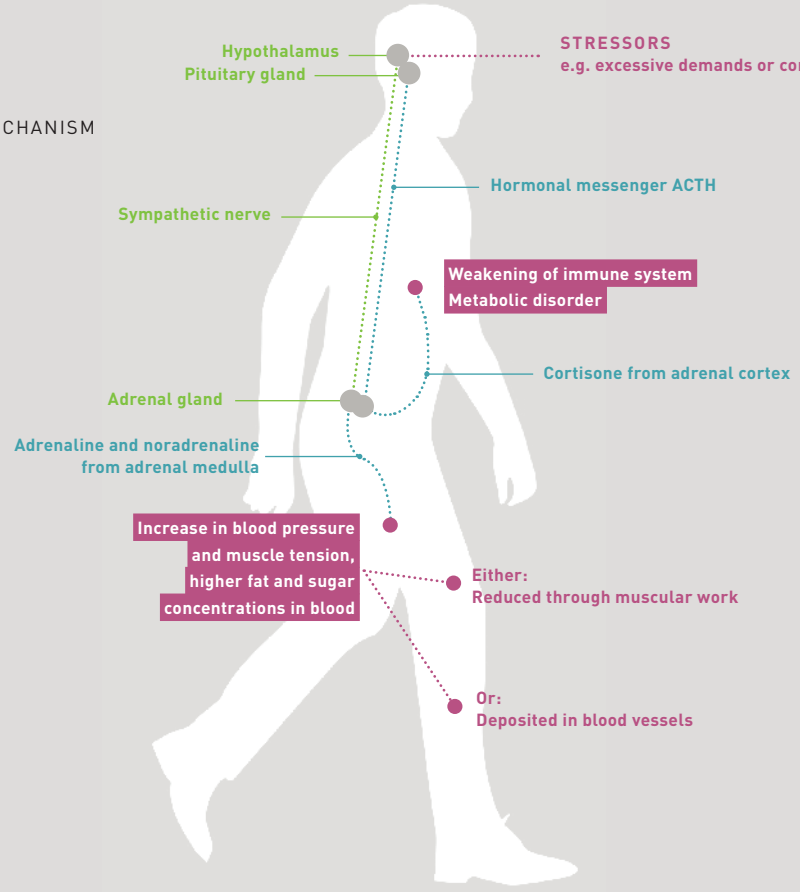


Illustration based on: *Stress und Psychische Belastung – Terror für die Seele*;
IG Metall Bezirk Baden-Württemberg, 2001

This guide examines what can be done in practice to assess and reduce known risks of psychosocial factors.

As always, it is good practice to begin any risk assessment by fully consulting and involving the workforce.

Together we need to consider the following 'easy win' measures that can often be applied to improve the working environment at every construction site, namely:

- making tasks less monotonous, where appropriate;
- ensuring that there are reasonable workload deadlines and demands (neither too much nor too little);
- guaranteeing good communication and reporting of problems;
- encouraging teamwork;
- monitoring and controlling work patterns such as shift work or overtime worked to meet the demands of the schedule;
- reducing or monitoring payment systems that are based on measured piecework for an agreed rate per item;
- providing appropriate training, ensuring that workers have the skills needed for the tasks entrusted to them;
- improve cooperation between trades and companies at a site.

WHAT EXACTLY DO WE MEAN BY PSYCHOSOCIAL RISK IN CONSTRUCTION?

Prevention experts, safety representatives and employers are aware of the potential psychosocial risks in the workplace that affect all those working in the construction industry. These risks include tight deadlines, missing information or a negative working atmosphere, as well as the indirect impact of traditional hazards such as noise, vibrations or hazards that affect the musculoskeletal system. However, construction processes, new materials and substances may also pose unknown hazards in the workplace, as do recent changes in types of employment. The shift towards subcontracting and specialisation (which involves different actors working on the same worksite at the same time) is changing existing balances and creating new uncertainties.

The combination of these potential risk factors as well as internal communication issues, the pressure of tight deadlines, changes in working hours and other factors may lead to tension and stress in the workplace. As we have said, this is a psychosocial risk.

Before assessing potential hazards, you need a proper definition of occupational mental health. Mental health and well-being are influenced by many factors, including:

1. the content and organisation of work (clarity of role distribution, influence, development, variation, meaning, involvement, change);
2. demands at work (workload, work rate, overtime, unscheduled tasks);
3. interpersonal relationships at work (management, cooperation, reward, trust, fairness, respect, opportunities for those with less capacity, social support, social fellowship);
4. conflict in the workplace (sexual harassment, threats of violence, physical violence, bullying, banter, quarrels and conflict);
5. reactions to the situation at work (safety at work, risk of job losses, work satisfaction, work-life balance).

Though difficult to quantify, interpersonal relationships and conflict in the workplace are important factors to be taken into account since they may trigger situations that potentially lead to psychosocial risks.

However, this guide does not focus on interpersonal relationships and conflict in the workplace. Such factors are difficult to measure and, though not denying their importance, the social partners want to focus on those aspects

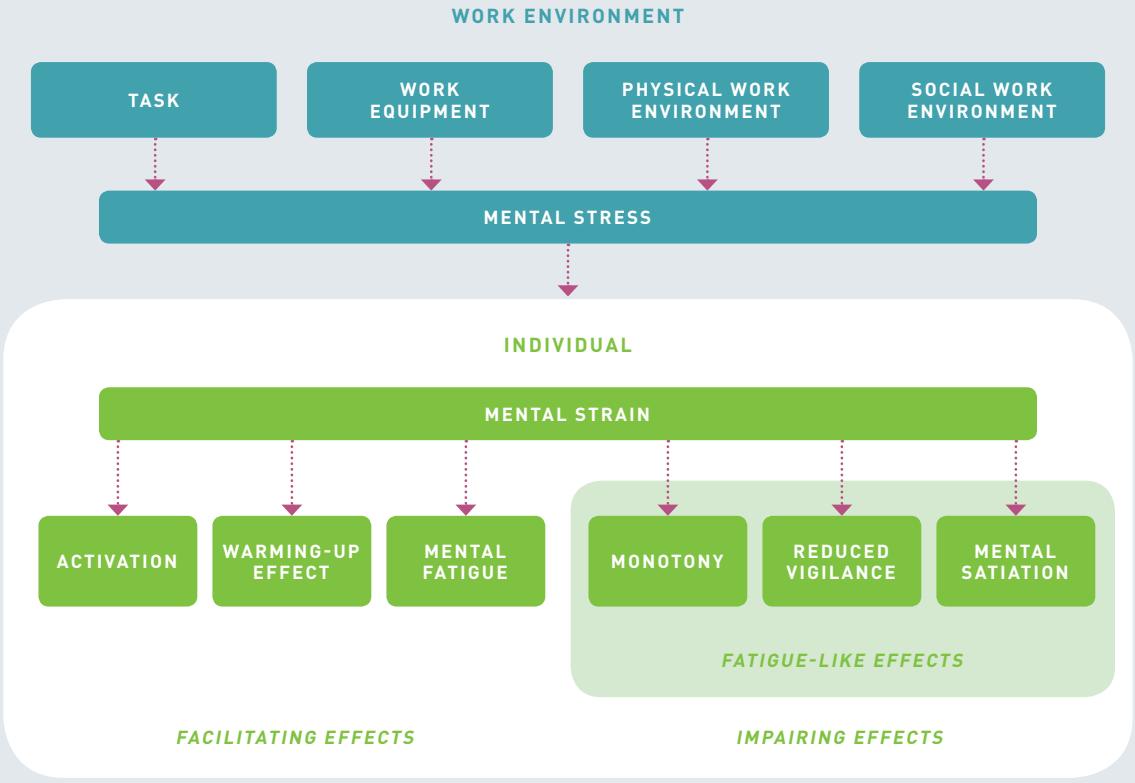


Illustration based on: *Belastungs-Beanspruchungs-Modell* (Rohmert and Rutenfranz, 1975)

they can influence directly without interfering with workers personally. We agreed to discuss psychosocial risks and avoid the term 'stress', since this was originally humans' physiological response to threats or danger, not an external impulse (see also How does stress work?).

OUR APPROACH

Statistics from health insurance companies indicate an increase in psychosocial suffering, particularly among workers with a physical or mental condition who continue to work due to insecurity.[3] This phenomenon is known as presenteeism and causes suffering to those affected, as well as delays and other burdens and costs for businesses and society.

It is against this backdrop that the European social partners for the construction industry (the EFBWW and FIEC) have launched an EU-funded

3 Source: Reference for Austria: Leoni, T., and Uhl, A. (2016). *Fehlzeitenreport 2016. Krankheits- und unfallbedingte Fehlzeiten in Österreich* [Absenteeism Report 2016. Sickness and accident-related absences in Austria]. Vienna: *Österreichisches Insititut für Wirtschaftsforschung*

joint project to raise awareness of this problem within the European construction industry. This guide provides stakeholders and safety representatives with specific information on supporting prevention efforts in the workplace tailored to the construction industry's needs and specific characteristics.

The European social partners for the construction industry have focused this initiative exclusively on work-related aspects that can lead to psychosocial risks. Of course, we also know that psychosocial diseases can comprise a range of elements, including those of a personal nature. However, we want to provide an action guide that would help to improve those aspects of work and work organisation that the social partners can influence directly. This guide focuses on preventing those aspects linked to relationships and structures in the workplace, not those linked to behaviour, as social partners at company level can directly influence work-related conditions.

As such, this guide comprises two parts.

- The first addresses the assessment of psychosocial risks at work and describes the various steps involved in a participation-oriented assessment process.
- The second part provides guidance on how to reduce stress in the various aspects of work.

Good planning and the proper involvement of workers in the assessment of psychosocial risks can optimise working conditions through priority preventive measures, thereby creating benefits for workers and employers.

This booklet is available in eight different languages. The EFBWW and FIEC have also presented a research report in English together with the European Association of Paritarian Institutions (AEIP) in connection with the project. This report provides an overview of current levels of knowledge regarding how psychosocial risks in construction are dealt with in practice today.

We hope that this booklet will provide suggestions and support, as well as outlining simple ways to tackle this issue and foster working conditions so that construction becomes less burdensome and more satisfying for workers and employers, and more effective and of higher quality for companies.

LEGAL PROVISIONS AT NATIONAL LEVEL, laws and other types of regulations differ when it comes to occupational health and safety and psychosocial risks. This guide refers to the European legislative framework and thereby serves as a common framework for activities at company level. This, however, does not exempt social partners at company level from checking if and what type of regulation exists at national level.

BENEFITS FOR WORKERS

- Reduced psychosocial risks
- Further development of knowledge and qualifications
- Participation in the creation of attractive work
- Job satisfaction
- Improved health

BENEFITS FOR THE COMPANY

- Improved processes and products
- Better use of workers' potential
- Higher process efficiency
- Reduced absenteeism and presenteeism
- More interest from qualified and committed workers

Risk assessment for construction work

THE LEGAL OBLIGATIONS

All employers are required to regularly evaluate all risks at work, regardless of the size or nature of an enterprise. This is followed by an assessment of the existing risks. An action plan is then drawn up with a view to reducing the various risks as far as possible. The whole process must be documented. This is currently based on a European Directive on the protection of workers' health at work (the European OSH Framework Directive 89/391/EEC).[4]

THE COMPLEXITY OF RISK ASSESSMENTS

The assessment of risks in the workplace is no easy task and is a challenge in particular for small enterprises without specific staff dedicated to occupational health and safety. We also need to take into consideration the increasing complexity of construction worksites due to the involvement of multiple actors (clients, designers and builders) and the fact that work at new construction sites often starts with several companies unknown to each other. Modern construction methods mean that we are now dealing with a much wider range of materials, tools, machinery and techniques in ever-increasing combinations. This also means that the level of knowledge needed to assess all possible risks in a workplace has risen considerably.

The client's health and safety plan serves as the basis for the risk assessments conducted on all companies active on a construction site. The coordinator must consider and define measures providing protection against psychosocial threats affecting workers and must identify those affected by construction works. Organisational and collective protective measures are required for every work sequence for, for instance, setting up and providing welfare facilities, site security, demolition, site traffic, earthworks, concrete work, fall protection, storage, and emergency management.

The construction schedule must be seen to take into account all contractors and workers present with regard to these aspects.

THE DIFFICULTY OF DEMARCATING AREAS

The paragraph above is particularly relevant to the construction industry. The nature and specific features of construction work are characterised by complexity, interrelation between professions working in one spot, and interaction between companies on the same site or with the surrounding area (e.g. traffic, passengers, weather conditions and other external factors).

4 https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=celex%3A31989L0391

EVER-CHANGING CONDITIONS

Construction itself is always changing, which can make it even more difficult for clients to provide safe and healthy working conditions. A construction site is like no other workplace. It is not a static workplace, as the form of a typical construction site is constantly evolving until it is finished.

COOPERATION AND COORDINATION WITH OTHER COMPANIES AND THE SURROUNDING AREA

The complexity of today's construction processes means that all stakeholders and duty holders involved must cooperate and coordinate their activities with one another during the preparation or execution of a typical construction project. Poor cooperation or coordination can have a significant negative impact on both the quality of the output and on all those involved in such processes.

Setting aside design and pre-construction work, the construction industry can be divided into multiple subsectors, more specifically structural work, civil engineering work and complex buildings, road construction, construction of overhead or underground networks, and secondary work in building interiors (work involving electricians, plumbers, heating engineers, joiners, painters, tilers, and so on).

All these activities aim to produce a finished product that will be delivered to the client.

Each company will have to fully cooperate with the other companies under the coordinator's supervision with a view to finishing the work by a very often predetermined deadline. Many contracts include penalty clauses that are applied when a company fails to meet its deadlines.

Some thoughts regarding the organisation of occupational safety and worker participation[5]

Employers are legally required to assume overall responsibility for organising proper occupational health and safety management within their company. According to the European OSH Framework Directive (89/391/EEC), as well as its transposition at national level, employers are legally responsible for organising and implementing health and safety measures within their company. However, workers are also responsible for good occupational health and safety. Their safe, prudent conduct, compliance with their employer's instructions, and correct use of protective equipment are crucial. The proper fulfilment of such duties mainly depends on the prevention culture within each company. All workers should be familiar with their company's OSH structures.

The construction industry is unique because of its complex work processes, variety of professions, and, in part, the fact that companies work side by side on construction sites, that construction sites are in constant flux, and that workers are often highly independent within the construction process. This means that workers must be heavily involved in all occupational health and safety measures. We therefore advise paying special attention to the following issues:

- If a company has an occupational health and safety committee, it should be involved in the planning and implementation of assessments of psychosocial risks.
- The works council or other worker representatives should also be involved in the planning and implementation of all associated measures.
- The individual workers should also be involved in the evaluation of burdens, as well as in the definition, implementation and assessment of measures taken to minimise risks.

5 As legal provisions differ considerably between countries, when mentioning "worker participation" in this guide we refer to all types of participatory processes and all possible players involved, including works councils, trade unions and safety representatives.

This can substantially boost both the effectiveness and acceptance of measures and their practical implementation in the workplace. Workers' active involvement will also improve the prevention culture in their companies.

The following sections briefly detail a number of methods for assessing psychosocial risks in the workplace based on workers' active involvement.

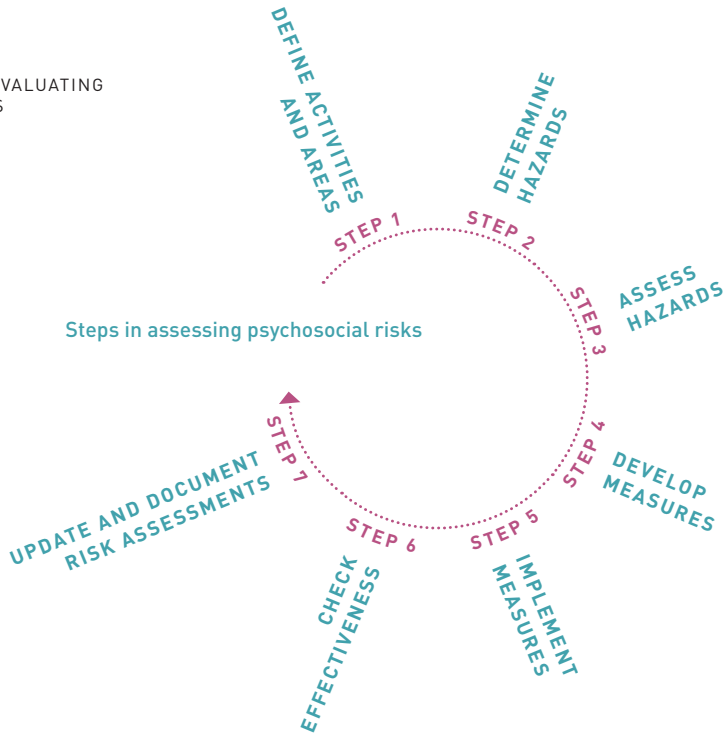
Preparation

First of all, the assessment of psychosocial risks must be planned. This will create conditions conducive to implementation. All stakeholders should be involved in this phase (depending on the size of the company: the company owner, the executives, the occupational health and safety committee, the occupational safety specialist, the works council).

Basic assessment of psychosocial factors is key to a good evaluation, and those in the workplace should have the in-depth knowledge needed to successfully complete the process. Prevention institutions can provide useful support, typically in the form of materials, explanations and tools, and frequently offer seminars as well as personal support.

The company's different activities/areas must be defined and separated from each other. Workers' experience can be useful in identifying hazards. The groups of activities can be formed by 'comparing' tasks/everyday requirements (job profiles) so as to define homogeneous groups. The workload is then determined using standardised methods/tools. It is very useful to consider workers as experts in their roles because they experience strain, and more, day after day; as such, they know best and can also provide clear information about risks.

APPROACH TO EVALUATING MENTAL STRESS



The aforementioned procedure for identifying psychosocial factors or reviewing working conditions should be carefully planned. The methods or tools to be used should be identified in the preparation phase. The way in which measures will be devised and their effectiveness checked must also be considered at this point.

The workers should be notified early on in the assessment of psychosocial risks. This means that workers should be well informed about the approach, goals and non-goals of the assessment, namely that it is intended to identify poor working conditions and ways to improve them. This guide does not cover personal sensitivities. Notifying workers ensures that the planned measures are understood, accepted and actively supported.

National occupational health and safety regulations do not typically stipulate how the assessment of psychosocial risks should be conducted and documented in detail. This is unfortunate, but the most important point to note is that the form of and steps in the documentation process must be defined during the preparation phase.

STEP 1

Define activities and areas

As each and every construction project is unique, it is always advisable to acquire an overview of the different activities within a project.

It is then possible to decide which activities should be included in the assessment of psychosocial risks. Work and trade descriptions or programme charts are normally very useful here.

The assessment of psychosocial risks can be structured around:

ACTIVITIES:
- Workplace groups (e.g. offices)
- Activity groups (e.g. leadership)
- Professional groups (e.g. bricklayers) or

AREAS:
- Work or organisational areas (e.g. administration, construction site)

The choice here must be justified.

Even at this first stage it becomes clear that this process is all about the assessment of working conditions, not of individuals.

STEP 2

Determine hazards

Referring back to this guide's introduction, data on sick leave, fluctuation of labour, quality problems or complaints provide useful information and are all indicators of psychosocial issues within a company. These data can provide a first impression. It is also crucial to operationalise the working conditions and environment, including communications, inside the company and with the outside world.

The following section lists the psychosocial risk factors for six core areas. They shall provide a pattern for the assessment process:

PSYCHOSOCIAL RISK AREAS AND FACTORS

THE ORGANISATION OF WORK AND WORKING TIME

- Signal detectability
- Signal intelligibility
- Length of service
- Breaks
- Shift work
- Change of tasks
- Workflow
- Timing
- Time pressure
- Disruptions
- Teamwork / individual work
- Activities involving special hazards
- Confined spaces

THE ORGANISATION OF OCCUPATIONAL SAFETY

- Responsibilities
- OSH
- Management structures at sites
- Regular meetings
- Light
- Climate
- Noise
- Colours
- Odours

WORK TASKS

- Attention
- Variation
- Predictability
- Amount of work
- Level of difficulty
- Scope for action
- Responsibility
- Choice
- Special requirements

COOPERATION WITH OTHER TRADES AND COMPANIES

- Cooperation
- Collaboration with other trades, professions and companies
- Foreign workers
- Subcontractors

QUALIFICATION

- Level of qualification
- Missing qualifications or skills
- Career opportunities
- Training facilities
- Learning on the job
- Opportunities
- Overqualification (mismatch of skills and task)

COMMUNICATION

- Social contact
- Group behaviour / cooperation
- Relationship with superiors
- Feedback
- Management style
- Status / social validity
- Languages
- Career opportunities
- Activity reporting / status feedback

- The organisation of work and working time
- The organisation of occupational safety
- Work tasks
- Cooperation with other trades and companies
- Qualification
- Communication

If hazard assessments are not specific enough or measures are missing, a moderated analysis workshop (e.g. brainstorming session, work situation analysis) is recommended after the investigation. Psychosocial risks at work can be determined by means of observation interviews, moderated analyses, workshops or standardised written surveys conducted among workers. The description of Step 3 provides a short overview of methods for conducting a risk assessment.

Methods/tools can also be combined. The procedure chosen depends, for example, on the size of the company and its areas of activity.

STEP 3

Assess hazards

Once the actual hazards have been identified in the individual areas involved, the burdens have to be assessed and a decision must be made about whether occupational health and safety measures are required.

Each country has guidelines or tools issued by prevention organisations or government agencies that can be used to assess psychosocial risk factors in each area. These are qualifiable work environment factors that can affect workers' health and safety. Publications outlining the findings of work science may also be helpful in assessing psychosocial risks.

The description of the hazards assessed should be clear and precise. General phrases like 'stressful situation' or 'administrative burdens due to internal requirements' or 'dysfunctional organisation' must be avoided. This is also relevant when documenting the whole process of risk assessment and risk reduction measures.

Depending on the method or tool chosen, threshold values or empirical comparison values may be available (e.g. when using questionnaires).

If observation interviews do not provide for a clear assessment of burdens, a moderated analysis workshop (e.g. brainstorming session) can be used to reach a decision. Clearly identifying psychosocial risks (i.e. a detailed description of the problem) facilitates brainstorming of potential measures and the development of tailor-made measures.

STEPS 4 + 5

Develop and implement measures

European Directives regulate the foundations of work design and thus the development of measures. These Directives set out the same minimum requirements for all Member States. The principle of the European OSH Framework Directive is analogous: work must be designed in such a way as to avoid any risk to life and mental health and to minimise residual risk.

Measures will generally be developed as per the STOP principle, which is intended to reduce hazards at their source.

THE STOP PRINCIPLE

1. **S**ubstitution
2. **T**echnical measures
3. **O**rganisational measures
4. **P**ersonal precautions

In this sense, the STOP principle creates a kind of hierarchy for companies to adopt in all their prevention activities. Though it is clear that some psychosocial risk factors can be eliminated, technical and, in particular, organisational

METHODS FOR CONDUCTING RISK ASSESSMENTS

PROCEEDINGS	PROCEDURE	STRENGTHS	PREREQUISITES/ LIMITS
Analysis workshops	Describe the workers, experts assess the psychosocial risks of the work in the field in question.	• Extensive reference to the experiences of the affected workers and managers provides for thorough descriptions of real stress situations. • Design recommendations can be developed directly in the workshop for the problem areas identified. • Language barriers are quickly recognised.	• An atmosphere of trust and open conversation is required. • Potential distortions due to group discussion dynamics (e.g. dominance of 'top dogs', priority given to problems experienced here and now). • Expert moderation required, by external moderators if necessary.
Observation interviews	Trained persons assess psychosocial risks based on their observations of the activity, usually supplemented by (short) interviews with the workers and employers in question.	• Records psychosocial risks independent of the worker experience. • Provides for thorough descriptions of the stress situation, depending on the method used. • Analysis results objectified through the use of analysis teams. • Surveys/interviews of workers at their usual place of work are often relaxed and low threshold. • Often the only possible method for workplaces with fewer than four workers. • Language barriers are quickly recognised.	• Observers need to be trained. • Observability of the psychosocial risks must be indicated if supplementary interviews are not possible. • Takes a comparatively long time, if many different activities/areas have to be considered.
Worker surveys	Workers use standardised questionnaires to assess the psychosocial risks of their work.	• Involves all workers. • Spotlights a wide range of psychosocial risk factors. • Standardised procedures allow for comparison with reference values. • Particularly suitable for gaining an overview and identifying problem areas. • Survey results objectified by interviewing all workers.	• Minimum size required per assessment unit to guarantee anonymity. • Should a survey spotlight hazards, these must generally be concretised in order to plan measures (e.g. in the workshops/analysis team or through observation interviews). • Sufficient involvement is required to collect meaningful data. • Reading skills are required.

measures and changes will ultimately be predominant when reducing risk factors and tackling these types of risks. Nonetheless, personal precaution plays an equally important role in a prevention strategy. The STOP principle is therefore not just a legal obligation; it helps to operationalise the assessment process, especially when defining prevention measures.

It is good practice to deal with any and all psychosocial risk factors by reducing them at the source. As such, measures should primarily target the design of conditions within the company, focusing on organisation, structure, processes, worker qualification, and activities.

The way in which management and cooperation are organised within a company also has a major impact on mental health issues; they are not just a part of the organisation or processes.

Workshops are a good way to develop measures targeting the identified psychosocial risks. Such workshops could be moderated by different prevention experts, like OSH managers, occupational physicians or psychologists.

The measures should be implemented gradually. Priorities must be set. Someone must be put in charge of the process and a deadline for implementing the measures must be determined. The chosen measures should be explained to and discussed with the workers or managers involved.

When implementing the measures, it is vital to define clear responsibilities for certain tasks (what is the supervisor/line management/other responsible department doing). The four levels of action must be kept in mind for any and all action, i.e.:

- The individual level – What can a worker do?
- The hierarchy – What is management's duty?
- The organisation – What can another department/unit do?
- Internal or external expertise – What additional knowledge is needed?

EXAMPLE

Constant interruption by mobile phones is a possible burden. Each worker is responsible for deciding when to accept a phone call. As such, it is possible to go without a mobile phone during meetings – most people will wait to be called back after a meeting. Of course, this procedure can also be applied to other activities. The relevant supervisor must approve this procedure.

As per the aforementioned levels, this could mean:

- attending a user training course;
- a supervisor buying the licence for a special programme or update;
- the IT department buying additional hardware or software or providing better Internet connections.

Send clear messages to the workers involved if something cannot be changed. The renovation of railway sites is a good example. Such work is often carried out during night shifts. The burden on train authorities due to delayed or cancelled trains is greater than that felt by the workers performing the work. As such, night shifts are stressful but cannot be changed by the employer.

Climatic conditions are often difficult to change, too. Not every construction site can be shaded, heated or cooled.

STEP 6

Check effectiveness

When checking the measures' effectiveness, there should be an assessment of whether the planned measures for work design are successfully minimising psychosocial risks in the workplace.

The following questions are useful:

- Were the planned actions taken?
- Has the intended goal been achieved through the measures?
- How did the measures affect workers' health and safety?

Effectiveness can be checked through short verbal or written interviews with workers and managers. Group discussions could also be held within the company's departments or on construction sites. In any case, the chosen procedure should be traceable and coordinated with the worker representatives.

It must be taken into account that some measures only have an impact in the medium or long term, rather than taking effect immediately. If the measures are not as effective as planned, return to Step 4 to develop alternatives.

STEP 7

Update and document the risk assessment

As in normal assessments of work-related risks, the assessment of psychosocial risks should be reviewed regularly, especially if:

- working conditions have changed;
- new occupational health and safety regulations have been introduced or new occupational knowledge has emerged; or
- there are conspicuous levels of worker turnover, health issues or complaints.

Documentation must make it clear that the risk assessment was carried out appropriately. This means that the description of the individual steps must be justified and written in an understandable, legible way.

Documentation may be in electronic or paper format and should detail the following as a minimum:

- Working areas and workers concerned
- Description and assessment of hazards
- Definition of concrete health and safety measures, including dates and persons responsible
- Implementation of the measures
- Verification of effectiveness
- Date of creation.

SPECIFIC FORMS AND EXPLANATORY NOTES are usually available in each Member State. The prevention organisation for the construction industry can help find the right materials.

Determining measures to reduce individual load factors

The proper planning of measures to reduce existing hazards is one of the key parts of the process. The measures chosen will be vital in securing a positive result but they also need to be realistic and feasible. Furthermore, their success will very much depend on their acceptance among all those involved.

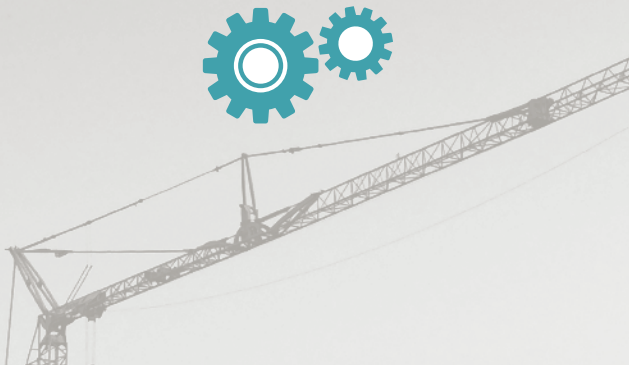
The six aspects defined are based on established concepts for reducing hazards in this field, including two aspects (organisation of OSH and cooperation between trades/companies) that are of specific relevance for construction. The examples of risk reduction measures provided are far from being complete but shall offer some ideas and encourage you to think more about tailor-made solutions.

1. THE ORGANISATION OF WORK AND WORKING TIME

2. THE ORGANISATION OF OCCUPATIONAL SAFETY

3. WORK TASKS

4. COOPERATION WITH OTHER TRADES AND COMPANIES



5. QUALIFICATION

6. COMMUNICATION

1. THE ORGANISATION OF WORK AND WORKING TIME

The organisation of work places enormous demands on construction companies. In addition to coordinating individual tasks and conducting different work processes, other companies and trades often have to be cooperated with or taken into account.

The work of one trade (e.g. transport or earthworks) can facilitate or complicate the work of another, making work more relaxed or more stressful. An important factor in the organisation of work is, of course, having enough workers for the task(s) to be performed.

There are many forms of working time in construction, such as night work, shift work, weekend work, and overtime when time is tight.

Many OSH studies have shown that night work, shift work or permanent overtime can be harmful in the long term. Such work can become a stressor, so the organisation of working time is a key tool in reducing burdens.

POSSIBLE CRITICAL CHARACTERISTICS	WORK DESIGN MEASURES
Staff have no information about new workers. No point of contact or introduction on the morning of a worker's first day at work.	Email, notices, or supervisor meeting with the team to inform them when a contract is signed. Supervisor appoints a point of contact for a worker's first week.
Customer service (Accounting) has no technical knowledge.	Establish a written workflow of who is to be contacted about what questions/topics. Ask all departments, one after the other, when customer has technical question or request.
Workers take material out of storage without asking the warehouse manager or documenting the change of quantity.	Introduce a simple documentation system for everyone to use (e.g. barcode scanner).
Workers are put in danger due to isolated workplaces.	Organise work in a way that prevents workers from being alone in a work area (prohibited by law in some EU Member States).
Complaints about the pressure of work.	Create a time buffer.
Low levels of acceptance regarding the way in which work is organised.	Including workers in the organisation of work will increase both the quality of the work and levels of acceptance among workers. Foster transparency in decision-making processes and company policy. Proper personnel planning with sufficient staff.
Actual working time practices are undermining the work-life balance.	Involve workers when planning rosters and enquire into workers' working time preferences.
Night work.	Reduce exercise requirements – the body cannot provide the same level of performance at night as it does during the day. Avoid night work whenever possible.
Poor organisation of working time.	Introduce predictive working time and resource planning to avoid overtime. Make all necessary corrections in the schedule as early as possible if it is likely that work cannot be completed by the agreed date. Workers' needs and social and family situation must be taken into account when preparing the production schedule, and planning shift work in particular.
Complaints regarding the organisation of working time and/or working hours.	Introduce timely feedback on all aspects of the organisation of working time. Take note of workers' health when planning breaks. Announce manpower planning (change of location) at an early point in time.

2. THE ORGANISATION OF OCCUPATIONAL SAFETY

The sound planning and actual implementation of safety on a construction site is a fundamental tool for minimising psychosocial risks from the outset.

Construction sites are different to other static workplaces. Construction work is performed in a constantly changing environment and products as well as construction processes are always in flux. The appointment of a health and safety coordinator is one response to this specific issue. Regular meetings with all companies present on a construction site provide an opportunity for stakeholders to agree upon collective protective measures and the associated responsibilities for their implementation. The safety and health plan should be drawn up and regularly updated based on these agreements.

Clear responsibilities are important, if not a prerequisite for a functioning safety organisation. Responsibilities need to be shared between management, those responsible for a site and the safety representatives on site.

POSSIBLE CRITICAL CHARACTERISTICS	WORK DESIGN MEASURES
Cooperation between companies including self- employed persons on site.	Organise regular meetings between all companies involved. Devise work plans for those operations where multiple companies are working at the same spot with the same equipment. Provide a written code of conduct.
Lacking information on site.	Arrange for information to be regularly provided, either orally or in writing, to the various professions and companies on a site. Consider the need to provide information in different languages.
Open-plan office. Loud due to phone calls and project meetings.	Set up pin boards between desks. Define areas for meetings. Use visual or vibration alarms and headsets for phone calls. Discuss a code of conduct.
In the event of work accidents or severe incidents.	After a serious accident or another serious event, give witnesses and team members free time to calm down and help with immediate psychological first aid.

3. WORK TASKS

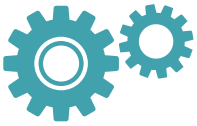
The design of work tasks forms the basis of both the skills needed and potential psychosocial risks. A 'human' task should be workable, safe, and without flaws, and should promote workers' personal development.

Autonomy, the completeness of tasks, skill variety, social interaction and room for independent decision-making are also important when it comes to motivating workers. Good management of these aspects determines the quality of the work performed.

POSSIBLE CRITICAL CHARACTERISTICS	WORK DESIGN MEASURES
ROOM FOR MANOEUVRE – MISSING OR INSUFFICIENT LEVELS OF FREEDOM IN TERMS OF TIME	
Short deadlines and time constraints.	Advise all units involved to provide realistic estimates. Regularly update order status.
Increasing time pressure due to precisely defined duration and/or times by which tasks have to be completed, although a more flexible workflow design would be possible.	Flexible break times. Influence of workers on shift plans.
No option to briefly halt work.	Teamwork, which allows for breaks through short-term overtime. Allow for interruptions/breaks, if necessary by using a stand-in.
No influence on work content or fixed specifications determining how work must be performed, i.e. working methods, working equipment are defined.	Offer workers at least two alternative working methods and tools to choose from. Ensure the completeness of tasks for each worker (with set aims, schedule, individual preparation, action/execution and checks with feedback). Experienced staff in particular best know how to implement a process and what tools to choose. Have independent, decentralised work groups who can make their own decisions about a group task and coordinate, rather than breaking jobs down into small tasks. Reduce emotional labour (e.g. being friendly to aggressive people) by setting clear codes of conduct on what is expected by the staff and how they are allowed to act.

POSSIBLE CRITICAL CHARACTERISTICS	WORK DESIGN MEASURES
LACK OF VARIABILITY (VARIETY)	
High level of repetition in individual tasks, always the same tasks, e.g. for highly monotonous activities.	Check if monotonous or physically demanding work can be organised differently. Avoid work with short repetition time, like painting, constant shovel work, cleaning or laying roof tiles. Reduce long periods of intense concentration. Change in activity during the working day. Increased responsibility for activities.
INFORMATION / INFORMATION OFFER – INFORMATION DEFICIT	
Information is missing or not up to date. For example, a worker receives insufficient information about the next customer appointment and cannot adequately prepare for it.	Equip workers with and use new media to share relevant information.
Too much information can become a burden, too!	Before sharing any information, consider who needs what information, how much, and when. Information shall serve and support the legal compliance of activities and be relevant to the job.

4. COOPERATION WITH OTHER TRADES AND COMPANIES



Construction work very often involves cooperation between different professions and companies in one place. Activities interfere and depend on each other. The more people work on a project or a construction site, the greater the likelihood of miscommunication or stress factors. The often numerous languages spoken on a construction site and the range of prevention cultures can have considerable influence here.

The main contractor's health and safety organisation and the work of the health and safety coordinator needs to reflect this by facilitating mutual information, communication, and organisational measures.

Special attention should be paid to the fact that posted workers, the self-employed or workers from subcontracted companies may not be familiar with the language in question.

POSSIBLE CRITICAL CHARACTERISTICS	WORK DESIGN MEASURES
If you need to coordinate multiple companies on one site.	Clarify skills, capabilities and responsibilities for all people working on site. Work towards an improved, transparent information and communication structure in the project/on the construction site.
If problems or complaints arise regarding cooperation between different companies/trades.	Coordinate parallel work performed by different companies with a clear schedule to make dependencies transparent for everyone. Have regular meetings with the other trades and companies if this is a long-term project/construction site to give feedback and set out a common schedule.
In case the work of one worker can endanger workers from other companies and in case of lacking communication.	Define common solutions for dangerous work situations for all companies involved in the respective work process (e.g. general safety provisions, the coordinated use of cranes, earthworks, transport). Take into account the possible presence of foreign workers who may struggle to understand your language. Provide common areas for everyone. Appoint worker representatives to support cooperation.

5. QUALIFICATION

Everything is better from the outset if a worker's qualifications and capabilities (i.e. their knowledge and experience) align with the tasks entrusted to them.

A qualified worker who meets the specific demands of the job at hand makes fewer mistakes, works in a safer manner and is more relaxed.

However, it is also important to consider underdemand, i.e. unused skills and competences, which causes frustration and resentment.

POSSIBLE CRITICAL CHARACTERISTICS	WORK DESIGN MEASURES
In case the worker's actual qualifications do not correspond to the task at hand. If new techniques and skills are needed due to new materials, technologies or work equipment.	Provide professional training and clear instructions. Inform or initiate offers for vocational education and training. Provide subject-specific training and qualification offers, either in house or on the job. Check the number and type of occupational safety instructions and change them if necessary. Involve workers in the assessment of skills shortages or unused qualifications. Offer transparent personal development measures such as annual worker reviews.
If workers feel overburdened by their work.	Review and change the content and design of the work, if necessary. Give workers the option to pass on their knowledge e.g. within a mentoring programme or by giving in-group training. Organise performance appraisals and acknowledge skill building.
Underdemand at work.	Reconsider the work organisation. Provide a broader scope of activities to the person. Check whether the concerned workers can be moved to another job, more in accordance with their qualification.

6. COMMUNICATION

Social working conditions on a building site (i.e. languages, safety cultures, the division of labour between trades, communication between management levels, cooperation between different companies, differences between workers with different employment statuses) all contribute to the work atmosphere and can be a burden or a blessing, depending on how they are organised.

POSSIBLE CRITICAL CHARACTERISTICS	WORK DESIGN MEASURES
Working alone without contact with colleagues the whole day.	Organise projects with other departments or rotate jobs with colleagues.
No positive feedback from managers. Missing appraisal.	Establish a routine for passing on positive feedback from customers. Hold debriefings after projects to talk about achievements and lessons for the future.
Foreign workers who are partly isolated from communication structures and lack information.	Take the time to provide all workers with the same level of information. Include workers in all possible measures. Consult workers explicitly. They are often best placed to identify the things that lead to better communication/cooperation.
Unclear communication structures and repeated disruption because of misleading communication.	Clarify competences and responsibilities. Work towards an improved, transparent information and communication structure within the company. Reflect on and discuss leadership behaviour. Introduce regular feedback on working situations and opportunities for improvement.
Language problems caused by multiple nationalities working on the same site.	Provide information on occupational health and safety, codes of conduct or operating instructions in multiple languages. Check whether workers have language skills and can provide others with information. Attend or offer training if this is possible within the company.
Conflict in the workplace.	Create opportunities for aid and support. Health and safety training should be provided, or conflict management measures offered (possibly also externally).

To provide a comprehensive assessment of working conditions, psychosocial hazards need to be part of the assessment. This is not an easy task, especially for construction companies, which operate in an environment with continuously changing working conditions.

This guide describes the general conditions of construction work, proposes a concept for the evaluation process, lists methods to collect data and information, identifies potential hazards and suggests measures to reduce these hazards, all of which can provide assistance to companies in the construction sector when assessing working conditions.

EFBWW
European Federation
of Building and Woodworkers
Rue Royale 45
1000 Brussels
Belgium
Tel. +32 2 227 10 40
info@efbh.be
www.efbww.org

FIEC
European Construction Industry
Federation AISBL
Avenue Louise 225
1050 Brussels
Belgium
Tel. +32 2 514 55 35
info@fiec.eu
www.fiec.eu