



# **Peer Review on the “Use of web-based tools for OSH risk assessment”**

**Dublin, Ireland, 2-3 October 2017**

**Checklists – an established Swedish e-tool for companies in many high-risk sectors**

**Peer Country Comments Paper - Sweden**

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## **1 Background to the Swedish approach to e-tools for OSH risk assessment**

In Sweden as in other EU Member States, risk assessment is a core activity in occupational safety and health (OSH) management. In the Swedish Work Environment Act (SFS 1977:1160) and in most of the around 80 Swedish OSH provisions and especially in the most recent ones, risk assessment is mentioned as one of the principal requirements. In the provisions, short guidance may be included on how to conduct risk assessments. One of the main provisions, AFS 2001:1 about systematic work environment management includes a requirement for engaging experts in the OSH management, if the OSH competence, e.g. regarding risk assessment, in the organisation is not sufficient. Even if risk assessment is essential in the OSH management, there is little public debate about risk assessment. However, it is primarily the responsibility of the company to decide whether their OSH competence is sufficient.

The provisions are issued by the Swedish Work Environment Authority (SWEA). However, apart from the short guidance included in the provisions and general information about risk assessment and OSH management, SWEA provides only limited support on how to conduct risk assessment and have no e-tools for this purpose. This is mainly due to "the Swedish model", where the authority draws up the provisions and the social partners provide guidance to their members on how to fulfil the requirements in the provisions. The guidance provided by the social partners is usually adapted to specific sectors. For this purpose, the social partners have jointly owned organisations (Prevent and Suntarbetsliv), who develop different kinds of material aimed at supporting the workplaces. When risk assessment is mentioned in Sweden, it is often in relation to the publication and dissemination of new advice on OSH which may include, but not solely focus on, risk assessment (e.g. for a specific sector).

SWEA inspect companies and put demands on OSH and OSH management including risk assessment. The social partners may provide limited support to their members, which primarily consists of the material produced jointly by the social partners and visits, by the trade unions safety representatives, to micro and small enterprises (MSEs). In the construction sector the employers' federation also provides personal support through regional OSH advisors. However, the support provided by the social partners is not intended to help out in solving problems but is rather focused on general advice which may be more or less adapted to each workplace. For more elaborate support, other actors such as occupational health services are available. In Sweden, around 65-70 % of all employees are covered by the OSH service, with the highest outreach in the largest organisations and in high-risk sectors.

The Swedish OSH status is in one way comparable to other EU Member States. The distribution of risks between sectors in Sweden as in many other Member States is similar; agriculture, transport and construction are among the sectors with the highest risks. However, the frequency of occupational injuries is among the lowest within the EU.

Sweden is a technically well-developed country and a huge share of the population, as well as workplaces, has access to computers and internet. Currently there are rarely discussions about limited access to computers and the internet and there is a transition towards using the internet for an increasing number of services.

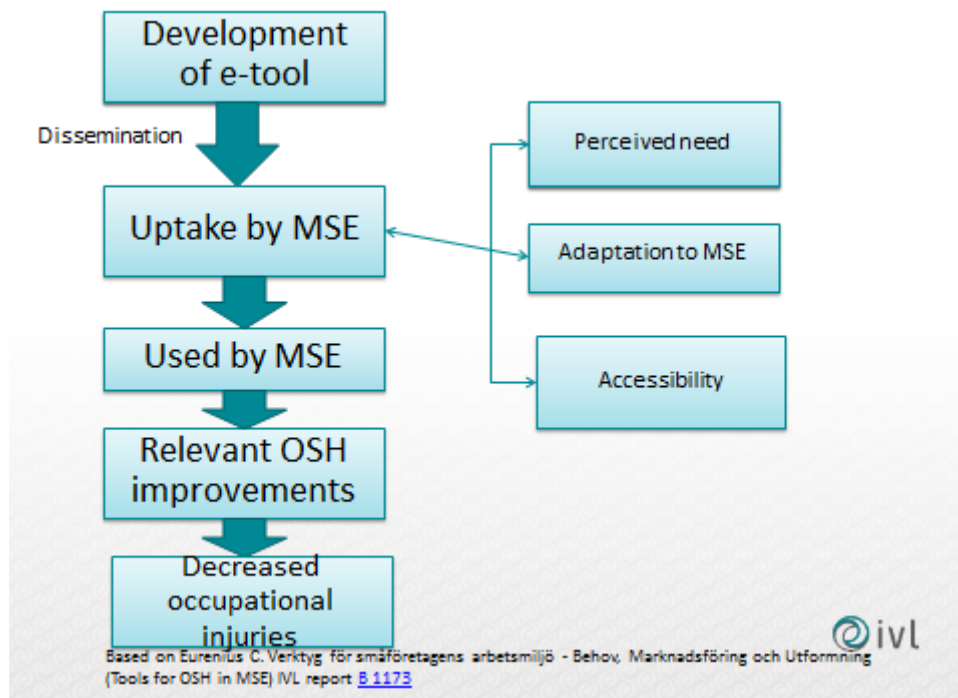
There is limited knowledge about the number of risk assessments carried out, the quality of the risk assessments and the effect of them.

## 2 Assessment of the policy measure

### 2.1 A programme theory for enterprises use of e-tools

The following assessment and discussion about the Swedish checklists and the Irish BeSMART is based on the programme theory (Vedung 2009) described in Figure 1.

Figure 1. A programme theory describing how e-tools contribute to the desired effect of decreased occupational injuries.



Source: The programme theory is based on Eurenus (2000).

The outcome in terms of *decreased occupational injuries* is not possible to evaluate. This outcome can be considered a long term achievement and is difficult to measure. For example, statistics on occupational injuries may be difficult to use, as the use of the e-tools will probably increase OSH awareness which might lead to increased reporting of occupational injuries. Especially among MSEs, underreporting of occupational injuries is often described and discussed (EU-OSHA, 2016). In addition, the injury frequency is affected by many different factors and it is extremely difficult to distinguish the impact for each factor.

Evaluation of *relevant OSH improvements* is also difficult to evaluate. Usually, there is no reporting of what measures are undertaken and the relevance of the measures (e.g. are the measures those which are most needed) is rarely even discussed.

The *use* of the e-tools is also difficult to evaluate, as the information available usually concerns downloads (as for the checklists) or registrations (for BeSMART) which may be used as an indicator on *uptake by MSEs*.

### 2.2 The Swedish checklists

In Sweden, e-tools in the form of checklists for risk assessment have been available since the 1990s. The checklists were developed in the 1980s within a research project aimed at supporting MSEs in improving their OSH conditions. The checklists were originally printed and sold, but were subsequently made available for free download online.

The first set of around 40 checklists were developed for high-risk sectors during a period of around 15 years by a research organisation (IVL Swedish Environmental Research Institute) together with the social partners and were published by Prevent. Most of the checklists have been revised once or twice.

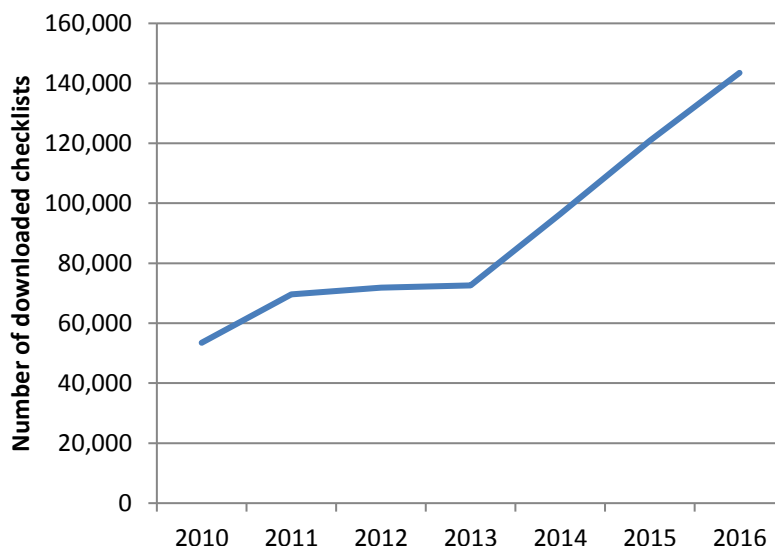
The checklists are available online and can be downloaded for free (as pdf-documents). They are also included in a tool – Regelbanken - where it is possible to make your own checklist through combining a selected set of ready-made questions from existing checklists. In this way, the checklists can be adapted to each workplace.

During 2017, the checklists have been further developed and many of them can now be used and filled in directly on a smartphone, computer or tablet. There are discussions about further developments, including mobile applications.

### 2.3 Uptake of checklists compared to BeSMART

Figure 2 shows the total annual download of checklists since 2010.

Figure 2. Total number of downloaded checklists for all sectors from 2010 to 2016.



Source: Prevent

The number of downloads can be compared to BeSMART with 43 000 registered users in 2017. In 2016, Sweden had 308 000 enterprises with 1-49 employees compared to Ireland's 160 000 SMEs in 2015. Notably, Ireland's SME base is likely to include a small number of companies with 50–200 employees as well.

It seems that both the Swedish checklists and BeSMART have reached out to a large number of enterprises. Considering the differences in the number of enterprises between the countries and the different measures (download versus registration), it is not possible to draw any conclusions on any of the e-tools being better or worse at reaching out to MSEs/SMEs. Both tools seem quite successful at reaching out to MSEs, in particular, and it is well-known that MSEs are more difficult to reach and that they do not work as systematically with OSH as large enterprises.

### 2.4 Dissemination

Social partners have been involved in both the development and dissemination of the Swedish checklists. In addition, the inspectors from SWEA often recommend checklists especially when inspecting MSEs in the sectors for which checklists have been developed. However, several other tools and information leaflets may also be recommended. Whether and how the checklists are presented or recommended in the inspection is decided by each inspector.



In Sweden, regional safety representatives (RSRs) from the trade unions visit many MSEs and the frequency of these visits is on average much higher than inspections from SWEA. RSRs may also recommend checklists when advising MSEs on what is needed to improve OSH and OSH management.

In comparison, BeSMART is clearly promoted as a strategy of the authority in providing support to MSEs in complying with the legal requirements, even if there is no guarantee that usage of BeSMART will result in the company passing an inspection without remarks.

## **2.5 The target groups' perceived need of the e-tool**

In a forthcoming report (EU-OSHA, work package 2 from the SESAME project) the attitude and values in MSEs are discussed, based on interviews with around 160 enterprises. To summarise, many MSEs state that they want the work environment to be safe and healthy and it would be a disaster (or at least something they absolutely want to avoid) if an employee had an occupational injury. However, they also consider their work environment to be safe and that there is no great need for risks assessment. They usually think they are aware of the existing risks and usually they also say that the risks are under control. When they work with OSH, it is usually due to a reactive strategy (i.e. when an inspector, safety representative, employee or RSR demands improvements or when something has happened). Systematic identification of risks is, however, not common among MSEs. From this perspective, there is no obvious general need of support in order to identify what OSH conditions needs to be assessed and controlled or risk assessment tools. If awareness of a need for tools arises, it seems to be due to the reactive approach to OSH, e.g. initiated by an inspector or RSR and often an integral part of a personal meeting, where different kinds of argument are used to motivate MSEs to make use of the e-tools.

The different arguments for improving OSH management and using checklists depend on the intermediary involved. For example:

- SWEA provides support on how to work with OSH management. As an example on how companies can investigate their own work environment, the checklists are presented as a good tool to use ([www.av.se](http://www.av.se))
- When visiting MSEs, RSR may advise them to make use of checklists to investigate their own work environment. This may be supported by arguments such as that the checklists are free for download and use, and they help out in identifying risks which can easily be forgotten as it is common to get 'blind to one's own shortcoming' (an argument which most MSEs agree with). An advantage with the checklists is that they are used by the enterprise, without any external person interfering, which can make the manager more comfortable using the checklist. When combining these arguments with a reminder on the risk assessments required according to the legislation, checklists seem to be a tool which does not pose a threat to MSEs, but can be perceived as useful in identifying risks that they might have forgotten about and in fulfilling the regulatory requirements.
- Links to the checklists are available on several websites and usually also on the social partners' websites.
- For anyone searching for information on OSH on the web, the checklists tend to be quite high up on the search results, especially when combined with the name of the sector. Links to the checklists are also provided on the websites of SWEA and the social partners. In this way, the checklists support a reactive OSH strategy which is common in MSEs, as shown in work package 2 of the SESAME project.

## 2.6 Adaptation of the e-tools to MSEs

In the development of the checklists, the adaptation to the needs and prerequisites in small enterprises has been in focus. There are several similarities between BeSMART and the Swedish checklists. However, there are some basic features which cannot be compared to BeSMART due to a lack of information about BeSMART. These features may be interesting to discuss - see section 4 for further questions of interest.

The questions in the checklist have a strong focus on good practice and often present alternative measures that can be used to reduce a certain risk. The good practice approach is very well adapted to MSEs, as they often have a lack of OSH knowledge and may have difficulties finding good solutions to the OSH problems that they encounter.

There is strong evidence for good practice being the best way of supporting OSH improvements in MSEs (EU-OSHA, 2016, Antonsson and Hasle, 2015). There is also evidence that MSEs lack OSH knowledge and have difficulties in assessing risks, especially long-term risks which are difficult to identify and assess, including chemical risks, risk of strain injuries and psychosocial risks. Acute risks such as risks of accidents and especially common accidents or accidents that are well-known within a sector are more easily recognised, though they may also be underestimated. Providing advice about good practice for sector-specific risks is a way of circumventing the huge problems with the difficulties of risk assessments. There are however limitations to good practice. It can only be provided for the risks that are known and common. Freak occurrences and unusual risks can hardly be dealt with through a good practice approach. In addition, if good practice is not updated regularly, it may reflect old-fashioned measures.

Another adaptation of the checklists to MSEs is that the checklists are organised in a way which is easy to understand for MSEs. The checklist may for example reflect the production process, starting with storage, continuing with manufacturing, supplementary treatment of the products and delivery. In addition, questions are often included about control measures that ought to be in place (e.g. for certain machines). In this way, the checklists are based on the MSEs' understanding of their workplace and the questions are easy to understand. As the questions often include a very short comment about the risk, the use of checklists is also a way of learning more about OSH in the sector, including risks and control measures as well as routines that need to be in place.

- Comparison of the questions in the Swedish checklists with the BeSMART checklists should be discussed at the workshop.
- Another discussion relates to the extent to which authorities may give concrete good practice advice to enterprises. This is not a problem for the Swedish checklists, as they are produced by Prevent, an organisation owned by the social partners. Swedish authorities have been reluctant to give such advice for several reasons. For example, they may not wish to give advice that potentially hampers technical development. Equally, they may not be prepared to take the legal responsibility for inspectors providing concrete advice that may not be good advice.

## 2.7 Accessibility

The accessibility of the checklists has been described above under dissemination. Both the checklists and BeSMART are provided at no cost for the user. BeSMART is supported with personal advice from inspectors. The checklists may also be supported by personal advice, including from RSRs or inspectors, but not in such an organised way as BeSMART.

## **2.8 Qualitative evaluation of checklists**

The Swedish checklists were included in an evaluation of methods for chemical risk assessment for MSEs (Antonsson et al., 2009). The checklists cover all OSH aspects, not only chemical risks. Other methods that were evaluated together with the checklists were: 1) on your own (companies had to find out themselves how to identify and evaluate risks), 2) a short brochure from SWEA describing the general principles of chemical risk assessment, 3) a book from SWEA describing chemical risk management and what is required as well as advice on how to go about it, 4) a short checklist covering only chemical risks and not wider sector risks, 5) recommendation to consult the occupational health service (on the enterprises' expense).

With the exception of developing their own methods, the evaluation showed that complete checklists (not the one only covering chemical risks) was the method which was accepted and used by most MSEs. Importantly, using the checklists resulted in far better quality in the risk assessment than methods developed by the MSEs themselves.

When the checklists were developed, they were also evaluated. The evaluation showed that the checklists resulted in the identification of OSH problems and the implementation of various control measures. In addition, the evaluation also showed that some of the measures undertaken concerned risks that were not mentioned in the checklists. This indicates that when using the checklists other issues than the ones in the checklist can be identified and assessed (e.g. through discussions between the employer, safety representative and/or employees). The checklist questions, entitled "Any other problems?", may have contributed to this.

## **2.9 Other e-tools**

The checklists are not the only e-tools used for risk assessment. However, other tools may have a slightly different or broader focus. For example, KemiGuiden is a tool for chemical risk management in MSEs, which includes risk assessment. KemiGuiden is currently being translated into English by EU-OSHA and will be presented as an e-tool during the European week for Safety and Health at Work in 2018. Within a research project, KemiRisk, a tool for chemical risk assessment is currently being developed. The tool is available in a test-version and will be published by the end of 2017.

### **3 Assessment of the success factors and transferability of BeSMART**

There are obviously many similarities between the Swedish checklists and BeSMART.

- Both are based on a checklist approach.
- Both focus on MSEs and offer tailored advice to well-defined sectors.
- Both focus on simplicity.
- Both are promoted by the authorities, though in different ways.
- Funding is available, though from different sources. Additional funding could make it possible to develop e-tools for more sectors and to intensify the dissemination of them.

However, there are also differences.

- The checklists involve the social partners in a way which BeSMART do not seem to do.

Some questions need clarification.

- The checklist focus on good practice and control measures and how to comply with the demands. It is not clear to what extent BeSMART does this.
- How can authorities deal with detailed advice to MSEs in order to facilitate compliance? What is the national policy and what is the legal framework?

The checklists can easily be translated into other languages. However, if the checklists are to be used in another national context, it is recommended that they are adapted to each national context. This can be done through discussion with the social partners and complemented by letting MSEs in the relevant sectors test the checklist and give feedback, thus, taking into account the needs and conditions of the MSEs in the target group.

## 4 Questions

- Is risk assessment the right term for what we want to achieve? Risk assessment can also be seen as a step towards the goal – risk elimination, risk control, risk reduction or a safe and healthy work environment.
- What is required if e-tools are to be adapted to MSEs? MSEs often lack knowledge on OSH and the SESAME-project has shown that they have scarce knowledge about many different risks and in particular long-term and subtle risks but also several acute risks can be ignored or under-estimated. Risk assessment tends to be difficult for MSEs and there is a huge risk of not identifying or of underestimating risks.
- From an impact point of view, what can be expected to improve OSH conditions most; risk assessments made by MSEs themselves or risk assessment made by experts for a sector in combination with advice on good practice on how to reduce or eliminate common OSH problems in the sector? And which one of these can be implemented most easily and at the lowest cost?
- What kinds of topics are included in BeSMART? Is concrete and detailed advice given on good practice? The checklist focus on good practice and control measures and how to comply with the demands. It is not clear to what extent BeSMART does this.
- Are there any problems related to providing concrete advice on measures, not only on regulatory demands?
- How can authorities deal with detailed advice to MSEs in order to facilitate compliance? What is the national policy and what is the legal framework?

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## Annex 1 Summary table

The main points covered by the paper are summarised below.

### Situation in the peer country relative to the host country

- Similar to Ireland when it comes to the distribution of occupational injuries across sectors, but Sweden is at the lower end of the spectrum in terms of the frequency of such injuries.
- Both in Sweden and Ireland, MSEs are the ones that are most difficult to reach but also the ones with the most need for support in terms of complying with the demands for risk assessments.
- Sweden has a well-developed system for cooperation between the social partners, which has a major impact on OSH support to workplaces. Ireland and BeSMART seems to rely more on the Irish Health and Safety Authority.

### Assessment of the policy measure

- A limitation with the checklist is the voluntary approach, though checklists may be recommended in inspections.
- The voluntary approach has advantages, as the focus is on needs of MSEs and what can be gained from improving OSH.
- Checklists have been used and developed for almost 30 years and are still used and appreciated. There are still efforts being made to develop new checklists and develop the IT-platform used for providing checklists.

### Assessment of success factors and transferability

- The adaptation to MSEs' needs, conditions and their (lack of) understanding of OSH is essential. This includes focussing on good practice rather than regulatory requirements (though the good practice of course meets the regulatory requirements).
- The provision of checklists via the web that are free-of-charge is essential for their success.
- The support from different stakeholders such as employers' organisations and trade unions as well as authorities is essential as it gives legitimacy to the checklists.
- The checklists can easily be translated into other languages. However, it is recommended that they are adapted to the national context in collaboration with stakeholders. It is also important to allow MSEs to test the checklists before publishing them.

### Questions to the host country in the Peer Review

- What kinds of topics are included in BeSMART? Is concrete and detailed advice given on good practice?
- Are there any issues related to providing concrete advice on measures, not only on regulatory requirements?

## Annex 2 Example of relevant practice

Name of the practice:	Checklists – an established Swedish e-tool for companies in many sectors at high risk
Year of implementation:	Since the 1990s – ongoing
Coordinating authority:	Coordination by a research institute, IVL (in the beginning) and Prevent (currently) in collaboration with the social partners. No authority involved.
Objectives:	To support MSEs in identifying OSH risks and developing an action plan to control selected risks.
Main activities:	<p>The checklists were developed in a research project aimed at developing methods to support MSEs in improving OSH (at the time of the project OSH management was not discussed).</p> <p>The checklists proved to work and the checklists were first published (paper-version) and after a few years, Prevent (previously Arbetarskyddsnämnden) published the checklists online. Currently, new IT-solutions allowing interactive use on the web have been developed.</p> <p>New checklists are continuously being developed together with the social partners for new high-risk sectors and new topics.</p>
Results so far:	More than 100 checklists are available and in 2016, more than 140 000 checklists were downloaded. The evaluations made, show that using the checklists is a good way of identifying risks and the need for OSH improvements. The use of checklists also results in improvements. However, there are also limitations to the checklists. OSH problems, even those included in the checklist, may be missed and all risk assessments are not 'correct'. However, compared to other risk assessment methods, using the checklists generate better results in terms of being accepted and used by MSEs, as well as ensuring a high standard in terms of identifying risks.



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