



European Construction Sector Observatory

Policy fact sheet

Sweden

Vision Zero

Thematic objective 2

September 2020



In a nutshell

Implementing body	Swedish Construction Federation (<i>Byggföretagen</i>)
Key features & objectives	Programme of activities and services designed to help the construction sector to improve health and safety and achieve zero fatal accidents.
Implementation date	2011 – ongoing
Targeted beneficiaries	Construction sector employers and employees
Targeted sub-sectors	All sub-sectors
Budget (EUR)	1.5 million per year
Good practice	★★★★☆
Transferability	★★★★★

The main pieces of national legislation that regulate health and safety at work for the construction industry are the Work Environment Act (1977)¹ and the Swedish Work Environment Authority's provisions for Building and civil engineering work (AFS 1999:3)². Both define the main occupational safety and health (OSH) obligations for different stakeholders involved in construction site operations.

The OSH challenge has been a priority for Swedish policy-makers over the past few decades³. This continued focus has enabled the country to consistently record one of the lowest rates of fatal accidents in the EU over several years.

As part of the national effort to reduce fatalities and serious occupational accidents in the construction sector, a series of surveys were conducted between 2005 and 2013. Their findings fed into the 'Beyond Zero – A Health-Promoting Construction Industry'⁴ study (2011-2016) conducted by the Swedish Construction Federation

(*Byggföretagen*) and the University of Lulea (*Luleå tekniska universitet, Institutionen för ekonomi*).

The study identified a complex mix of reasons for the occurrence of accidents on construction sites:

- Personal factors such as age and attitudes towards OSH;
- Safety culture at the construction site;
- Stress;
- How well planned the work is⁵.

On the premise that accidents, and fatal accidents in particular, are an unnecessary and avoidable tragedy, the Swedish Construction Federation launched the Vision Zero Programme in 2011.

Vision Zero aims to eradicate the occurrence of fatal accidents in the construction sector by improving health and safety on construction sites. Following the conclusions and recommendations put forward by the Beyond Zero study, the programme adopted a non-coercive approach that places strong emphasis on awareness raising and OSH training.

Vision Zero encompasses a number of complementary activities. A range of materials inform and guide OSH improvements. Periodic meetings and events are held to ensure the involvement of labour unions and construction companies. The 'Safety Park', created in 2019, provides an OSH training and demonstration facility. Free online OSH training⁶ and fee-paying OSH training programmes are available to construction workers⁷. Regional advisors help employers to improve safety⁸.

To date, the zero fatal accident target has not been reached yet. Nonetheless, public and private stakeholders believe that it is having a positive impact on attitudes and behaviours toward health and safety. However, a detailed assessment of the programme's effectiveness is made difficult by the lack of quantitative and qualitative objectives, other than zero fatal accidents, and a lack of published data on the results and impact achieved.

1.

General description

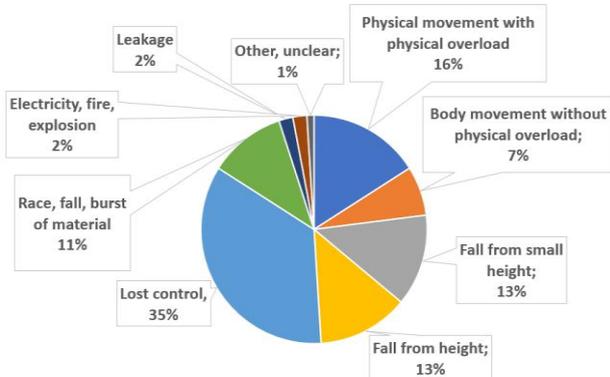
The Vision Zero Programme was developed to implement the recommendations put forward in the study conducted by the Swedish Construction Industry Federation and the University of Lulea⁹. The study highlighted the importance of addressing negative attitudes toward safety in order to prevent unsafe behaviour. The recommended solution was to adopt a non-coercive method and encourage greater management proactivity¹⁰.

The study also identified four key ingredients needed to create a safer work environment¹¹:

- Clear leadership;
- Education and knowledge;
- Clear requirements and follow-up; and
- New attitudes towards safety.

Other studies conducted by Lulea University on accidents and fatalities at work have also fed into the Vision Zero Programme. For instance, the 2018 ‘Work Injuries in Construction’ study (*Arbetsuskador i byggverksamhet*) provides a list of the main causes of accidents on construction sites, as illustrated in Figure 1.

Figure 1: Main causes of construction sector accidents (1995-2018)



Source: Beyond Zero¹²

The Vision Zero Programme targets zero fatal accidents in the construction sector and has implemented a range of activities to help achieve the zero-accident goal.

Vision Zero provides **free online occupational safety and health (OSH) training** for supervisors and safety representatives. Upon completion, trainees are awarded a certificate. The Swedish Construction Federation intends to make the completion of this training course a mandatory requirement for its members in 2021¹³. In addition, the Construction Industry Centre, which is part of the Swedish Construction Industry Federation, has updated its list of **fee-paying training courses** that cover a range of key safety aspects such as handling asbestos, etc¹⁴.

In 2019, Vision Zero launched the ‘**Safety Park**’, which is based on the Finnish example. The Safety Park is a 15,000 sqm facility that provides safety training for construction workers. The park offers 15 training scenarios for the different types of risks associated with working at height, asbestos, etc. Work stations can be adapted to provide training on specific topics. The Safety Park’s target audience is the entire construction workforce and potential new entrants, including safety representatives, supervisors, purchasers, planners, skilled workers and apprentices, as well as teachers and students. The park also provides demonstrations of best practices.

Vision Zero has produced a **range of materials, templates and documents** for construction sector stakeholders to support the creation of a safer work environment, as shown in Table 1. The purpose of these materials is to raise awareness and simplify monitoring tasks for safety managers. The materials have been disseminated at a number of OSH-related conferences and events.

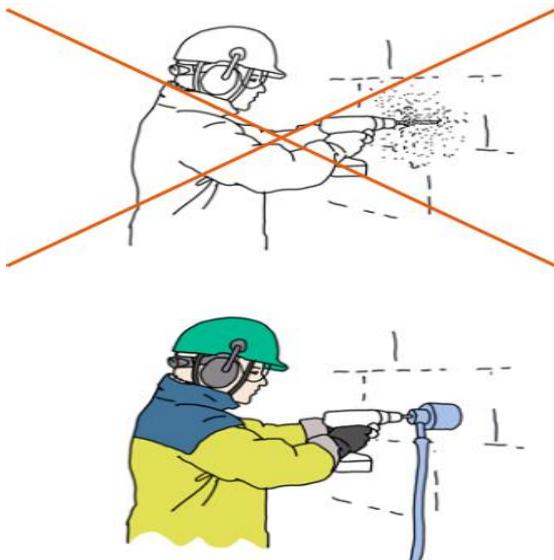
Table 1: Vision Zero-dissemination materials and documents

Document	Description
Report block	Template for safety managers to report and describe incidents.
The Silent Book	Visual book of construction safety “do’s and don’ts”.
Templates and checklists	Safety monitoring tools, such as checklist for safety rounds.
A safe workplace	Report that describes the key features of a safe working environment.

Source: Swedish Construction Federation¹⁵

Figure 2 shows an example of the visual “do’s and don’ts” that figure in the Vision Zero ‘Silent Book’. The purpose is to provide construction employers and employees with simple and easy to understand guidelines on safe and unsafe working practices.

Figure 2: Example of an illustration from the ‘Silent Book’



Source: The Silent Book¹⁶

To complement Vision Zero training and support materials, the programme also involves a series of support initiatives.

Two signage models have been developed for construction sites, as shown in Figure 3:

- An entrance sign showing recommended protective equipment;
- A notice board for the working environment.

Figure 3: Signage models for construction sites



Source: Swedish construction industry¹⁷

The Swedish Construction Federation (Byggföretagen) and the construction company Erlandssons Bygg have collaborated to develop a **warning vest for site managers**. The vest must be used by site managers on a construction site in the event of a workplace accident.

Figure 4: Warning vest for site managers



Source: Swedish construction industry¹⁸

Regional work environment advisors provide member companies of the Swedish Construction Federation with support and advice¹⁹.

To help change attitudes on safety within the sector, the Swedish Construction Federation hosts conferences and meetings (such as the National Security Day) to bring stakeholders together to discuss the safety challenge and invite their opinions on the Vision Zero initiative²⁰.

The National Security Day is organised every April to raise awareness about safety at work. The activities and discussions taking place during this day are used to focus on safety culture and real accidents and how they could have been avoided.

2.

Achieved or expected results

Data on the results of the Vision Zero Programme has not been published, which makes it difficult to assess the full impact of the programme on the construction sector, beyond the ultimate goal of zero fatal accidents. This objective is clear and relatively straightforward to assess, using national statistics on the number of fatal accidents in the sector each year.

However, it is difficult to assess the results and impact achieved by each of the activities carried out as part of the Vision Zero Programme. No data are published, for example, on the number of participants that have received OSH training through the programme, nor on the number of companies and individuals that have utilised the facilities or training activities provided by the Safety Park. There is a similar lack of data available on the number of persons that have used the support materials that the programme has made available.

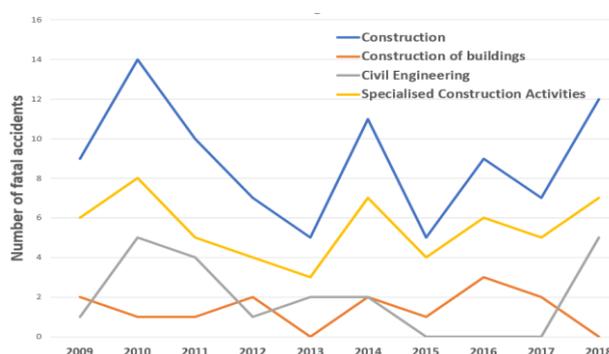
Published data on the annual number of fatal accidents in the Swedish construction sector, as shown in Figure 3, shows that Vision Zero has not managed to achieve its end goal of zero fatal accidents in the sector. The data provides an overall picture of fatal accidents at sector and sub-sector levels. Following a decline between 2011 and 2013, the overall number fluctuated year on year.

The best performing sub-sectors, however, are civil engineering, which achieved zero fatal accidents between 2015 and 2017, and the building sub-sector, which recorded zero fatal accidents in 2018. In contrast, specialised construction activities have consistently accounted for the majority of fatal accidents in the sector.

Although Eurostat data on this indicator do not extend to 2019, figures published by the Swedish

National Statistics Office (which concur with Eurostat data for 2010-2018) show that 10 fatal accidents were recorded in 2019²¹. That is slightly less than for the previous year.

Figure 1: Number of fatal accidents in construction in Sweden



Source: Eurostat²²

Although the Vision Zero Programme has not met its overall goal, Sweden consistently performs much better than the EU-27 average on two related indicators – the number of fatal accidents in construction and the number of accidents in construction in relation to the number of persons employed²³.

Table 2: Number and incidence rate of fatal accidents in construction in Sweden

Number of fatal accidents	2014	2015	2016	2017	2018
Number of fatal accidents in construction					
Sweden	11	5	9	7	12
Average EU 27	27.4	28.4	24.9	25.1	NA
Incidence rate of fatal accidents in construction					
Sweden	3.4	1.5	2.62	1.97	3.3
Average EU 27	6.91	7.07	6.28	6.31	NA

Source: Eurostat²⁴

3.

Perspectives and lessons learned

The results and impact of the Vision Zero Programme and its activities are unclear.

The lack of data available on the performance and effectiveness of the programme's activities makes it difficult to assess what has worked and what has not worked. While feedback surveys have been circulating, the results have not been made public.

In terms of what can be assessed, statistics show that the number of fatal accidents per year in construction has been relatively constant throughout the programme implementation period, varying between five and 14 per year. That suggests that the programme has not had a noticeable impact on the number of fatal accidents. One possible explanation could be that low numbers of fatalities, compared to the EU average, are simply harder to reduce than higher numbers. They require almost a complete reach throughout the sector to ensure that every company follows safe practices.

The Vision Zero approach focuses on the safety responsibilities of construction companies on construction sites. However, it lacks focus on the responsibilities of construction clients.

According to the Programme Manager at the Swedish Construction Federation, the Vision Zero Programme has not yet provided focus and guidance on the safety responsibilities of clients on construction sites²⁵.

As the drivers of construction projects, it is essential that clients understand, practice and demand occupational safety and health (OSH) as part of any construction site or project. To make

OSH common practice on sites and in projects, all parties must be involved and the roles and responsibilities of each party must be clear.

Although the programme has not yet achieved its end goal of zero fatal accidents in construction, stakeholder engagement (internal) indicates overall satisfaction with the programme.

According to the Regional Manager of the Swedish Construction Federation, both trade unions and policy makers have shown their interest in, and satisfaction with, the programme and its impact²⁶. In addition, construction sector employers and employees were involved, allowing to get their feedback. The overall consensus of opinion is one of satisfaction with the programme²⁷.

The 'soft-law' approach adopted by the Vision Zero programme works in Sweden.

Vision Zero was designed as a 'soft law' (non-legally binding). Consequently, emphasis was placed on communication and dissemination. This approach may help to explain the lack of enforcement rules and the lack of clarity about the programme's results and impact.

The 'soft law' approach favoured in Sweden contrasts with the 'hard law' (legally binding) approach adopted in Denmark, for example, in relation to the roles and remits of health and safety inspectors in both countries. In terms of impact, the Swedish approach resulted in inspectors being accepted in the field as partners, whereas their counterparts in Denmark were perceived as law enforcers²⁸.

4.

Conclusion and recommendations

National statistics show that fatal accidents in the Swedish construction sector have consistently fluctuated between five and 14 per year over the last decade. Although these figures remain well below the EU average, they indicate that the programme has not yet managed to achieve its zero fatal accident goal.

At the sub-sector level however, both the building and civil engineering sectors managed to achieve a zero-accident rate in different years over the last decade. This demonstrates that the goal is achievable. However, achieving a zero-accident rate across the whole sector will require the programme to support and incentivise all companies to implement OSH good practices.

Although the zero-accident target has not yet been reached, the Swedish Construction Federation confirms that the programme has been well received and is valued by public and private stakeholders, based on stakeholder feedback. It is also having a positive impact on attitudes and behaviours toward health and safety. However, a detailed assessment of the programme's results and impact is made difficult by the lack of quantitative and qualitative objectives, other than zero fatal accidents, and the lack of published data on the results and impact achieved.

Looking forward, four recommendations are suggested to help improve the impact of the Vision Zero Programme:

- Consider implementing a monitoring and evaluation system to assess the results and impact of the programme and its component activities. The evaluation findings can then be used to further improve the programme;
- Consider publishing data and findings on the results and impact of the programme. This

would help support policy learning across the EU;

- Consider extending the programme's scope to target a zero-accident approach to non-fatal accidents. This will require improved systems to record and report minor accidents;
- Emphasize the importance of better tracking and reducing the number of non-fatal injuries to help the programme achieve its next step: going 'beyond zero'.

Overall, the Vision Zero Programme is rated as a '4-star good practice measure' on a scale of 1 (low) to 5 (high).

This score is based on the broad range of informative OSH materials and support services that the programme has developed and made available to construction companies. They build on Sweden's long-standing record of success in reducing the accident rate in construction, which is already one of the lowest in the EU. In addition, feedback from stakeholders indicates that they value the programme. However, having not met its zero-accident target and with a lack of published data on the results and impact of the programme and its activities, a 5-star rating cannot be awarded.

The Vision Zero Programme is rated as a '5-star transferable measure' on a scale of 1 (low) to 5 (high).

This score is based on the fact that Vision Zero is a multi-national concept that was created in Sweden and adapted in other countries. The creation of the Safety Park provides further evidence of transferability, as it is modelled on a similar facility established in Finland.

Endnotes

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