



Concawe Safety Management Group: strategy review

A broad survey and subsequent review of Concawe's SMG strategy points to a number of topics that will be key areas of focus for the SMG in the coming year with a view to further improving safety performance in the European downstream oil industry.

The Safety Management Group (SMG) chaired by Harald Hess of OMV, serves as the technical management committee on all issues relating to personal and process safety in the refining and marketing of petroleum products. Its mission is to promote excellence and efficiency in the development of personal and process safety as part of sustainable development in the downstream oil industry in Europe. The SMG aims to assist enhancing member company safety performance; develop and maintain effective communications with member companies, industry organisations, the public and regulatory authorities on safety matters; and facilitate access to information on the latest developments in the practice of personal and process safety management.

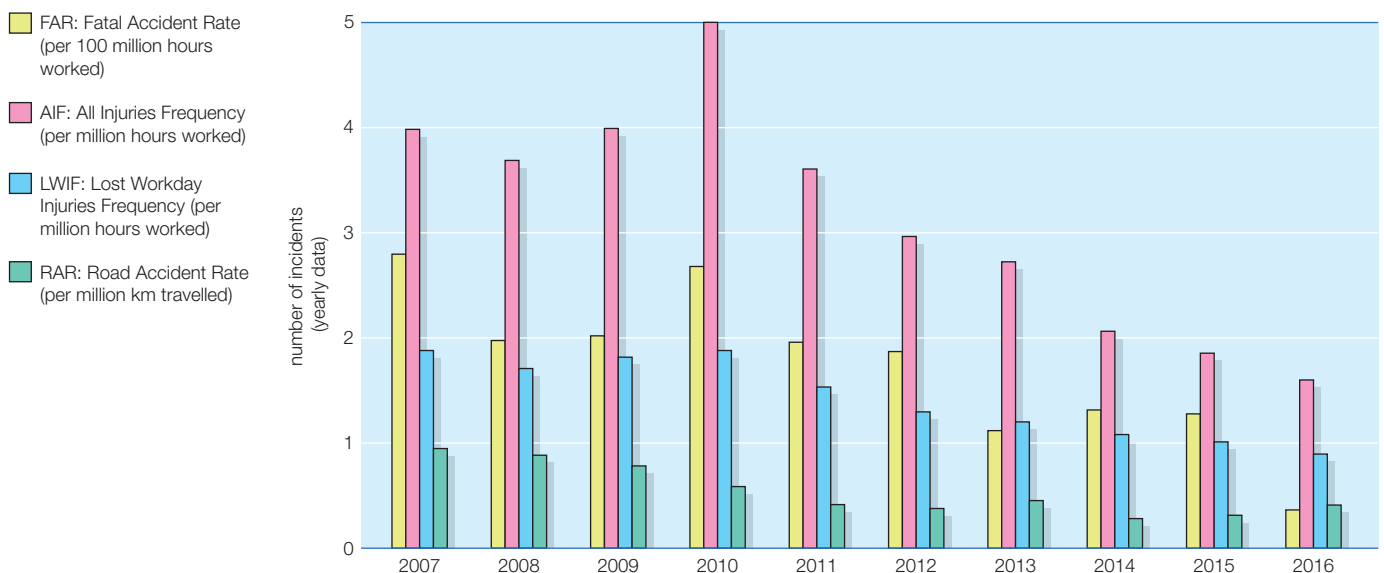
Since 2009, the SMG has continued to review its charter and agreed to follow and respond to developments in EU legislation relevant to safety management and industrial risk, and to maintain appropriate direct links with the European Commission. It contributes to the enhancement of member company safety performance by identifying areas of safety management and performance where members share the need for improvement. Through information analysis and exchange, the SMG proposes a collective approach to resolving problems where it may be beneficial to do so. It strives to develop and maintain effective communi-

tions between member companies and with other industry organisations with interests in safety, such as CEFIC, IOGP and the European Process Safety Centre, as well as with regulatory authorities.

While improvements in European downstream oil refining industry safety performance have been evident over the years since publication of the first Concawe report in 1993, the SMG considered, in 2016, that a focus on 'behaviour-based safety management' would support the next step change in safety performance in the sector. An SMG strategy survey was launched, aimed at all Scientific Committee and SMG members, as well as company safety staff, to identify what is valued in the current SMG offering and to assess whether any changes in current scope would improve its value to member companies.

The strategy review found that the annual safety statistics report was the most valued SMG deliverable. It provides member companies with a benchmark against which to compare their performance, so that they can determine the efficacy of their safety management systems, identify shortcomings and take corrective actions. The report also demonstrates that responsible safety management in the downstream oil industry results in a low level of accidents despite the hazards intrinsic to its operations.

Figure 1 Safety performance indicators for the European downstream oil industry, 2007–2016





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The 2016 safety statistics report, published in June 2017, received input from 38 Concawe member companies representing approximately 99% of the European refining capacity. There were two fatalities in the industry in 2016. While this is the lowest number of annual fatalities since Concawe began compiling industry records in 1993, we must consider this to be two fatalities too many. Lost workday injuries fell from 546 to 501, a drop of approximately 8%. The number of Tier 1 and 2 process safety releases continues to decline but the rate of decline per annum appears to be slowing.

The structure of the twenty-third annual safety report was revised to focus on incidents in 2016 and included a comparison with data from the past 10 years. A new concise format and executive summary made the key messages accessible while maintaining all historic data for reference in the appendix.

Also highly valued in the 2016 strategy review survey were the one-day workshops/theme days that allow in-depth analysis and learning from topics of interest on

an annual basis, bringing science back into the SMG. It is important that each workshop/theme day has appropriate follow-up to realise further growth in knowledge and application.

The SMG's annual Safety Theme Day entitled 'Human Factors and Situation Awareness' took place on 31 May 2017.

As many member companies find continuing improvement in safety performance difficult to achieve through management systems, standardised processes and competency training, attention is turning to the role of human behaviour in safety incidents. This event aimed at raising awareness of human psychology and sharing practical approaches to implement improvements in situational awareness.

Participants benefited from the broad experience of three expert guest speakers from within and beyond the downstream oil sector:

- Professor Rhona Flin, a psychologist conducting research on human performance in high-risk industries;
- Pekka Erkama, an ex-pilot and human factor consultant optimizing human performance and managing human errors; and
- Simon Monnington, a chartered human factors specialist and human factor advisor at BP.

The Safety Theme Day provided the opportunity for maximum interaction with speakers and participants to share their own experiences in the field. Feedback from the 12 companies present was extremely positive, and the event was described as 'inspirational'.



Delegates at the 2017 Safety Theme Day workshop; the topic was 'Human factors and situation awareness'.



Carol Banner joined Concawe as Science Executive for safety in February 2017.

Armed with a raft of ideas for implementation across all levels from corporate leadership to engineering design to front line staff and contractors, participants left the event energised. As a spin-off, some companies are currently planning internal situation awareness training sessions. As one participant commented, 'a good comprehension of human factors will be essential for the future of oil refining and this day will certainly contribute to that.'

The safety consulting network function is also a valued SMG activity. It is used regularly by SMG members posting queries on safety matters. These are normally reacted upon on the same day or within a week. In 2017, the SMG moved to a SharePoint® system and is making use of the discussion board functionality which facilitates the exchange and retrieval of discussion topics.

In addition to exploring the benefits and applicability of 'behaviour-based safety management' for the refining sector, the strategy review recommended establishing a system enabling Concawe members to learn from sector-specific incidents that have occurred in member companies.

In the first quarter of 2017, a Learning from Incidents (LFI) task force was set up by the SMG. Its initial task was to establish a scope and deliverables, something that has proved to be challenging given the breadth of the subject and differences in company safety cultures. Two rounds of surveys and several teleconferences later, the terms of reference have been agreed and work was started on the first of four key deliverables in the first quarter of 2017. The LFI task force, chaired by Ana Berrocal of CEPSA, will focus on what is learnt from incidents and how we learn from incidents, rather than on the details of incidents per se. The aim is to share best practice in learning from incidents, consider the importance of human behaviour as a cause of incidents, and share information and experience in influencing such behaviour.

The 2016 strategy review has shaped and focused SMG activities in 2017. Looking ahead, there are plans to gather additional data about Tier 1 process safety events in the 2017 annual safety report, the question-

naire for which will be available to member companies in January 2018. The aim is to provide a better understanding of the causes of process safety events, in the same way that Concawe has been collecting cause category data for personal safety incidents since 2013. In parallel, the LFI task force is planning to deliver best practice in three areas:

- effective recommendations and actions following an incident investigation;
- measuring implementation of recommendations/ actions and evaluating change; and
- maximising individual learning from remote incidents

The strategy review also indicated that an increase from 0.1 to 0.5 FTE would be the optimal requirement for Concawe secretariat support for the SMG. To address this, Carol Banner joined Concawe as Science Executive for safety in February 2017. Carol has more than 20 years' experience with Shell and has in recent years led systems improvement for safety reporting and learning from incidents. She currently divides her time between the SMG and coordinating updates of the Concawe REACH dossiers.

Chair Harald Hess of OMV has explained that, since the strategy review, the SMG has started working on the subjects that had been considered most valuable to member companies, and has tried to share the activities and their results more visibly, including outside the SMG. Carol is driving the increased activities with high energy and a very positive momentum, constantly fostering the collaboration between the SMG members. There has already been considerable interest and participation by member companies in activities related to 'behaviour based safety' (for the theme day) and the recently installed LFI task force. These topics will remain focus areas of the SMG for next year. The SMG will also continue to further improve the annual safety report in terms of data completeness, quality and data collection, and will put a special focus on more granularity of the process safety chapter which should provide more insight into incident categories, trends and patterns as a basis for further activities to bring process safety management to the next level.