

Summary:

## The use of knowledge about road accidents generated by the Accident Investigation Board Norway

**In 2005, the Norwegian Accident Investigation Board (AIBN) was expanded to include a new section for road traffic (henceforth AIBN-Road). Their task, as defined by the Government, is to investigate individual road accidents in order to determine what had actually taken place, and to construct road safety advice on the basis of their investigations. The overall ambition behind the new organisation was to reduce the number of fatalities in road traffic. Hence, in order for the AIBN to fulfil its intended task, knowledge must not merely be accumulated; it must also be *used*. Using literature from the research utilization tradition as a theoretical framework, this report investigates how the information uncovered by the new section has been taken up and used by actors in the road safety field.**

The report is based on interviews with (former and present) employees in the road safety department of the AIBN, in the Road Directorate, the Norwegian Public Roads Administration, the Ministry of Transport and Communication, the Norwegian Hauliers' Association, and the Norwegian Council for Road Safety.

From the beginning, there was an explicit ambition that the organisation ought to benefit from its autonomous position, and thus there was also considerable manoeuvring room when the practical day-to-day operations of the AIBN-Road were to be given shape. The new section was intended to benefit from its co-location with the other sections of the AIBN, and also to adopt a methodology similar to the one used in air traffic. The fact that the number of accidents in road traffic was so high, however, meant that an attempt to investigate all accidents and near-accidents, as is the case in air traffic, would be impossible. The official documents suggested that the Board should focus on accidents with “high potential risk” (not necessarily catastrophic consequences), and, most importantly, with a high possibility for safety improvement, through potential for acquiring new knowledge. It was further assumed that these requirements would probably lead to a focus on professional traffic, such as public transport and freight, as it was believed that these accidents could more profitably be investigated with methods taken from the aviation sector, as there was more of a similarity between the actors involved. So far, the AIBN has only investigated accidents involving professional drivers.

Unlike police investigations, the AIBN explicitly (and in compliance with international regulations of airline investigations) avoids stating only one cause of the accident; the ambition is to find how several causes work together, and how the process leading to the accident could have been intercepted at different points.

The reports from the AIBN conclude with safety recommendations, which are sent to the Ministry of Transport and Communication, who, in turn, hand them over to the Norwegian Public Roads Administration, the agency responsible for closing the recommendations. The AIBN's responsibility ends with the completion of the report, and they are not to comment on the process of closure, as this might violate their future autonomy. Most of the AIBN-Road's safety recommendations so far have been directed at the Road Directorate or the Public Roads Administration, but recommendations have also been directed at the Police, and other private and public actors and organisations.

The reports and safety recommendations from the AIBN-Road are used by those to whom the recommendations are directed. They are also used quite extensively by the media, politicians and other organisations. The main impression is that their work is considered reliable and well-founded by the general public.

This report divides the uses of knowledge from the AIBN into three broad categories; instrumental, conceptual and symbolic.

## **Instrumental Use of Knowledge**

The use of information from AIBN-Road is divided into three broad groups: instrumental, conceptual and symbolic. Instrumental use of knowledge implies that knowledge is used as an explicit basis for practical decisions, and in order to solve clearly defined problems. While this kind of use is certainly found in the Directorate of Public Roads, they have not always been in total agreement with the AIBN when it comes to what constitutes an acceptable solution to an observed problem. The Directorate of Public Roads as well as the Ministry of Transport and Communications have at times found the recommendations to be too numerous, too specific, and too costly. The Directorate of Public Roads also at times found it hard to follow up recommendations due to the fact that it is a huge organisation that works according to long-term plans and budgets which cannot easily be altered, or because some measures would require modifications of international regulations over which they have very limited influence. In general, they also expressed a certain doubt as to whether the inference from one single accident to often far-reaching and costly measures was always adequate.

Informants from the AIBN-Road held that it was frequently easier to gain acceptance and the right kind of follow-up from the more operational parts of the Public Roads Administration, an impression that seemed to be confirmed in interviews with regional leaders, who as a rule considered reports and safety recommendations to be very reliable, and, on the whole, appreciated the independent perspective provided by the AIBN-Road. This might suggest that the focus on single accidents employed by the AIBN is easier to combine with the local perspective than with the national one, which necessarily emphasizes statistical aggregates.

Collaborations with private businesses was as a rule considered quite successful by the AIBN-Road, whereas processes following recommendations directed at other public actors had proven more cumbersome, and informants from the AIBN-Road believed that this could perhaps be improved by the establishment of an

independent road inspection agency, whose authority would presumably be greater than that of the Road Directorate.

## **Conceptual and Symbolic Use of Knowledge**

Conceptual use of knowledge is harder to identify. It is less direct and may only be observable over longer periods of time. This implies that knowledge is used for instance as background information, to clarify one's thinking, to reorder priorities, and to provide a conceptual framework. Such effects could be observed for instance when the Norwegian Hauliers' Association and the Norwegian Council for Road Safety reported that they read the AIBN-Road's reports and use them as a basis for justifying and strengthening their arguments. In the practical road safety work, it is difficult to establish whether such effects apply, but the informants from the AIBN expressed an intention to not only impact directly, but also to contribute to changing ways of thinking about safety culture. While such an effect was difficult to find in the Road Directorate – where the different perspective might also impede the instrumental uptake of information – informants in the regions of the Public Roads Administration did to some degree appreciate the alternative perspectives that could serve to complement and improve their own.

Symbolic use of knowledge means that information is used in order to confirm already adopted positions, and to confirm planned decisions. Arguably, the Norwegian Road Safety Council and the Norwegian Hauliers' Association also used the reports of the AIBN for these purposes.

## **Challenges and Possibilities for Improvements**

While the reports from the AIBN have demonstrably had certain effects for road safety work, all informants seemed to agree that the knowledge produced was not yet used in an optimal manner. The reasons for this can range from different theoretical perspectives and problems with shaping roles in the system to the form and quality of safety recommendations and follow-up procedures. The AIBN is still a new organization, however, in the process of defining its position in the system, and the informants also held that collaboration as well as recommendations had been steadily improving. For instance, the Road Directorate and the AIBN had agreed to organize meetings prior to the issuing of recommendations, to seek to find recommendations that could be integrated into the routines and systems of the Directorate.

Research has also found the following factors to determine whether knowledge will be used:

- Quantitative results
- Results adapted to use
- Knowledge that is relevant to existing areas of work
- Lasting interactions between users and producers of knowledge
- Users make an effort to find the information
- Knowledge is considered correct and relevant

In accordance with this, this reports finds that the Directorate were slightly critical of the methodology of extrapolation from single accidents, i.e. the lack of quantitative results. This could be an incentive for the AIBN-Road to focus more on the justification of their recommendations, for instance through references to research carried out elsewhere, or other ways of highlighting the importance of the suggested measures. Thematic reports may also be one possible way to strengthen the arguments without abandoning the methodological framework.

The collaboration with the Road Directorate may also be influenced by the fact that, due to the different methodologies applied, the safety recommendations do not necessarily respond to specific problems, as defined by the Directorate. The different perspectives mean that the results are not directly adapted to application. This might also imply that the findings of the AIBN-Road are perceived to be less essential in relation to the existing areas of work in the Directorate, and generally as less relevant and correct. On a practical level, the interaction between users and producers of the reports and recommendations has been somewhat limited in this early phase. The receivers of safety recommendations also do not make an effort to find the information; on the contrary, they experience the recommendations as something coming from outside, and as a one-way process.

In general, the autonomous position of the AIBN is at the same time a great strength and a possible problem; while it affords them an independent position and increases their credibility, it also means that the process of closing the recommendations can sometimes be a one-way process that does not allow for dialogue and learning. However, this could probably be improved through changing the routines of the organisations that are responsible for follow-up, something which has already, to some degree, been carried out.