

Summary

How can Ruter work with traffic safety? A qualitative investigation.

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In administrating public transport, Ruter has to relate to a large and comprehensive mobility system, in which valued societal goals often conflict, and where the right balance between traffic safety, environment and mobility needs must often be struck. Results from focus groups with managers and staff in Ruter, and from interviews with representatives for Ruter's operators and collaborators, indicate that Ruter's traffic safety work should be made systematic and a concrete traffic safety strategy identified. This would lead to increased awareness and the assurance of choices taken between traffic safety and other valued goals. An important reason for the lack of a systematic approach to traffic safety today seems to be "responsibility pulverization", where responsibility for traffic safety is shared among several actors in the mobility system that Ruter is a part of, and where actors other than Ruter have formal responsibility for traffic safety. Lack of a systematic approach to Ruter's traffic safety work has several implications, such as lack of understanding of how to achieve Vision Zero in practice, and that external partners get the impression that Ruter do little concrete work with traffic safety. Ruter are well-placed to see the "overall picture" of the mobility system they administer, and to analyse how different components interact and influence traffic safety. Ruter also have an important influence on their operator's traffic safety work, and are a "leading star" for passengers wishing to report important incidents. These and other aspects of Ruter's role in the mobility system indicate that Ruter can play an important role in the work to achieve Vision Zero.

Ruter have overall responsibility for administration of the public transport service in Oslo and Akershus in Norway. Even if they do not have formal responsibility for traffic safety, there are several aspects of Ruter's work and administrative decision-making that influence traffic safety. In line with Ruter's vision of zero killed or seriously injured in traffic, this report looks at how Ruter works with traffic safety today, with the aim of identifying potential areas for improvement.

To investigate this, we have carried out:

- 1) Three focus group interviews with a selection of 11 managers and staff from Ruter, and
- 2) Individual interviews with representatives from four operators and nine external actors that Ruter collaborate with in the planning and operation of public transport.

In the interviews we have investigated four potential ways in which Ruter can influence traffic safety:

- Interaction with other key actors influencing the mobility system
- Ruter's own safety management and safety culture
- Tendering process and work with the operators
- Information given to and received from the public as users of the mobility system

Potential for improvements are identified through two analytical approaches: 1) Analysis of Ruter's activity in the four areas above, based on the answers of focus group and interview participants, and 2) Analysis of areas for improvement identified by the participants and respondents, based on our knowledge of good practice in safety management.

Overview of Ruter's activities

Ruter is owned by, and carries out delivery tasks for, Oslo City Council and Akershus County Council. Ruter's mandate is described in a formal agreement called a *leveranseavtale*, which lays out how the tasks shall be carried out. It states that Ruter shall contribute to realization of Vision Zero (zero killed and seriously injured in traffic). This includes that Ruter shall follow the progressive development of safety measures and accident numbers, highlight the need for safety measures, and contribute to Vision Zero in its communications with the travelling public and its own operators. Beyond this, the *leveranseavtale* does not include additional description or specification of how Vision Zero should be achieved.

Ruter has around 250 staff involved in a variety of activities, from follow-up of daily operation of transport routes (e.g. digital services, Customer Service Centre [CSC] operation, operation of Centre for Information and Coordination [CIC], route planning and follow-up of contracts) to long-term planning of new mobility services, infrastructural measures, requirements for and design of transport stock, and emergency measures.

Ruter's administrative activities are designed to meet the requirements set by its owners, as laid out in statutes and the *leveranseavtale*. They are also shaped by Ruter's framework conditions, which include the budget it has to carry out activities. An important part of Ruter's activities are market analysis and design of contracts for the operation of services to meet identified market needs.

Ruter's activities influence traffic safety in many ways, e.g. through contractual conditions and other communications with operators, information to the travelling public, or in the planning of "environmentally friendly" or self-driving buses or new services like Mobility as a Service or micro-mobility solutions.

Interaction with other actors influencing traffic safety

Public transport is part of a larger traffic system, operated and influenced by an array of public and private actors. Several aspects of production of public transport involve negotiation between Ruter and other actors, e.g. design and maintenance of infrastructure, signage, traffic management and assignment of street areas. Political decisions about transport, at national, regional or local level also shape Ruter's work and determine which aims Ruter should prioritize. This in turn influences how much room for maneuver Ruter has to carry out activities designed to ensure traffic safety. Ruter's must also account for activities and aims of the Plan and Building Services, the City and Environment agency (*Bymiljøetaten*) and other agencies influencing planning and operation of public transport, as well as the police who enforce traffic rules, the National Public Roads Administration, responsible for planning, design and construction of the road infrastructure on state and European roads, and organisations such as Safe Traffic (Trygg Trafikk), who look after road user interests, or schools, hospitals, or arrangers of large events.

In the following, we describe some of the ways Ruter influences traffic safety together with other key actors:

- Ruter's CIC plays a role in the coordination of situations occurring during daily operation of the mobility system.
- Communication with road authorities about problems with bus stops or roads, or need for winter maintenance.
- Formal statements by Ruter are considered during the planning of new roads, changes to existing infrastructure, establishment of cycle lanes etc.

- Participation in joint working groups, like Oslo's Traffic Safety Committee (OTSC) or Ruter's own Emergency Council (Beredskapsråd), and in working groups commissioning professional analyses of selected issues, e.g. concept studies.

Ruter's role in helping ensure traffic safety in the mobility system cannot be separated from the role other actors play in that system, and Ruter's own mandate. Ruter have an overall responsibility for operation of public transport, but there are several aspects of the system that Ruter do not have authority over, where others have the formal responsibility for traffic safety. This is especially the case for issues related to planning of road and infrastructure. Here, Ruter have a dialogue with the road authorities, make suggestions and "think traffic safety", but often have limited room for maneuver when it comes to traffic safety. Respondents from Ruter's collaborators said that Ruter appears to be concerned most with mobility, and to a lesser extent traffic safety, both in planning issues and in meetings with OTSC. There were, however, several who looked at mobility and traffic safety as two sides of the same coin. One explained that Ruter are naturally concerned with traffic safety as an important precondition for mobility.

The operators have formal responsibility to ensure the safety of travelers using their services. Safe Traffic, the National Public Roads Administration and *Sporveien* (tram operator) also have a clear focus on vulnerable road users in their traffic safety work. Group interviews with staff at Ruter indicated that Ruter could do more to consider the traffic safety of travelling public. At the same time it is not certain how Ruter should put measures in place, since this may interfere with other actors' domains. Ruter appear to be able to take a more passive role than other actors when it comes to traffic safety, due to a lack of formal responsibility together with a "pulveration of responsibility" across actors.

The interviews with external representatives suggest that, seen from the outside, Ruter lack a clear traffic safety profile. Even though many of the informants had the impression that Ruter are concerned with traffic safety, most did not know what concrete actions Ruter took to ensure traffic safety.

Even though safety has become more important in transport, there is little research on how safety should be ensured when several organisations and actors are involved in safety work. The research that exists has mainly looked at challenges arising during collaborative work, and to a lesser extent considered good practice or strategies that contribute to traffic safety. The research suggests that establishment of shared understanding, of an actor's own as well as other actors' roles and responsibility areas, is central for a well-functioning and systemic safety effort.

Ruter's internal work with traffic safety and its traffic safety culture

The focus group participants from Ruter discussed several dilemmas associated with the management of traffic safety and Ruter's "middle position" – they both set the premises for others (especially operators) and have premises set by others (e.g. council agencies). They emphasized that Ruter do not have formal responsibility for traffic safety. Several participants thought that Ruter can influence traffic safety through its relations with the operators, not least by implementing measures in cases where challenges to traffic safety are identified. Even if they do not have legislative responsibility for traffic safety, Ruter react if they get information about incidents with implications for traffic safety.

Several thought that there is a need to make Ruter's work with traffic safety systematic, and a need for a concrete strategy to account for traffic safety. The following points arising from the focus groups also support this.

- People in Ruter do a lot of good work related to traffic safety, but the work is neither coordinated or systematic.
- Beyond Vision Zero, there exist no criteria defining what is “safe enough” or how to progress in a systematic way to define traffic safety.
- Tram and metro services, which come under railway legislation, have a more systematic way to think about traffic safety, which could be transferred to the road sector.
- Ruter can take a more active role in ensuring traffic safety of its operators.

The participants from Ruter emphasized that a challenge with taking a more active role for operators’ traffic safety is that Ruter could be seen as having legislative responsibility in this area. This could reduce the salience of operator responsibility. This was used to explain why Ruter do not have a more systematic approach to traffic safety. The need to fulfil existing contracts also limit the ability Ruter have to influence its operators. Moreover, Ruter have to act in line with the *leveranseavtale* from its owners, which influences Ruter’s focus on traffic safety in relation to other goals such as environmental goals.

There are few scientific studies on the management of traffic safety by administrative companies like Ruter, with responsible for delivery of the public transport service. Ruter’s supervision of the operators’ fulfilment of contracts, can, however, be compared with the way authorities carry out their supervision of companies’ fulfilment of national rules. Such a comparison suggests that Ruter follow a rule-based approach, which starts with establishment of rules in the form of contracts, which are then followed-up by inspection to ensure that the operator is meeting its contractual requirements. Recent years have seen a tendency for such approaches to be supplemented by advisory activities, such as training, assistance with self-assessment of safety and safety management, or providing examples of good practice. In addition there have been increasing efforts from the authorities towards functional requirements rather than rule-based requirements, and for companies to “regulate themselves” to a greater degree, through safety management systems (SMS).

These tendencies can inspire Ruter in its work with its operators, e.g. it could:

- develop functional requirements for operators to implement SMS
- document systematic risk management work
- collect and provide good practice examples for operators
- analyze incidents across operators, with a focus on learning and collection of information through a common reporting system, to which all operators could have access as part of steps towards a open, learning safety culture.

Tendering and Ruter’s work with the operators

The scientific literature indicates that there is a positive relationship between SMS and objective safety results (e.g. behavior and accidents). Management engagement with safety and safety communication is one of the most important components in SMS. Proactive risk management is associated with fewer insurance claims in road transport companies. Studies of fleet management technology and organizational follow-up of, and feedback on, driving style, suggests also safer driving and/or fewer accidents. These measures seem to be based on a combination of technology-assisted self-monitoring for drivers together with management support and inspection.

Our interviews with respondents from Ruter’s operators suggest that they all have SMS that they use to carry out analyses of relevant risks, and that they design procedures and training programs in line with the results of these analyses. This concerns both track-related

transport, supported by rail legislation, and road transport, where systems for safety management are implemented even though there is no legislative requirement to do so. Those we talked with from the operators emphasized that SMS mean that they have gone away from an exclusive focus on individual driver responsibility, towards proactive work to develop good safety culture. The companies often utilize fleet management systems in their safety work, and such systems are positive tools to promote learning, if they are used in collaboration with the drivers, rather than against them.

Operator respondents agreed that Ruter underline passenger transport and a regular, punctual service in tendering, in contracts, and in its daily contact with the operators. They also had a strong sense that Ruter sets requirements primarily with environmental concerns in mind. When it comes to traffic safety, Ruter requires little beyond what is legally required of the operators, emphasizing the need to “follow rules and regulations”. The traffic safety measure most emphasized by Ruter is drivers’ use of mobile phones while driving, and they have worked to develop their contracts to improve traffic safety in this area. The respondents were somewhat surprised that certification in the ISO standard 39001 on traffic safety management, did not count more in tendering processes, and that there were not more explicit requirements for this. Ruter’s focus on regularity and mobility, especially specified through route timetables and incentivization, can have indirect consequences for traffic safety by setting the premises for operation. One implication of this is that both the operators and Ruter together have responsibility for traffic safety, even if Ruter do not have legal responsibility for the operator’s traffic safety.

Information to and from public transport users

Ruter stand for a substantial share of the transport in central Oslo, and will probably play a more important role in the future (need for “green” mobility, Ruter are at the forefront of digitalization, of Mobility of a Service etc.). It is therefore important to consider the role Ruter play in determining traffic safety of the public, both when they are travelling on public transport and on their way to or from the public transport vehicles and stops.

Ruter have worked actively with traffic safety for the travelling public through information campaigns (e.g. visibility in the dark, school actions), signage, regular dialogue with different actors, and development of safety markings in vehicles and at stations. Despite this, several respondents from collaborators thought that Ruter’s work with traffic safety was poorly visible. Several pointed out that Ruter could do more to influence attitudes to traffic safety through, for example, campaigns against distraction in traffic. Some commented that distribution of responsibility among different system actors was unclear when it comes to media campaigns promoting traffic safety.

Ruter collects information from the travelling public via observations from CIC, via their marketing information system and on-board surveys, via incidents reported to the web portal, and via telephone calls from customers to CIC and the customer centre. On-board surveys capture the travelling public’s experience of driving style, and this is of relevance for traffic safety. Several respondents pointed out that Ruter have an important role in the sense that they are a highly visible “leading star” in the eyes of the public, such that it is natural for many members of the public to turn to Ruter in order to report incidents. Despite this, Ruter’s accessibility can be perceived by many as “hidden in the system”. How incidents are reported, and to whom, depends to some extent on where one is in the mobility system and what information is visible. There are few signs that Ruter actively collects systematic data on safety measures from the travelling public, beyond on-board surveys of driver style. We saw few indications of a data-based, systematic and proactive effort, internally in Ruter, to manage traffic safety of the travelling public.

Conclusion

We have charted how Ruter work with traffic safety today, based on statements from a selection of managers and staff at Ruter, together with the operators and other actors Ruter work together with. We have focused on how Ruter's work with traffic safety is influenced by its work with other actors, how Ruter itself works with traffic safety, and how Ruter influences traffic safety of the operators and the travelling public.

Throughout it can seem that Ruter's work with traffic safety is not systematic. An important reason for this seems to be a certain "pulverization of responsibility" among diverse mobility system actors. In addition, actors other than Ruter have the main legal responsibility for traffic safety.

Lack of a systematic approach in Ruter's work with traffic safety has several important implications. This includes that those who work for Ruter do not have a concrete plan or a shared understanding concerning how to achieve Vision Zero in practice, or about who has responsibility for what when it comes to traffic safety. To external parties, it can seem that Ruter do not work concretely with traffic safety, perhaps because they do not communicate their traffic safety work clearly.

With a good overview over the many elements that make up the mobility system, Ruter is well-placed to see how different components interact and influence traffic safety. Ruter's influence on operators' work with traffic safety is also important, as is Ruter's role as a "leading star" for passengers wishing to report incidents. These and other aspects of Ruter's role in the mobility system indicate strongly that Ruter can play an important role in the work to achieve Vision Zero. Ruter's systematic work with traffic safety should therefore be optimized. Making Ruter's work with traffic safety systematic would improve the efficiency, coordination and salience of Ruter's existing work with traffic safety.

We formed the impression that there is more focus on environmental considerations than on traffic safety at Ruter. It is positive that Ruter work actively to address environmental concerns. If Ruter wish to do as good a job with its traffic safety work, this work must first be lifted and made increasingly systematic. Clarification of roles, responsibilities and goals for traffic safety work, and analysis and prioritization of the most important risk areas will each be important aspects to attend to in developing traffic safety work. Making Ruter's work with traffic safety more systematic will help increase the salience and awareness of choices that must be made between traffic safety and other goals that are important for society.

Finally, we see Ruter's room for maneuver as a continuum, from a passive role (traffic safety is the operator's responsibility, we require that they follow minimum legal requirements for traffic safety) to an active role (we take responsibility for traffic safety, place demands beyond legal minimum requirements and coordinate the traffic safety work of our different operators). Ruter should clarify their own position on this continuum and define what this means in practice.

Recommendations

Ruter's internal work with traffic safety

- Work systematically with traffic safety, by developing a clear policy for traffic safety, roles and responsibilities for the management of traffic safety, and data-based management of traffic safety risks in different parts of the mobility system. In this way, it can be made clear internally what Vision Zero means in practice for Ruter's operations.

- Define what traffic safety is in Ruter, traffic safety goals to be achieved, and criteria for risk acceptance for use in risk analyses. The work to clarify what traffic safety is, should distinguish between the risks for individual accidents and major accidents (“storulykker”). Criteria for risk acceptance should be defined in each case.
- Work proactively with key indicators for traffic safety, for example safety culture, near-miss incidents, deviations etc.
- Perform systematic risk analyses of how traffic safety considerations are addressed in relation to other considerations in situations where there are goal conflicts, and define accept criteria.
- Perform risk analysis of how Ruter are set premises for and how Ruter themselves set premises for traffic safety.
- Potentially, learn from Ruter’s work with the environment, e.g. by developing strategy and sharing information about how the strategy can be achieved.

Ruter’s work with the operators

- Identify possibilities for a more active role in relation the operator’s work with traffic safety, even if this is not legally required, and take a coordinating role. Clarify how such a “enabling role” shall be defined, while avoiding increased legal responsibility for operator traffic safety.
- Include traffic safety to a greater degree in evaluation criteria in tendering processes.
- Award or set requirements for traffic safety management – not necessarily resource-demanding for Ruter, but perhaps for the operators.
- Aware or set requirements for systematic follow-up of driver speed and driving style, e.g. through training programs, work with safety culture and/or a fleet management system. This could be a point that comes under a possible requirement for traffic safety work in tenders and contracts.
- Be a coordinating driver of open learning among the operators, e.g. by setting requirements for the reporting of deviations, incidents and safety problems to Ruter, who could organize the exchange of information and learning between operators (e.g. meetings, recommendations arising from shared learning and experiences).
- Evaluate how Ruter’s remaining requirements and contact with the operators can have negative consequences for traffic safety (especially the incentive system and fines for poor regularity of operator services).

Ruters work with the travelling public

- Based on comprehensive and systematic risk assessment, identify, implement and evaluate measures that improve traffic safety for the users of Ruter’s services.
- As part of a data-driven system for management of traffic safety, enable the systematic and proactive collection of data from the travelling public.
- Make clear to the public what possibilities there are for reporting of information and incidents that are relevant for traffic safety.

Collaboration with other actors on traffic safety

- Ruter can take a more active role in following up and encouraging the implementation of measures in its collaborative work with other actors.
- Work for better cooperative action and coordination among actors when it comes to traffic safety work in Oslo (we encourage Oslo’s council to do this as well).

- As part of a risk assessment, chart how Ruter influence traffic safety (both internally and externally) in its work with other central actors that are part of the larger public transport system in Oslo and Akershus, and as a consequence clarify specific areas where Ruter can and should play a larger role to promote traffic safety.
- Do more to take up questions about traffic safety in different forums where many actors are represented.
- Chart which actors have responsibility for what when it comes to informing about traffic safety (knowledge and attitude campaigns) and the collection of information from the public.