Drive Sweden Policy Lab

Traffic rules of the future

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DRIVE SWEDEN

With support from

VINNOVA

Swedish Energy Agency

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Strategic innovation programmes

Traffic regulations in the digital age

Traffic regulations are traditionally analogue and paper-oriented.

In the future, they need to be able to be interpreted by machines.

How can we ensure exchange of reliable data on traffic regulations to support technological innovation such as advanced driver assist and autonomous driving technologies?

”Traffic rules of the future”
– a Drive Sweden Policy Lab-project

In this project we have researched what is needed to reach a future system of machine-readable traffic rules.

Based on the current system for traffic regulations, we have examined how the conditions for a change look like, how it would affect those who issue the regulations and those who benefit from having access to them in a digital and machine-readable format.

Vinnova has financed the project through **Drive Sweden**.

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Project partners & reference group

Actors from the entire chain who are affected by the issue participated in this project:

- municipalities and authorities that decide on traffic rules
- authorities that manage and provide map data and data on traffic rules
- companies that provide map-based tools for digital traffic rules
- navigation companies
- vehicle manufacturers
- research institutes

Partners: Trafikverket, Adtollo, Sokigo, Norconsult Astando, KP Kostnads- och Planeringssystem, Triona, HERE, TomTom, Einride and RISE

Reference group: several municipalities (Borås, Gävle, Göteborg, Härnösand, Järfälla, Malmö, Skövde, Stockholm, Sundbyberg, Uppsala, Västerås, Sandviken m.fl.), Länsstyrelsen i Värmland, SKR, Skogforsk, Transportstyrelsen, Lantmäteriet, Försvarsmakten, Swedac, Polismyndigheten, Naturvårdsverket, Volvo Cars, Volvo Group, Mobility Sweden, HAVI, VTI and Univrses

In addition, we sent a **survey** to all municipalities in Sweden (they decide on traffic regulations at local level)

The project report

In this report we share our knowledge on digital traffic rules – what it is, why it matters and how we get there.

Framtidens trafikregler – Hur når vi dit? (diva-portal.org)

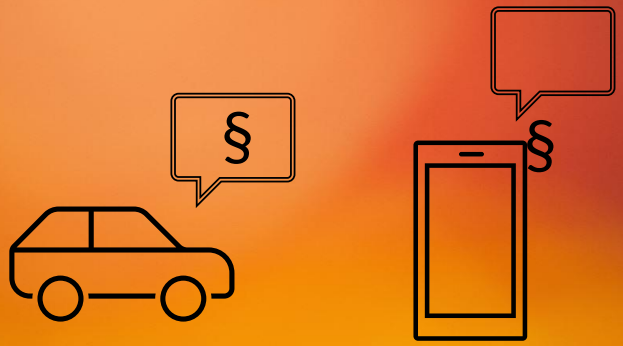
The future is digital

- The transport sector is becoming increasingly **connected**, **digitalized** and **automated**.
- The development is taking place at a rapid pace and has the potential to **improve the transport system** in several areas (safety, efficiency, environmental impact and accessibility).
- To meet this development, we need to move towards a **more digitalized** road infrastructure.

From physical to digital roads

- A **digital representation** of the road network is becoming increasingly important.
- One part of this is **digital and machine-readable traffic rules**. → In a digital world we need data on traffic rules (*what* applies *where*)
- Road users, citizens, companies and other actors in our society would **benefit** from such data.

What potential is there?



- Increased benefit for systems and services of **today**, and in the **future**.
- It can contribute to making driving **easier**, the roads **safer** and the transport system more **efficient**.
- **Data on traffic rules**
  - **facilitate** for navigation companies, providers of driver assistance systems, citizens etc. (they get access to more and clearer regulations)
  - would **enable** dynamic traffic regulations
  - is a **necessity** for the implementation of AD on public roads (AVs need a reliable digital infrastructure)

In the project, we have collected **information** about:

- needs and benefits of digital information about traffic rules
- challenges and possibilities for a change
- ongoing initiatives within the EU and internationally, as well as how other countries do.

Based on the analysis of the current situation, we have discussed possible **solutions and consequences** of different solution options.

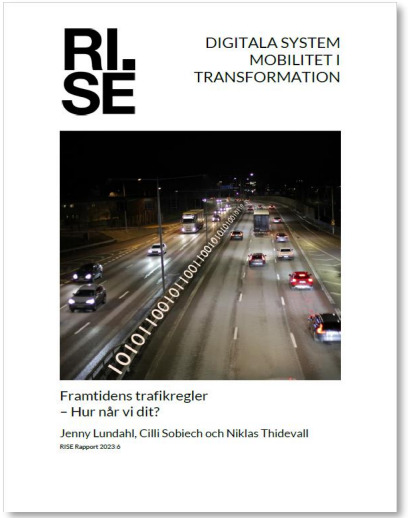
This is what we have concluded

- **We must accelerate the digitalization of traffic rules**. Many actors in society need this data. We also need to fulfill upcoming EU-rules. From an international perspective, we have come far in Sweden. But we also have work to do.

- Data on traffic rules are available to some extent today, for example in digital maps and traffic information services, but there are **shortcomings** both in terms of content and quality. → The data is not always reliable – it becomes difficult to use the data – the benefit is lost.

- For data to be reliable, **data must be captured close to the source** – digitalization must be done by the decision-making authority.

- **How can we** get more decision-making authorities to start working digitally with their traffic regulations?
- In the project, we have discussed both **carrots & sticks** (mandatory and voluntary instruments that either require or encourage those who decide on traffic regulations to report data).
- In order to achieve a sufficiently high effect, we recommend that digitalization should become **mandatory** in the future. A change to the legislation with new requirements for decision-making authorities is needed.
- The new requirements should cover **all decision-making authorities** as soon as possible, and that the **types of traffic regulations** to which this applies should at least match those in the proposed revision of the ITS Directive.



Framtidens trafikregler – Hur når vi dit? (diva-portal.org)

Thank you

Any questions?

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