



BADA

BIG AUTOMOTIVE DATA ANALYTICS

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BADA – Big Automotive Data Analytics

- Parter: Volvo Cars, AB Volvo, Scania, SICS, Trafikverket
- Basic building blocks that are necessary to take the next step in the development of Big Data Analytics in the automotive and transport area.
- Explore and design:
 - A **platform for information sharing** of vehicle and traffic data between vehicle manufacturers and public authorities.
 - An **analysis platform** for available vehicle and traffic data and the applications demonstrated in the project.
 - The new “**eco-system**” where new “business models” and service concepts, could be made possible by the ability to handle Big Data. This include payment methods, value of data, legislation, integrity aspects, etc.
 - Implement an information sharing platform, an analytics platform, as well as selected services in a first demonstrator to demonstrate social benefits and commercial possibilities with the system.

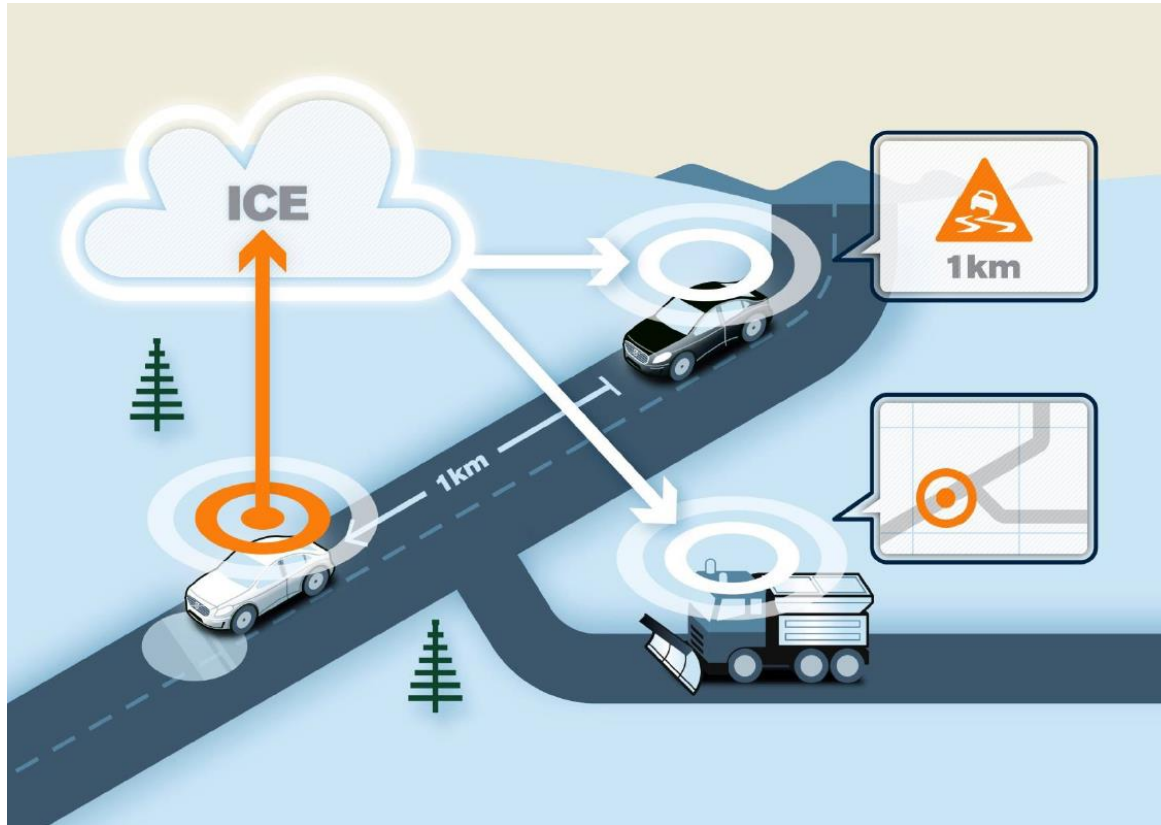


Hazard Light Alert example

- Information sharing between VCC, Volvo AB and Scania
- Hazard Light Alert is one example, although the real implementation currently only involves VCC
- See more on: <https://www.media.volvocars.com/se/sv-se/media/videos/198658/hazard-light-alert-animation>



Slippery Road Warning example



Picture from the RSI-project in which we got data from the vehicles for winter maintenance

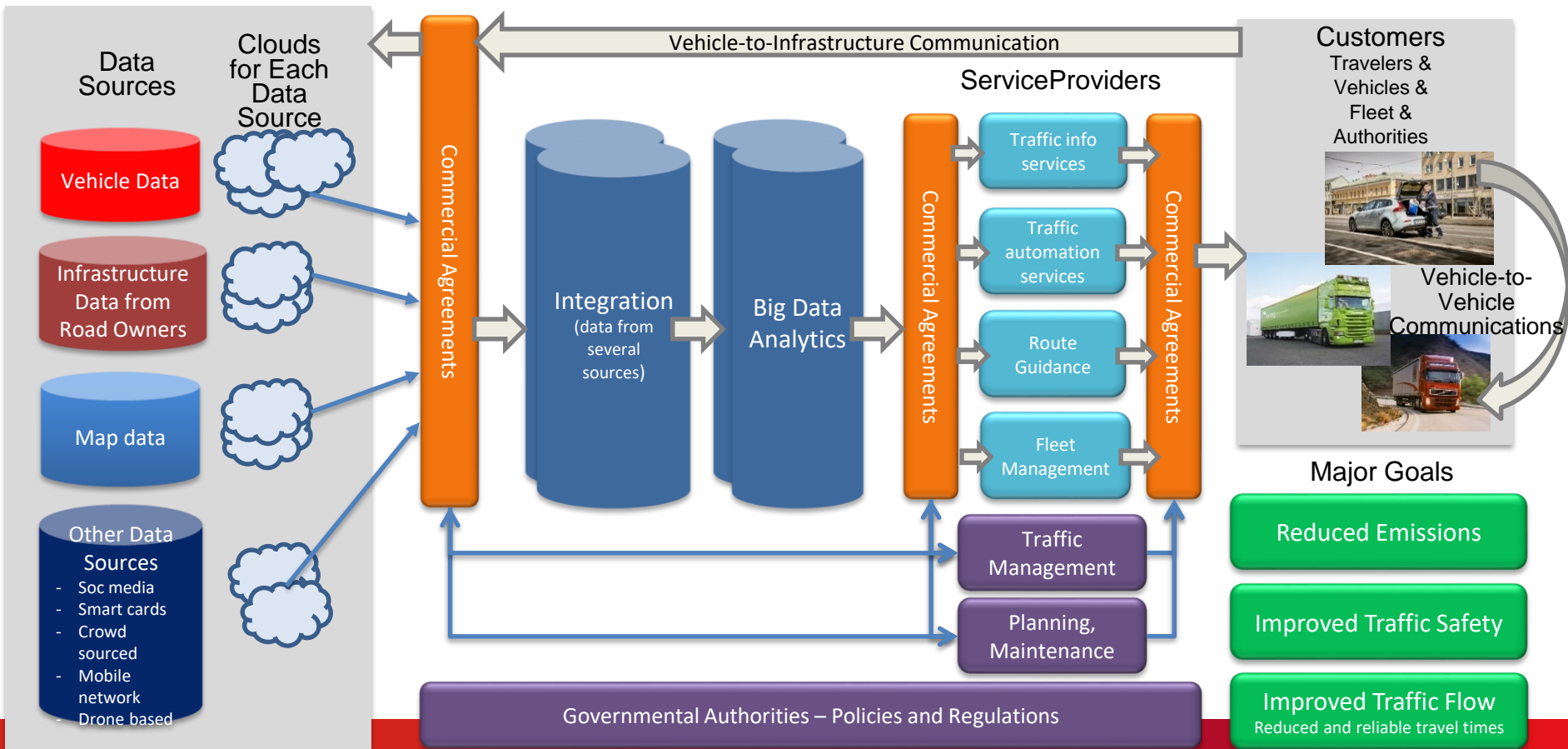
BADA used the same architecture as the Nordic Way project for data exchange

Big data in the automotive and transport area

- 90 % of the world's all data was created the last two years alone. ~25 Gb data per hour for a modern vehicle.
- Traditionally, big data analytics has been used on data generated by people, not on sensor data.
- Vehicles and Transport:
 - Collection of data increases rapidly
 - The challenge is to develop algorithms and extract information that generate value for a given service:
 - relevant data sources
 - design of algorithms for a specific application
 - find a balance between calculation platforms and chosen algorithms.



BADA Data flow, roles and actors



Effects of the "Ecosystem of Connected Vehicles"

- All actors will be both producers and consumers of data.
- Strong need for cooperation between actors (both public and commercial) to benefit from all the available data.
- Crucial to handle aspects regarding integrity, privacy, security, etc. in a proper way.
- New business models are needed.
- Gives road authorities the ability to establish pro-active traffic management and affect the use of the physical infrastructure in space and time by establishing a digital infrastructure.
- Important for road authorities to find their role in the eco-system.
- BADA results will be presented for decision makers in each of the participating partners organization
- BADA results are taken into account when working with the National Investment Plan for Trafikverket

