

AutoMat Motivation

The Idea

AutoMat's core intention is to create a vehicle data marketplace for service providers and make aggregated data from various brands accessible via a single point of data access. This marketplace provides harmonized vehicle data in the novel and brand-independent Common Vehicle Information Model (CVIM) data format. AutoMat intends to reduce the costs for realizing and providing services based on vehicle data.

Vehicles as Moving Sensors

Vehicles move in their surroundings, perceiving various aspects via on-board sensors. These connected sensors provide a mobile sensor network producing over 4000 signals per second per vehicle. The number of on-board sensors is strongly increasing and so does the amount of data useable in the near future.



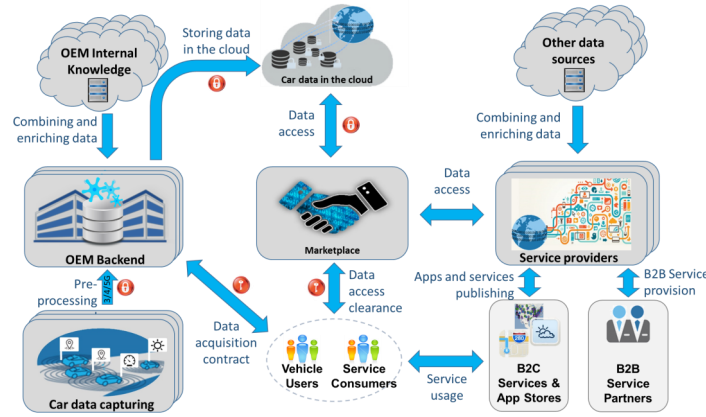
New Business Potentials

Vehicle data enables new and innovative business ideas for many stakeholders. A great spectrum of vehicle data allows new dimensions of services. The large amount of continuously aggregated data contains significant Big Data business potential.

Challenges

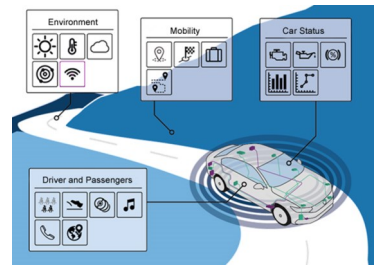
The automotive industry has not built an open vehicle data marketplace yet. Vehicle data is not provided in an brand-independent format and proprietary OEM solutions render business potentials uneconomical. Possible data users are required to negotiate with different OEMs, data supplier and partners, each having individual interfaces to their different, proprietary systems. Therefore, cost of realizing and providing services are too high.

AutoMat System Design



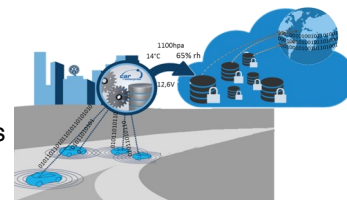
Vehicle Data Capturing

- In-vehicle data aggregation
- Data reception from vehicles via telematics platform
- Refinement, enrichment, validation and data masking in OEM Backend
- Transformation into the harmonized CVIM format
- Removal of proprietary and brand-specific information
- Delivery into cloud storage
- Management and re-configuration of data loggers



Vehicle Data in the Cloud

- Storage of harmonized CVIM data packages
- Standardized interfaces
- Vehicle user's private cloud storage vault
- Users stays in full control of their data
- Manageable authorization and access rights in cooperation with the marketplace



Marketplace

- CVIM data catalogue and statistics for Service Providers
- Open and standardized interfaces enable barrier-free access
- Processing of requests from Service Provider
- Data indexing and management
- Discovery of requested data and identification of according data owners
- Management of access permissions
- Delivery of data from the cloud to the Service Provider



Service Providers

- Service development on basis of the harmonized CVIM data catalogue
- Forwarding and creation of data requests
- Acquisition of vehicle data from marketplace
- Combination and enrichment with additional data sources and algorithms
- Transformation of vehicle data into service relevant information



The AutoMat Common Vehicle Information Model (CVIM)

The CVIM is the data format developed in the AutoMat project. CVIM enables non-proprietary datasets by harmonizing brand specific and generic information. This enables Services Provides to easily scale up applications and services as they retrieve similar data from a large number of vehicles of different OEMs.

CVIM includes data ownership, copyright and privacy information, which empowers the enforcement of Vehicle User's privacy rights. OEM certification of CVIM data ensures completeness, validity and high quality.