Connected Vehicle Interface Initiative (CVII) is an industry-wide, OEM-led dialog on joint development and adoption of common vehicle data models, access protocols and standard interfaces in the entire scope of the vehicle plus the cloud. 

W3C and COVESAs partnership has already produced industry-relevant standards such as Vehicle Service Specification (VSS). We are working on Vehicle Information Service Specification (VISS) 
https://www.w3.org/TR/vehicle-information-service/ 
and on Vehicle Signal Specification Ontology (VSSo) 
https://w3c.github.io/vsso/

We're working on standard vehicle service catalog (VSC) and related web-vehicle remote procedure calls. The combination of these existing and new activities forms a strong foundation for connected vehicles on the web. Join W3C's Automotive and Transportation and Smart Cities groups today to help us achieve faster results for the industry.

https://www.w3.org/2021/05/autowg-charter.html
https://www.w3.org/2021/06/smartcities-workshop/report.html
Industry Challenges

- Smart City trends require a common way to communicate with vehicles, destinations, and devices.
- Third-party developer ecosystem wants common APIs to work across all brands of vehicles.
- Development time and costs are higher and integration is more difficult with proprietary approaches to data models.
- OEM and vendors in the vehicle data cloud market require integration/interoperability to realize revenue/profit potential.
- Fragmentation/integration/interoperability problems inhibit fast growth and slow innovation of important (end-user functions) functions.
- Missing link between technical systems, humans, and organizations necessary for buyers and sellers throughout the whole supplier chain to plan projects more accurately, increase use of off-the-shelf technology, and make development costs more predictable.

Connected Vehicle Interface Initiative (CVII) Approach

- Build interoperable technology solutions for vehicle data and service delivery by standardizing data models and protocols.
- Establish a common language to describe data and function interaction between all vehicle technology companies.
- Develop industry-wide standards for a vehicle data model and service APIs.
- Build ontology model to enable sharing more useful data for cloud applications.

Consumer and Commercial Impact

- Interoperable solutions for vehicle data and service invocation reduce costs and improve efficiency for the entire ecosystem.
- Enables sharing of data for in-vehicle applications.
- Improved passenger experiences, enhanced safety, real-time information/entertainment/efficiency/maintenance/safety/convenience.
- Common data model accelerates market for next generation apps that offer new conveniences and revenue opportunities.

To learn more about Automotive and Transportation activities, visit: https://www.w3.org/auto/ or email: Marty Voshell: marty@w3.org or Alan Bird: abird@w3.org

Consumer Vehicles
- Safety: notifications such as lower tire pressure.
- Reduce costs: with regular maintenance updates.
- Insurance discounts: safe driving data to lower insurance premiums.
- Accurate weather reports: data in real-time from micro weather stations.

Cloud Services
- Expand connected vehicle ecosystem marketplace.
- Exchange data in a controlled, permission-based manner.
- Leverage existing cloud services providers.
- Reduce cost of AI, tools, services.

Fleet Vehicles
- Compliance: telematics data to meet government regulations.
- Efficiencies: optimize driving routes and fuel efficiency.
- Supply chains: integrate information with shipping destinations.
- Safe driving monitoring.
- Verification of any vehicle issues or accidents.