So...what is all this Fleet Stuff anyway?

Future Truck Committee

"The Future Truck Committee shall promote activities that fulfill its mission, which shall be: To improve transport equipment, its maintenance and maintenance management by efforts to influence future equipment design."

S5 Health Ready Components and Systems (HRCS)

"This Task Force will develop a Recommended Practice regarding the use of VMRS codes in developing data sheets for health ready componentry in conjunction with SAE International Health Ready Components & Systems (HRCS) practice."

TMC and SAE ITC Announce Collaboration

November 1, 2021

SAE ITC and the American Trucking Associations are pleased to announce an agreement between ATA's Technology & Maintenance Council and the Health Ready Components and Systems Consortium for use of the Council's Vehicle Maintenance Reporting Standards in helping to implement Integrated Vehicle Health Management technologies.
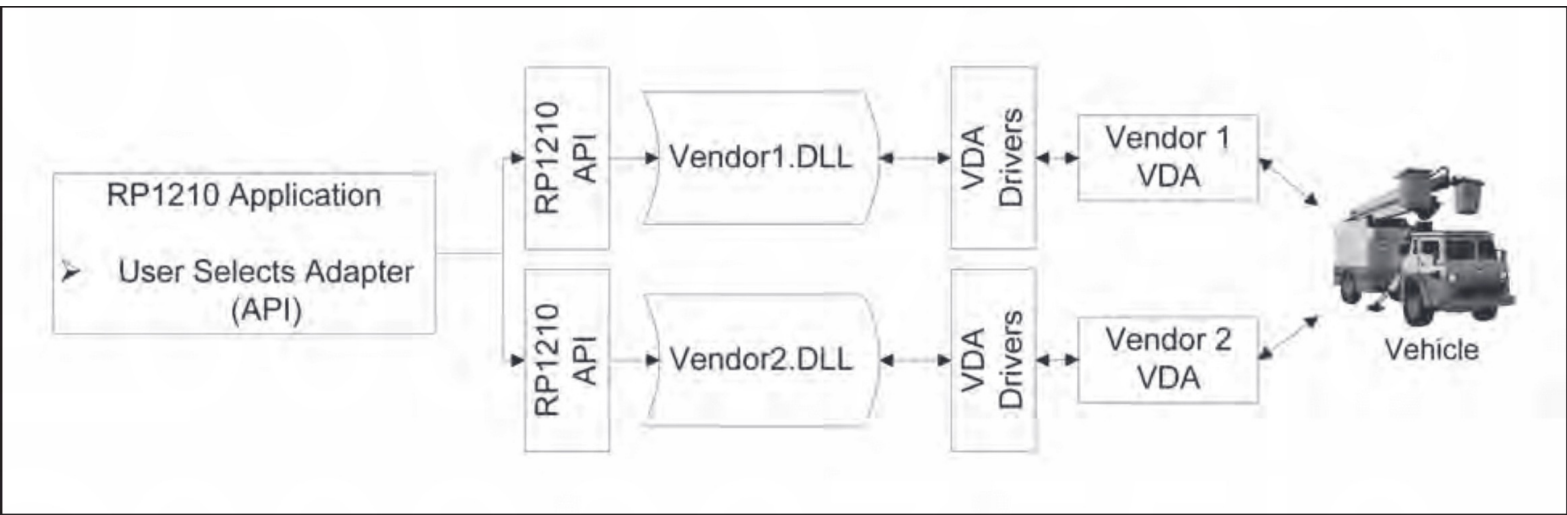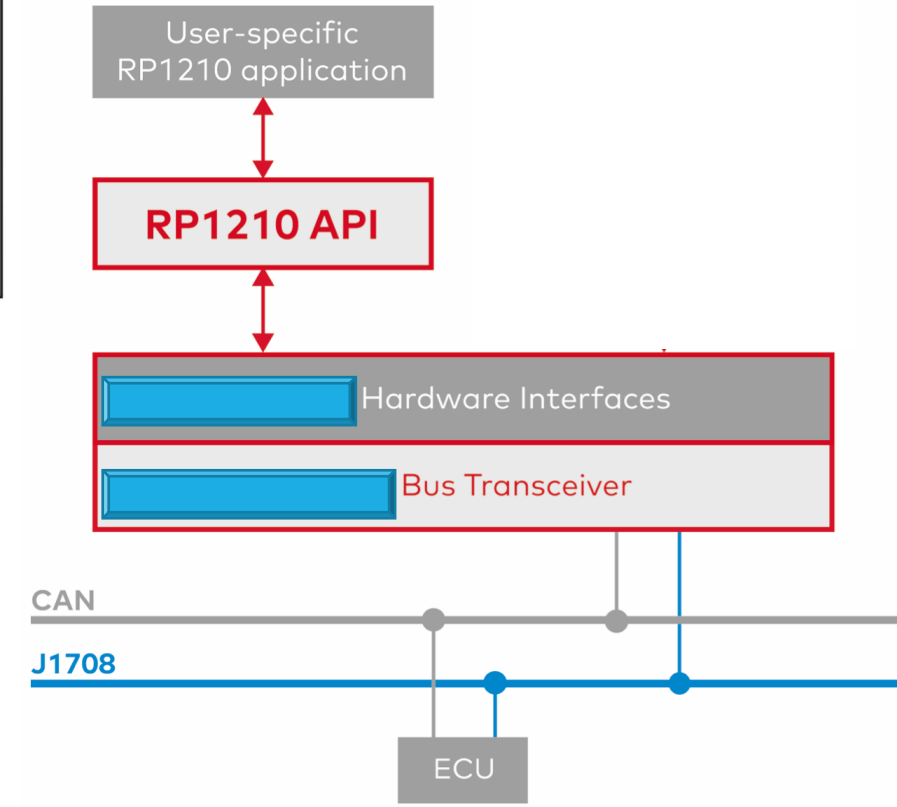
Off Vehicle

**Fig. 5-1: TMC RP 1210 Interface Concept Implementation Model**

Fleets Mapping from SAE Content to Vehicle Maintenance Reporting Standard (VMRS)

	COMPON	CHASSIS	EPA_YE	FAULT_	FAULT_CODE_1	FAULT_	FAULT_DESCRIPTION	OEM_SEVERIT	PROTOCOL	SOURCE	SYS_CD	ASSY_CD	PART_	LAMP_STATUS	POWER_LIMITA	SPEED_LIMITATION
17614	VOL	VOL	2019	SPN	1807	12	SAS Invalid Signal	(null)	J1939	11	015	012	012	(null)	(null)	(null)
17615	BWH	*	9999	SPN	1807	12	SAS Invalid Signal	(null)	J1939	11	015	012	012	(null)	(null)	(null)
17616	WAB	*	9999	SPN	1807	12	SAS Failure	(null)	(null)	(null)	015	012	(null)	ATC	(null)	(null)
17617	FTL	FTL	9999	SPN	1807	13	Steering Wheel Angle - Out of Calibration	(null)	J1939	11	015	002	029	(null)	(null)	(null)
17618	HIN	HIN	9999	SPN	1807	13	Steering Wheel Angle - Out of Calibration	(null)	J1939	11	015	002	029	(null)	(null)	(null)
17619	IHC	IHC	9999	SPN	1807	13	Steering Wheel Angle - Out of Calibration	Service Immediately	J1939	11	015	002	029	(null)	(null)	(null)
17620	*	*	9999	SPN	1807	13	Steering Wheel Angle - Out of CAL	(null)	J1939	11	015	002	029	(null)	(null)	(null)
17621	BWH	*	9999	SPN	1807	13	Steering Angle Sensor Calibration Not Finished	(null)	J1939	11	015	012	012	(null)	(null)	(null)
17622	WAB	*	9999	SPN	1807	13	SAS Not Calibrated	(null)	(null)	(null)	015	012	(null)	ATC	(null)	(null)
17623	VOL	VOL	2019	SPN	1807	13	SAS Not Calibrated	(null)	J1939	11	015	012	012	(null)	(null)	(null)
17624	IHC	IHC	9999	SPN	1807	14	Steering Wheel Angle - Special Instructions	Service Soon	J1939	11	015	002	029	(null)	(null)	(null)
17625	IHC	IHC	9999	SPN	1807	14	Steering Wheel Angle - Special Instructions	Service Soon	J1939	42	015	002	029	(null)	(null)	(null)
17626	FTL	FTL	9999	SPN	1807	14	Steering Wheel Angle - Special Instructions	(null)	J1939	11	015	002	029	(null)	(null)	(null)
17627	VOL	VOL	9999	SPN	1807	14	Steering Wheel Angle - Special Instructions	(null)	J1939	11	015	002	029	(null)	(null)	(null)
17628	HIN	HIN	9999	SPN	1807	14	Steering Wheel Angle - Special Instructions	(null)	J1939	11	015	002	029	(null)	(null)	(null)
17629	*	*	9999	SPN	1807	14	Steering Wheel Angle - Brakes System Controller - Special Instructions	(null)	J1939	11	015	002	029	(null)	(null)	(null)
17630	WAB	*	9999	SPN	1807	14	SAS Internal Failure	(null)	(null)	(null)	015	012	(null)	ATC	(null)	(null)
17631	HIN	HIN	9999	SPN	1807	17	Steering Wheel Angle - Data Valid, but Below Normal Operating Range - Least Severe Level	(null)	J1939	11	015	002	029	(null)	(null)	(null)
17632	FTL	FTL	9999	SPN	1807	17	Steering Wheel Angle - Data Valid but Below Normal Operating Range - Least Severe Level	(null)	J1939	11	015	002	029	(null)	(null)	(null)
17633	FTL	FTL	9999	SPN	1807	18	Steering Wheel Angle - Data Valid, but Below Normal Operation Range (Moderately Severe Level)	(null)	(null)	(null)	015	002	029	(null)	(null)	(null)
17634	HIN	HIN	9999	SPN	1807	18	Steering Wheel Angle - Data Valid, but Below Normal Operating Range - Moderately Severe Leve	(null)	(null)	(null)	015	002	029	(null)	(null)	(null)
17635	IHC	IHC	9999	SPN	1807	19	Steering Wheel Angle - Received Network Data in Error	Service Information	J1939	232	015	002	029	(null)	(null)	(null)
17636	IHC	IHC	9999	SPN	1807	19	Steering Wheel Angle - Received Network Data in Error	Service Information	J1939	42	015	002	029	(null)	(null)	(null)
17637	FTL	FTL	9999	SPN	1807	19	Steering Wheel Angle - Received Network Data in Error	(null)	J1939	42	015	002	029	(null)	(null)	(null)
17638	*	*	9999	SPN	1807	19	Steering Wheel Angle - Received Network Data in Error	(null)	J1939	42	015	002	029	(null)	(null)	(null)
17639	HIN	HIN	9999	SPN	1807	19	Steering Wheel Angle - Received Network Data in Error	(null)	J1939	42	015	002	029	(null)	(null)	(null)
17640	FTL	FTL	9999	SPN	1807	31	Steering Wheel Angle - Condition Exists	(null)	(null)	(null)	015	002	029	(null)	(null)	(null)
17641	HIN	HIN	9999	SPN	1807	31	Steering Wheel Angle - Condition Exists	(null)	(null)	(null)	015	002	029	(null)	(null)	(null)
17642	FTL	FTL	9999	SPN	1808	1	Yaw Rate - Data Valid, but Below Normal Operation Range - Most Severe Level	(null)	(null)	(null)	015	012	001	(null)	(null)	(null)
17643	HIN	HIN	9999	SPN	1808	1	Yaw Rate - Data Valid, but Below Normal Operating Range - Most Severe Level	(null)	(null)	(null)	015	012	001	(null)	(null)	(null)
17644	VOL	VOL	9999	SPN	1808	2	Yaw Rate - Data Erratic, Intermittent or Incorrect	(null)	J1939	11	015	012	001	(null)	(null)	(null)
17645	HIN	HIN	9999	SPN	1808	2	Yaw Rate - Data Erratic, Intermittent or Incorrect	(null)	J1939	11	015	012	001	(null)	(null)	(null)
17646	FTL	FTL	9999	SPN	1808	2	Yaw Rate - Data Erratic, Intermittent or Incorrect	(null)	J1939	11	015	012	001	(null)	(null)	(null)
17647	*	*	9999	SPN	1808	2	Yaw Rate - Data Erratic, Intermittent or Incorrect	(null)	J1939	11	015	012	001	(null)	(null)	(null)

Master Table | Sheet2 | J1939 SAE | J2012OBDII SAE | Sheet1 | Eaton

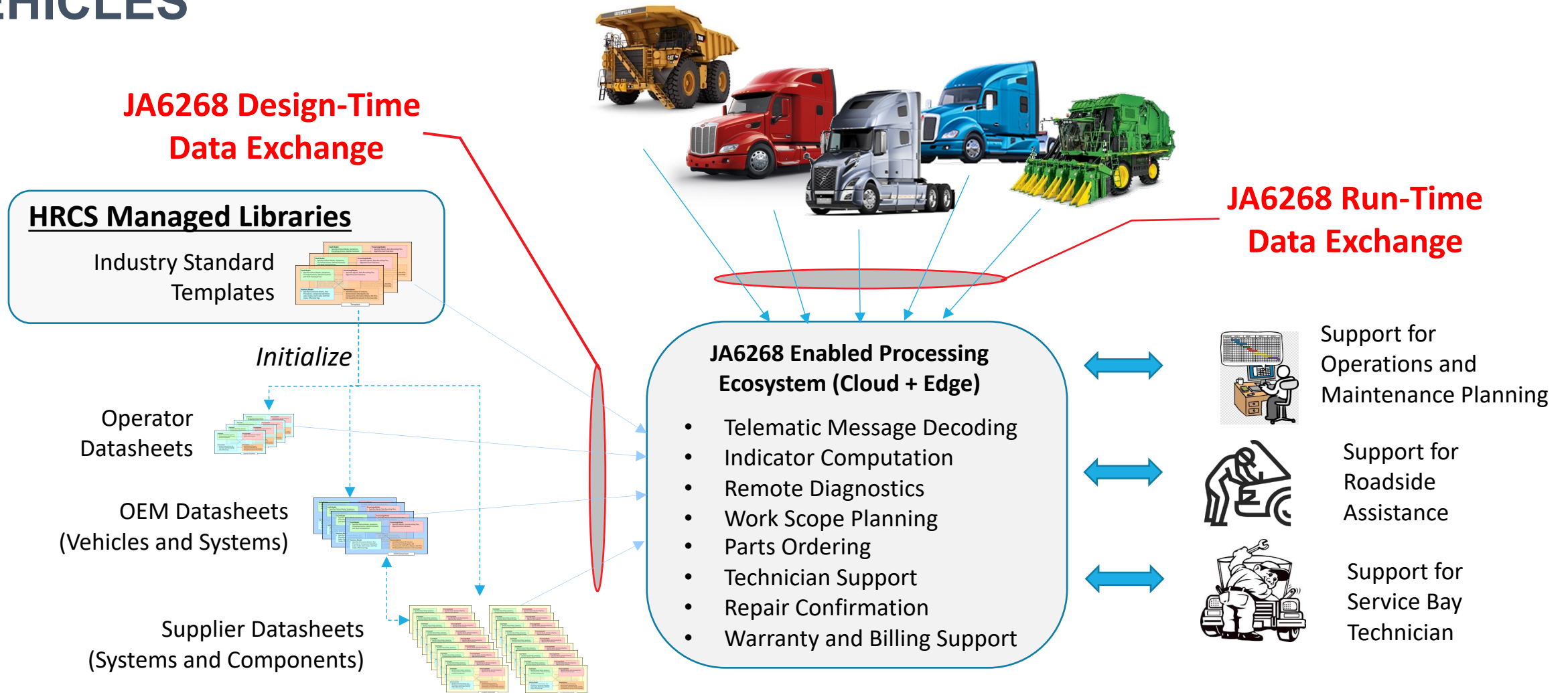# VMRS-JA6268 Mapping File
Implementation Concept
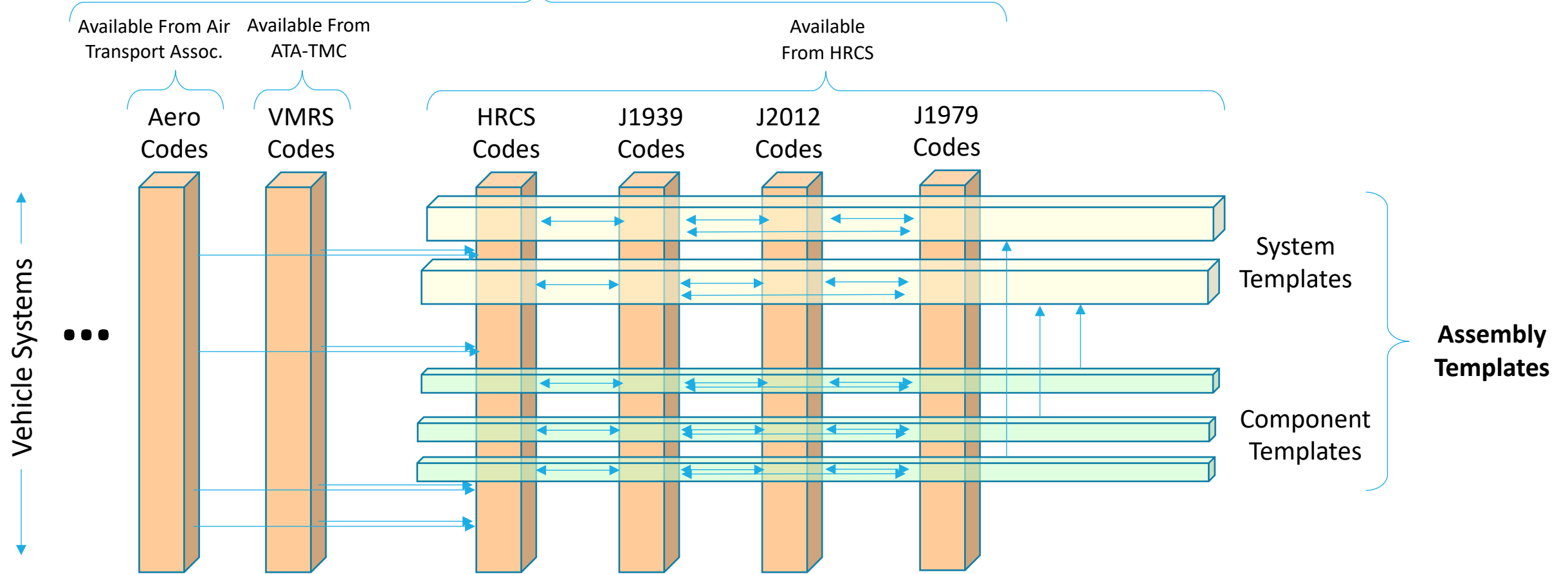
VMRS - SAE MAPPING VALUE

- **Enables Generation of Better Maintenance Work Orders**

- **Enables Better Analysis of Warranty Cost**

- **Enable Prioritization of Cost Reduction Initiatives**

- **Other Items Fleets Do Not Wish to Disclose**

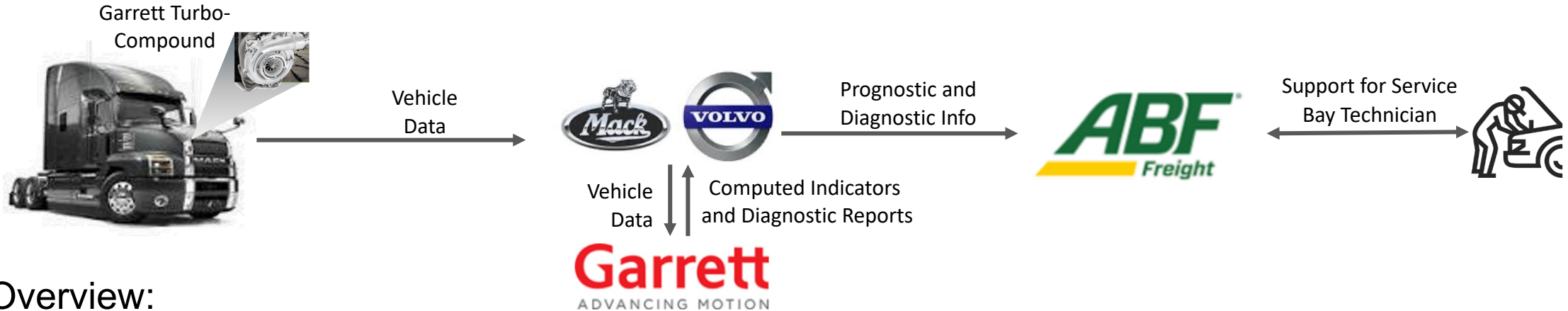# On Vehicle

APPLICATION OF JA6268 FOR COMMERCIAL VEHICLES

JA6268 Design-Time Data Exchange

JA6268 Run-Time Data Exchange

HRCS Managed Libraries

Industry Standard Templates

Initialize

Operator Datasheets

OEM Datasheets (Vehicles and Systems)

Supplier Datasheets (Systems and Components)

JA6268 Enabled Processing Ecosystem (Cloud + Edge)

- Telematic Message Decoding
- Indicator Computation
- Remote Diagnostics
- Work Scope Planning
- Parts Ordering
- Technician Support
- Repair Confirmation
- Warranty and Billing Support

Support for Operations and Maintenance Planning

Support for Roadside Assistance

Support for Service Bay Technician

JA6268 Format And Vocabulary Aligned With Industry Standards (i.e., J1939, J1979, J2012, VMRS)

TMC★22

Commercial Trucking – Proposed Pilot Program
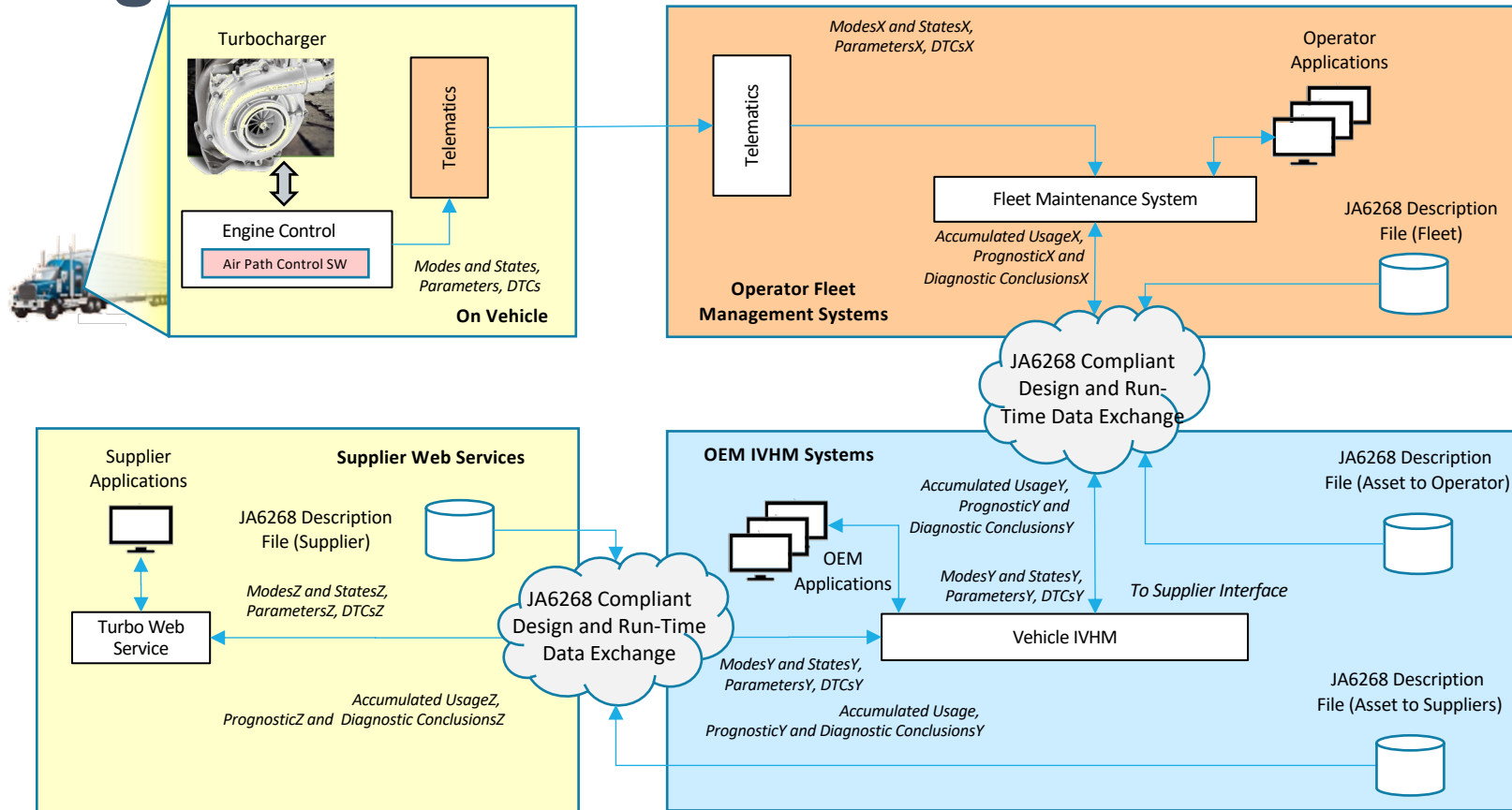
**Pilot will demonstrate how JA6268 and HRCS support the integration of IVHM Data and Functionality between Participants**

ATA TMC JA6268 MACK/GARRETT/ABF PILOT OVERVIEW

Garrett Turbo-Compound

Vehicle Data → Mack/Volvo → Prognostic and Diagnostic Info → ABF Freight → Support for Service Bay Technician

Vehicle Data ↕ Computed Indicators and Diagnostic Reports

Garrett — ADVANCING MOTION

- Overview:
  - Use JA6268 templates for specification and message routing data of engine Air System
  - ~300 Mack vehicles w/ Garrett Turbochargers managed by ABF.

- Objectives and Success Metrics:
  - Use of JA6268 reduces the effort to configure the communications, invoke the algorithms and receive the results
    - **Metric 1: Comparison of Effort using JA6268 compared to similar activities performed without**
    - **Metric 2: Diagnostic Accuracy**
  - Use of JA6268 allows Mack / ABF to implement aspects of IVHM that have not been previously feasible / affordable
    - **Metric 3: Value of New Capabilities**

Prove that JA6268 template reduce the effort to develop High Accuracy IVHM Functionality

TMC★22

ATA TMC JA6268 SEFL/DG/SAFERIDE PILOT OVERVIEW
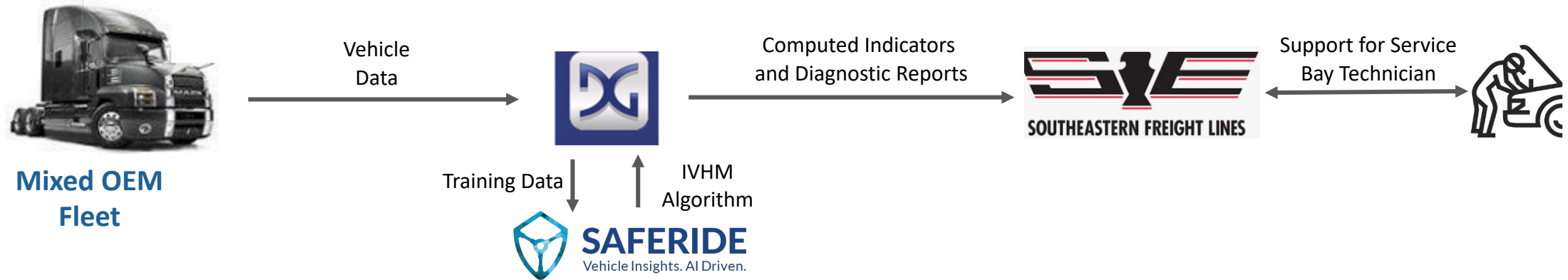
- <u>Overview</u>:
  - Use JA6268 templates for specification and message routing data for **Primary Electrical System Monitoring**
  - ~ 20 vehicles monitored for 12 weeks
- <u>Phase 1</u>: Objectives
  - Demonstrate TCO reductions using JA6268 health indicators compared to RP-129 diagnostics deployed without
    - Reduce the time and effort required compared with using shop test equipment and labor intense methods following RP129.
    - Reduce downtime for running preventive maintenance tests with RP-129
- <u>Phase 2</u>: Objectives
  - Demonstrate use of JA6268 datasheets to develop and deploy advanced ML/AI-based IVHM Health Indicators
  - Extend the features, functions, and benefits of Health Indicators beyond Phase 1

Pilot Program:

1. Air-System
https://ata.webex.com/ata/lsr.php?RCID=50c1
16452cb24b5e9d58c990b8b78211

2. Primary Electrical System
https://ata.webex.com/ata/lsr.php?RCID=3cdf
9816847e414191f159d2404a31c5

Please See TMC Connect for both Webinars.