



HEALTH-READY COMPONENTS & SYSTEMS RECOMMENDED PRACTICE	HRCS-N000001
	2021-05
DATA OWNERSHIP	

Modern surface and aerospace vehicles produce a significant quantity of maintenance and operating data relating to nearly all important vehicle systems. The advent of health-ready components is increasing this trend. This data is widely recognized as valuable information which can be used to support maintenance, monitor operating conditions, and potentially predict coming problems and/or the remaining useful life of systems or subsystems.

Manufacturers commonly enter into agreements regarding the collection and use of operating data with vehicle or asset owners (hereafter referred to as the “Owner”). For our purposes, we consider fleet operators or lessees to be equivalent to owners for data ownership, even though they may not be the legal owner of the asset. It is the policy of SAE HRCS™ that the vehicle owner is also the owner of all operating data produced and transmitted from their asset or vehicle for these purposes. There are many different potential users of such data that may have conflicting viewpoints about this data, and there are areas that require careful explanation to avoid confusion. The manufacturer can assemble assets or vehicles which produce data and may wish to consume and communicate that data for on-board and off-board applications. However, the manufacturer has overriding responsibilities to:

- a. Comply with all relevant government regulations¹ relating to operation, performance, and safety of the vehicle;
- b. Obtain the Owner’s permission for off-board communication of all data unless it is explicitly covered as a part of the purchase agreement or warranty agreement; and
- c. Respect the Owner’s decisions including de-identification of the data to prevent revealing the specific operator or vehicle unless addressed in (a) or (b) above.

The Owner may gain significant benefits by granting the manufacturer or third-party maintenance provider access to their operating data. This could include improved maintenance alerts and support, enhanced warranty coverage, and useful comparisons with respect to other operators of the same or similar assets and vehicles being used under similar conditions. In cases where the Owner elects NOT to grant permission for use of their data, it is possible that this could have negative consequences in terms of the vehicle warranty, as well as maintenance and support services.

Off-board communication can be accomplished in real time or via other means of data capture. Vehicle manufacturers may also be able to transmit information back to a vehicle (e.g., software updates or other useful data, such as infotainment updates). Some clarifications follow which help better define the issues and different perspectives in the industry:

- Data being communicated from the vehicle to off-board entities is still owned by the vehicle Owner. The data could be transmitted for the Owner’s benefit, the manufacturer’s benefit, or some other purpose.

¹ Including EU General Data Protection Regulations, where applicable.

- The vehicle Owner might be an individual or a company. The Owner could own a single vehicle or a fleet of vehicles.
- The driver of a given vehicle could be the Owner or someone the Owner has authorized to use the vehicle (commercial or private). If the driver is not the Owner of the vehicle, data ownership remains with the vehicle Owner. Any use of vehicle information should be understood by all parties in advance so as not to expose the driver's personal information (location, speed, etc.). This could be part of the driver's employment agreement or agreed to between the parties in some other way.
- Some vehicle information is used primarily on-board to drive displays for the benefit of the driver. The design and operation of these functions is IP owned by the vehicle or component manufacturer, which they may or may not wish to share with others.
- Some vehicle information is used primarily on-board to affect the operation, control, and safety of the vehicle. The design and operation of these functions is also IP owned by the vehicle or component manufacturer. The manufacturer may choose to make some of this knowledge available to third parties to enhance the value of their product at their option. This is critical to ensure the integrity, reliability, and safety of the vehicle.
- Some vehicle information is used on-board and off-board to support the maintenance and servicing of the vehicle. This area is generally known as vehicle health management (VHM). This operating data is still owned by the Owner of the vehicle but is typically made available to service providers. It is not appropriate for the manufacturer to charge Owners for their own operating data. Owners may enter into agreements with the manufacturer or third-party providers whereby additional value-added interpretation, or recommended actions, are provided under contract. The design and operation of these functions, along with any proprietary data, is IP owned by the vehicle or component manufacturer.
- The manufacturer may choose to make some of this design IP available to third parties to enhance the value of their product at their option. "Right to Repair" proponents in the U.S. and Europe have been advocating greater access to vehicle design IP information. This type of information sharing should be governed by the vehicle or component manufacturer's discretion and/or applicable regulation.
- Software updates and information content updates refer to information being sent to the vehicle to correct deficiencies or improve operation to the benefit of the vehicle and its Owner. The ability to perform these updates nevertheless requires the advanced permission of the vehicle Owner.
- Advanced safety systems now being developed will likely support the communication of vehicle location and velocity information via V2V and V2X technology in support of collision avoidance systems. These may be subject to government regulation which the Owner may or may not have the right to opt out of.
- Information legally demanded by subpoena or court order must be honored by the data owner or anyone in possession of that data.