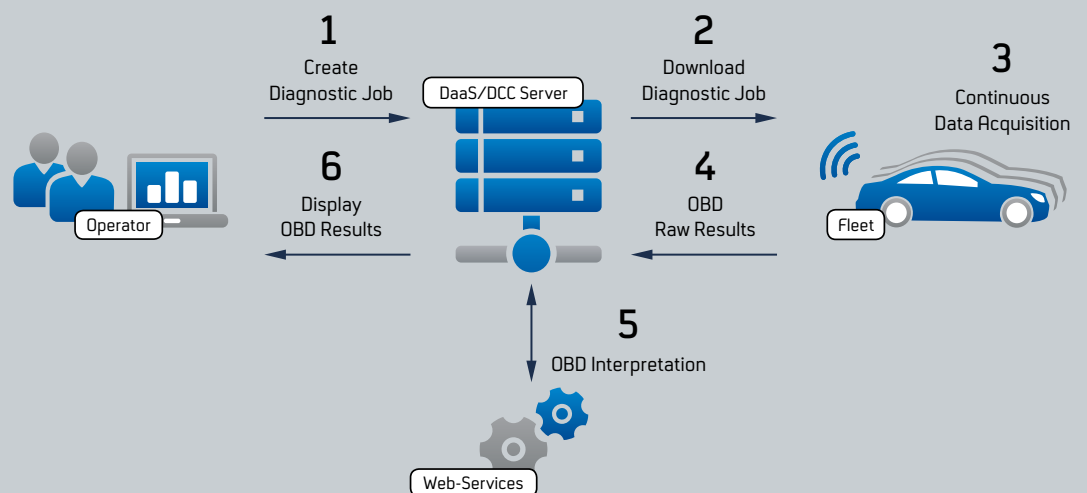


RA[®]DaaS Diagnostics - as - a - Service

Connected. Anywhere. Anytime.

- Connected vehicle service
- Pay-per-use diagnostics
- Web-Based Portal
- Remote Access with DiagRA[®] MCD Toolset
- OnBoard Unit Data Acquisition
- Server-based handling of diagnostic jobs and OnBoard Units
- Service options like consumption analysis driver profile and fleet status
- New business model



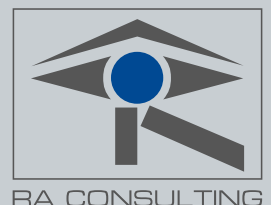
www.rac.de

 **ASAM**
Member

 **ORACLE**[®]
Gold Partner

 **CarMedialab**
Technology Partner

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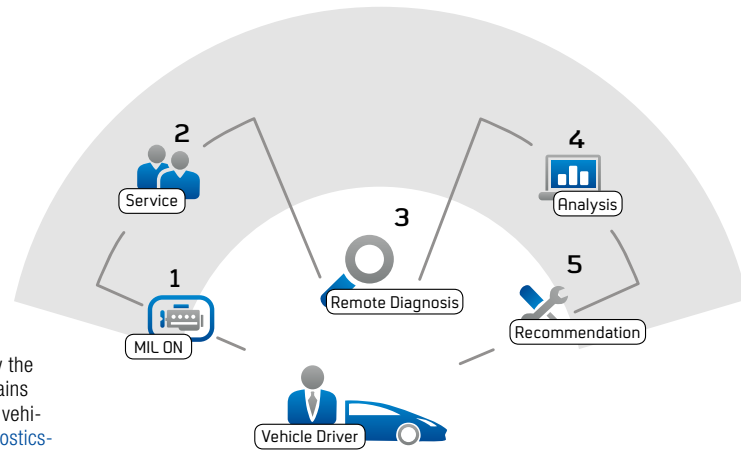


Browser-based service to collect diagnostics data in a comfortable, easy and cost efficient way.



RA® Daas Diagnostics - as - a - Service

Connected. Anywhere. Anytime



Synchronous data acquisition - scheme

Continuous vehicle diagnostics during the everyday use of the vehicle help to have a complete overview about the status of the vehicle over its lifetime. Problems are being detected much faster and can therefore be fixed in a timely manner.

For this reason, RA® is developing a service which allows to collect diagnostics data in a comfortable, easy and cost efficient way from any vehicle, no matter where it is located and without the need of an engineer having access to the vehicle.

Using a browser based online platform diagnostic jobs can be defined and send to an On-Board-Unit (OBU) installed in a vehicle. This OBU then collects diagnostics data in a predefined pattern (e.g. once per driving cycle) and sends it back to the server for further processing.

The customer now can access the data online in his own account in the portal and has in this way a continuous overview about the status of the vehicle.

If the data transmitted by the OBU back to the server contains hints about a problem in the vehicle (Fault Codes, DTC) **Diagnostics-as-a-Service** gives you the option to open a direct and secure communications channel to the vehicle through which you can directly access data from the vehicle synchronously as shown in the scheme top right. The customer is able to look at the data either online or inside the proven RA® Silver Scan-Tool™.

As a standardized access to diagnostics data we use the OBDII and EOBD information. But **DaaS** can also be integrated into our **DiagRA® MCD Toolset**. In this way diagnostics can also be done using the OEM specific diagnostics information like for example ODX data. But this will only be implemented in cooperation with an OEM or with an OEMs permission.

All the necessary steps like configuration, data transmission and administration will be offered by RA® as a cost efficient service. The cus-

tommer can now focus only on the diagnostics data and does not have to worry about the access to this data anymore.

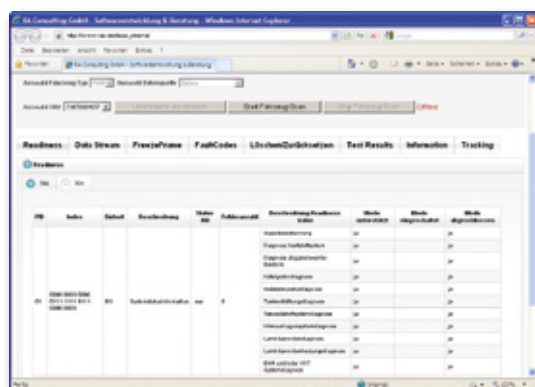
The front scheme shows the system design of DaaS. The central **DaaS Server** manages communication with both the On-Board-Units and the customers or the customers operator systems. Communication with the OBUs can be established by GPRS or UMTS. The customers can be connected via the Internet - wired or, for instance, by UMTS.

Additionally RA® will develop based on the described technology different service packages like fuel consumption analysis or driver profiles and offer them at a low fixed price. These services are not only

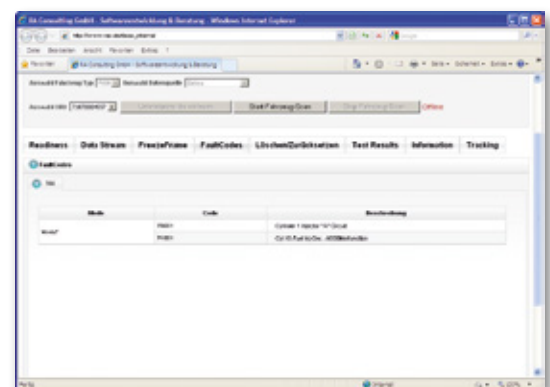
targeted at private vehicle owners but especially at companies and development departments that would like to keep an eye on their fleets.

Additional applications and reports can be individually generated by RA® according to customer requirements. The afford mentioned OBU is a telematics unit with an embedded operating system on which our diagnostics application **DiagRA®-Embedded** is deployed.

Besides the OBU of our subsidiary enterprise **CarMedialab** other technically suitable OBUs can be used as well. They are connected to the vehicle bus via the standardized OBD plug. An intervention into the vehicle is therefore not required or necessary.



Mode 1 PID D1 clearly represented



OBDII Fault codes remote accessed

