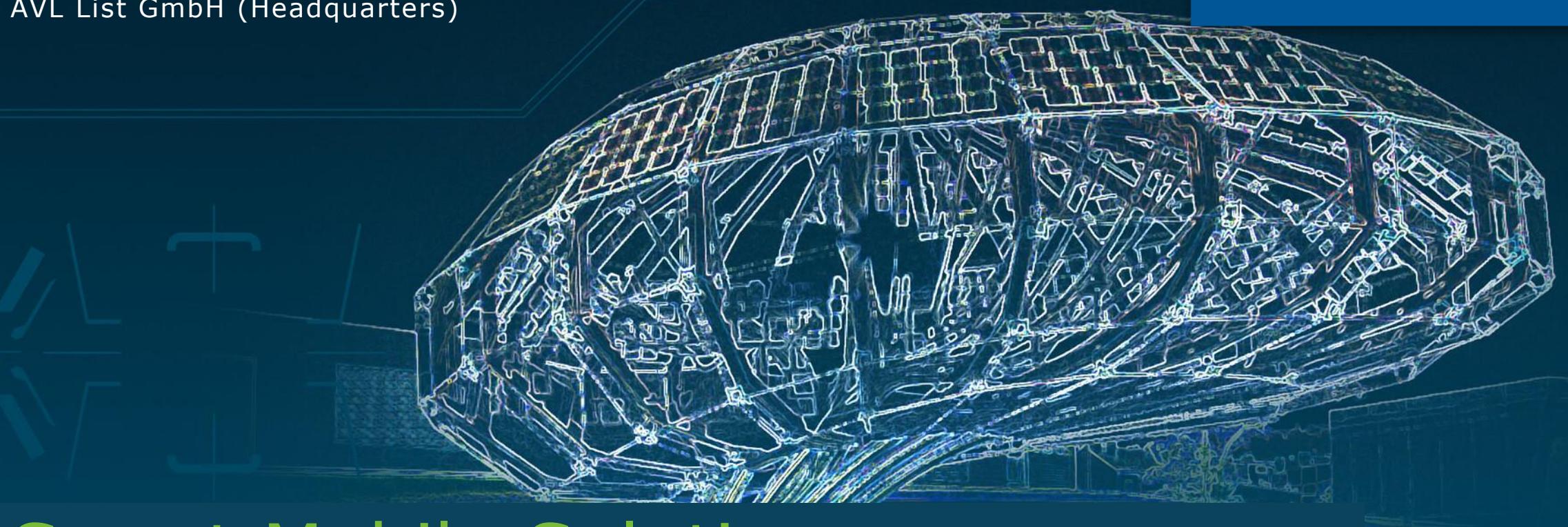


AVL List GmbH (Headquarters)



Smart Mobile Solutions

RDx Vehicle and Simulation Packages

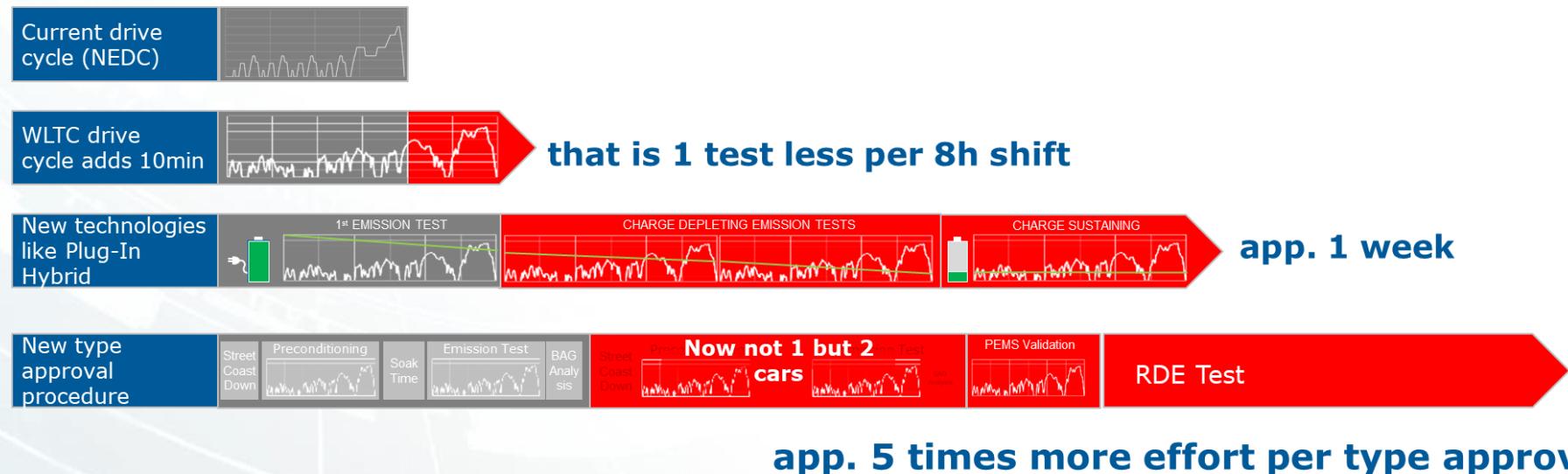
**Patrick Falk, Marco
De Bei**

Efficient RDE Calibration Workflow

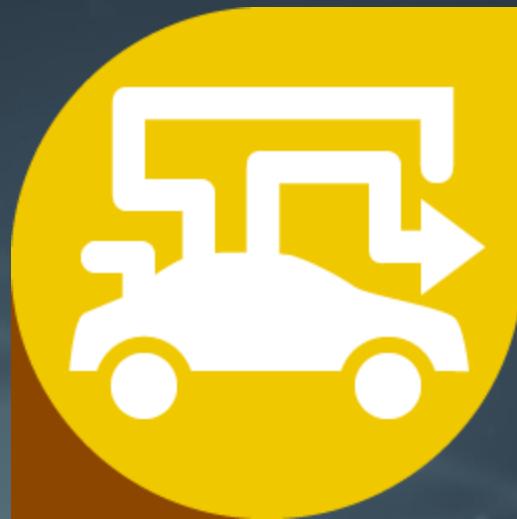
The Challenge

Issue: The RDE regulation has highly increased the calibration effort to validate new applications

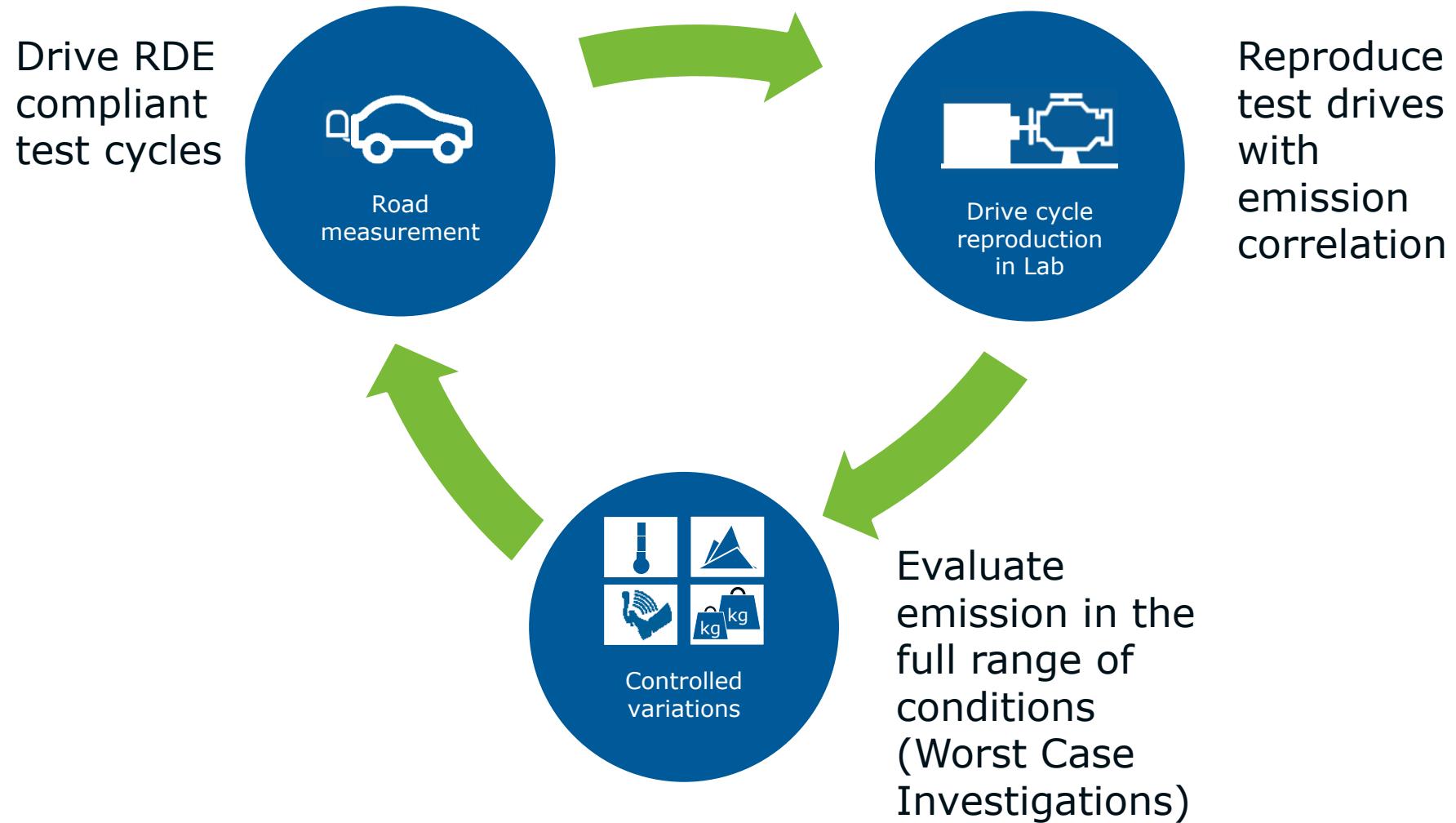
AVL solution: a platform of Apps which support all phases of the calibration workflow, helping reduce the development effort



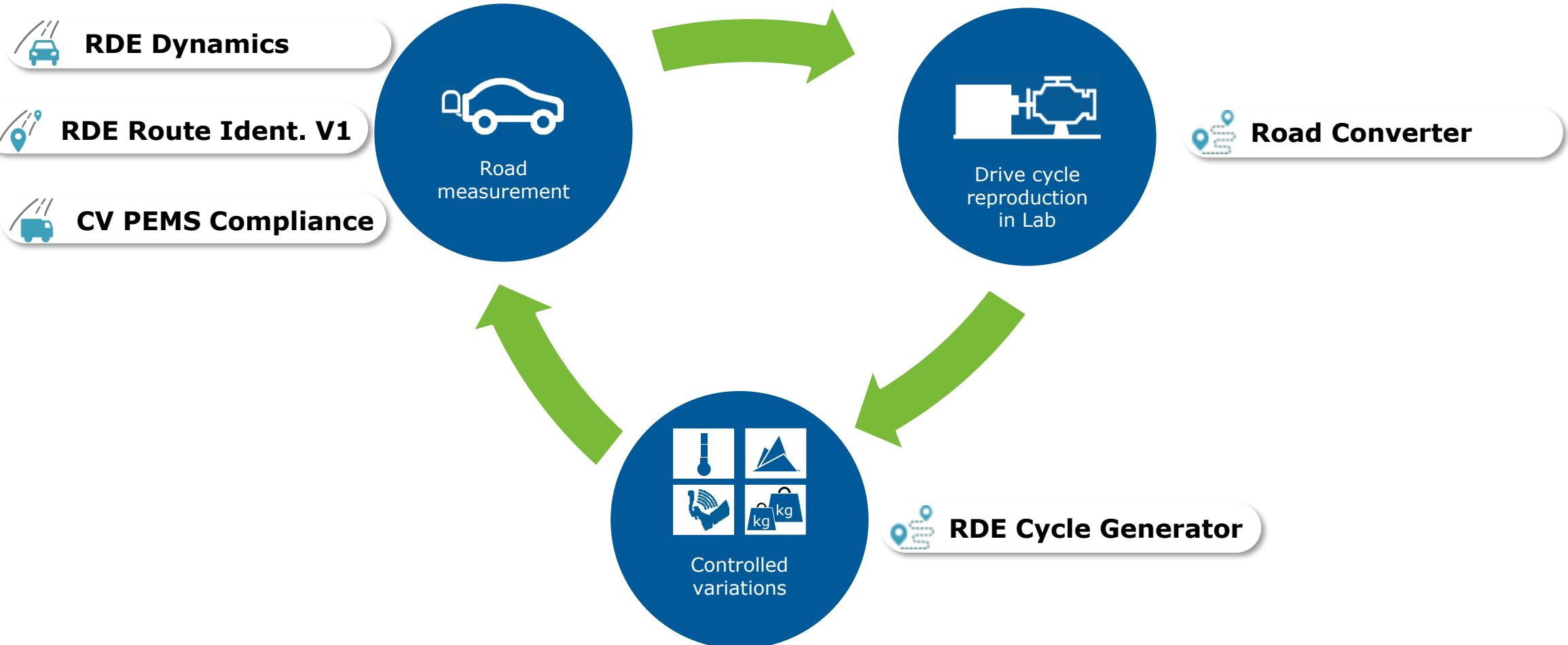
Smart Mobile Solutions



RDE Workflow



RDE Workflow



RDE Dynamics

アプリ “RDE Dynamics” デモ動画

AVL



RDE Route Finder

AVL InVehicle - <InVehCal> - Vehicle ParameterFile19.xpa * / Online Signals - [Welcome]

File Edit View Measurement Extras Window Help

Measure

New Open Data Explorer

Welcome

Channel-Browser

FILE1 (Online Signals)

PAR - Parameters

TM - Time Based (60)

Edit Channel Name Filter

\$ActiveCalibrationPage 0

\$Altitude m

\$AudioComment

\$AudioCommentData

\$Latitude

\$Longitude

\$Maneuver

\$Speed km/h

Misfire_determination

Misfire_Load %

Misfire_n rpm

RaceStart_Drehmoment_Rad_HL Nm

RaceStart_Drehmoment_Rad_HR Nm

RaceStart_Drehmoment_Rad_VL Nm

RaceStart_Drehmoment_Rad_VR Nm

RaceStart_EndTrigger Unit_Per

RaceStart_OelSumpftemp_AT Unit_Deg

RaceStart_OelSumpftemp_HAG ?C

Graphic Dependencies

New Window

Start visualisation

Start recording

Stop measuring

Configuration

Win2App

GPS

Full screen

Day/Night

Commenting

Mobile Apps

Protos

Development

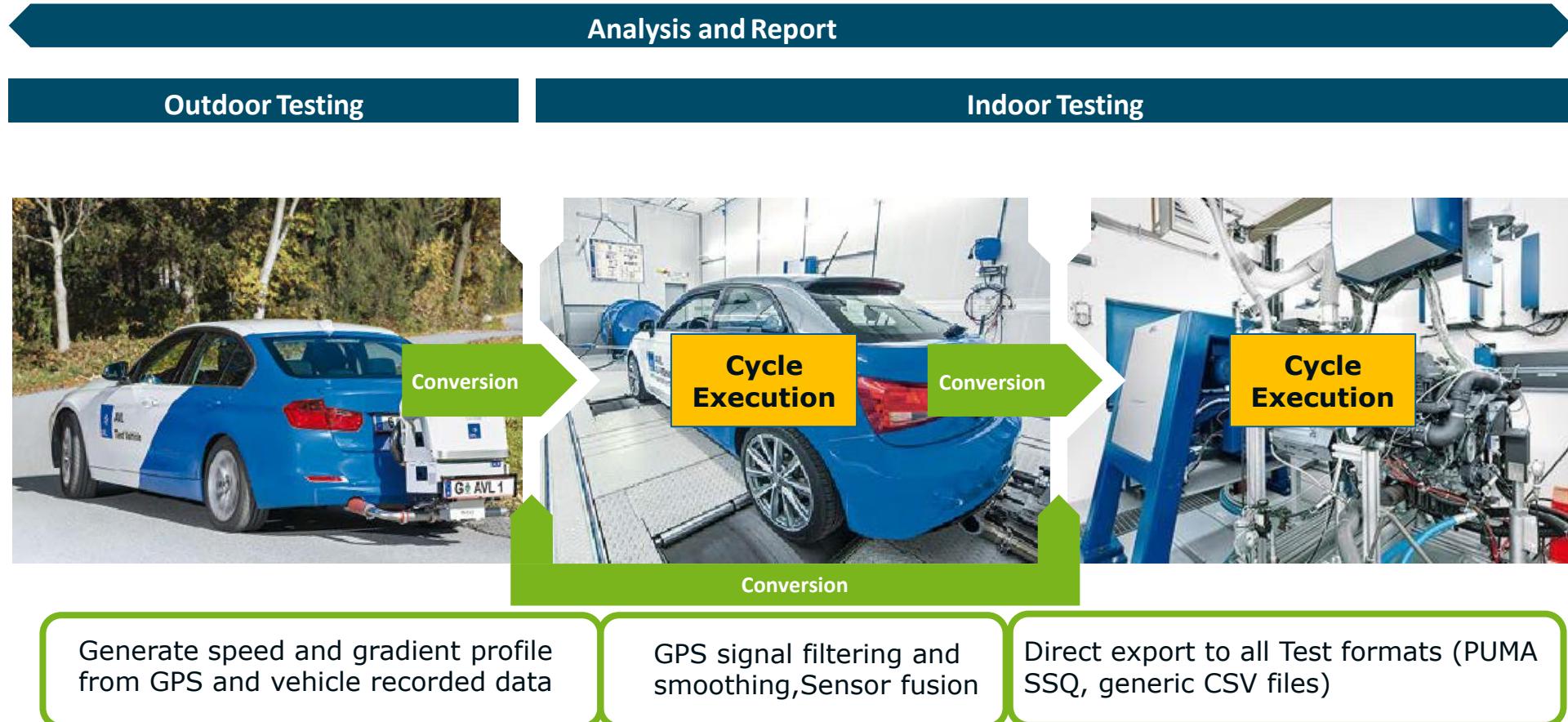
Message List

The screenshot shows the AVL InVehicle software interface. The main window features a large blue car silhouette centered on a white background. To the left is a vertical toolbar with icons for New Window, Start visualisation, Start recording, Stop measuring, Configuration, Win2App, GPS, Full screen, Day/Night, and Commenting. At the bottom of this toolbar, there are tabs for Measure (highlighted with a yellow circle), Prepare, Mobile Apps (which has a mouse cursor pointing at it), Protos, and Development. Below the toolbar is a menu bar with File, Edit, View, Measurement, Extras, Window, and Help. The top right corner displays the title "AVL InVehicle (BETA)". On the right side of the interface, there are several panels: "Channel-Browser" showing "FILE1 (Online Signals)", "PAR - Parameters", and "TM - Time Based (60)"; an "Edit Channel Name Filter" list containing numerous vehicle parameters like \$ActiveCalibrationPage, \$Altitude, \$AudioComment, etc.; and a "Graphic Dependencies" panel.

To start the application, let's go to "Mobile Apps"

Road Converter

DATA CONVERSION PROCESS for ROAD TO TESTBED



Cycle Generator

AVL RDE Cycle Generator Workflow Overview



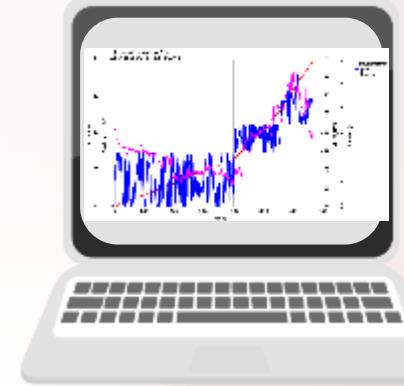
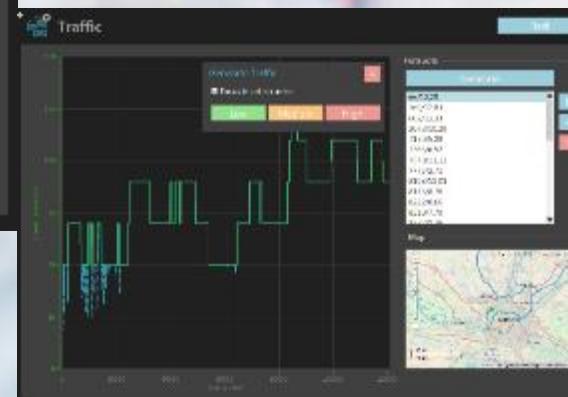
Define Start/End point in Google Map or upload an existing RDE measurement



Select different driver types or vehicle parameters



Select a road & traffic condition



Calculate a RDE compliant drive cycle for simulation & testbed



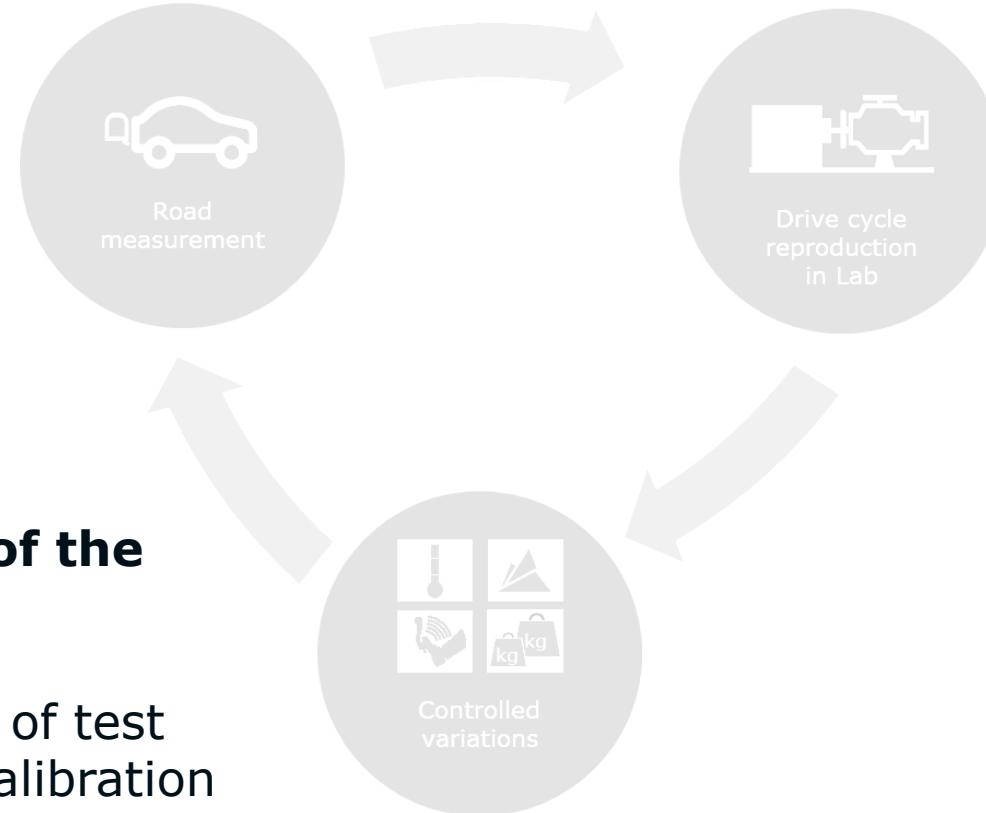
Smart Mobile Solutions – Key benefits

High efficiency in road tests:

Close to 100% valid RDE cycles!

Enhance the quality of the validation

Generating a wide field of test cases allows a robust calibration with reliable results



Shorten the development cycle of emissions calibration

Easy import of vehicle measurements allows frontloading of vehicle tasks to all testbed environments