

Information about Virtual Roads

> About

Virtual Roads is an innovation project in the gaming area. It enables you to record and digitalize your road trips in order to apply them to an accurate 3D gaming environment. Thus, you will be able to retrace the world's most beautiful car routes, relive your journeys and even share them with your friends.



Enjoy your favorite car routes



Record the route with your smartphone



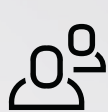
Adapt the real images to the digital routes



Transfer the digital route into the racing game



Select a Porsche model for the racing game



Challenge yourself and your friends online

> Technical background

The 3D environment is generated by a specially developed software supported by **artificial intelligence**. In order to evaluate, synchronize and convert the recorded route **using sensor data**, the program accesses an extensive graphic archive. In a fully-automatic process, the program creates virtual routes of **up to eight kilometers in length** in no time, depending on the degree of complexity.

1. Recording

The route is recorded via an app on your smartphone.



2. Evaluation

The visual image is evaluated and synchronized via the driving and sensor data on the smartphone.



3. Transformation

A 3D model of the road is captured based on the ride's evaluation.



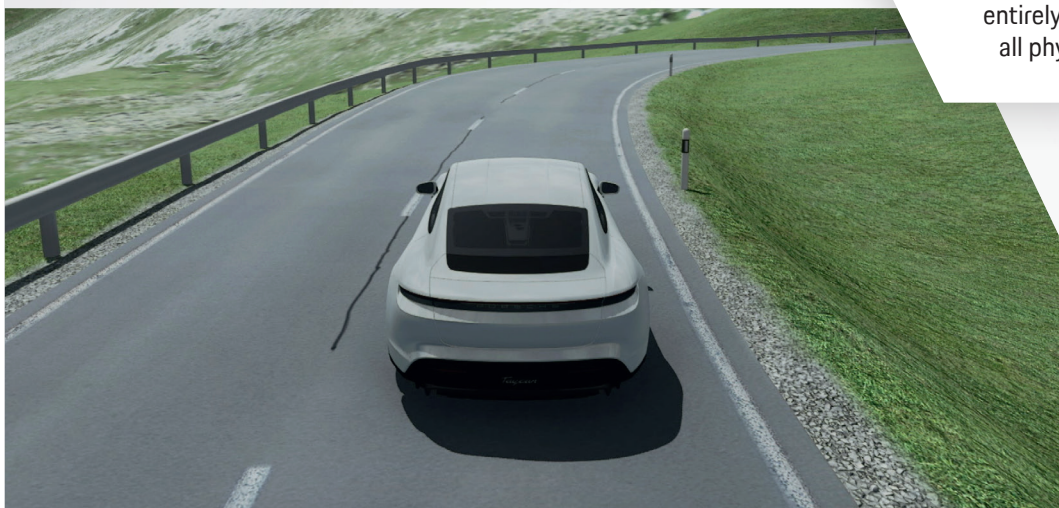
4. Expansion

The 3D model is enhanced by surrounding objects such as reflector posts, guard rails, trees, etc.



5. Completion

The more remote distance of the 3D model's range is completed based on geo data.



6. Processing and export

The 3D model is processed into an entirely playable environment including all physical features.



The conversion process takes less than

< 1 %



of the average time of a digitization process by laser.

> Start-up ecosystem

As part of their digitization strategy, Porsche has also been enhancing their innovative power outside their corporate boundaries. To this end, the sports car manufacturer has been consistently building a start-up ecosystem for several years now.

The **Virtual Roads** innovation project was developed by **Porsche** in collaboration with the Swiss start-up **Way Ahead Technologies**.



WAY AHEAD
TECHNOLOGIES



The prototype of **Virtual Roads** is based on Porsche's own racing game, however, it is transferable to other current racing games such as **Assetto Corsa**.

The users will enjoy the beauty of the route on the simulator, PC or smartphone once more and they will even be able to **share it with friends and community**.

> Vision

Access to a **virtual Porsche experience**: on the most exciting routes in the world with the most beautiful sports cars.

Fuel consumption / Emissions Taycan Turbo S: electric power consumption* combined (WLTP) 25.6 – 24.3 kWh/100 km, (NEDC) 28.5 kWh/100 km, CO₂ emissions combined (WLTP) 0 g/km, (NEDC) 0 g/km, electric range combined (WLTP) 390 – 416 km, electric range in town (WLTP) 434 – 477 km

Fuel consumption / Emissions 718 Cayman GT4 RS: fuel consumption combined (WLTP) 13.2 l/100 km, (NEDC) 12.3 l/100 km CO₂ emissions combined (WLTP) 299 g/km, (NEDC) 281 g/km

*Data determined in accordance with the measurement method required by law. As of 1 September 2018 the Worldwide Harmonised Light Vehicles Test Procedure (WLTP) replaced the New European Driving Cycle (NEDC). Due to the more realistic test conditions, the fuel/ electricity consumption and CO₂ emission values determined in accordance with the WLTP will, in many cases, be higher than those determined in accordance with the NEDC. Further information on the official fuel consumption and official, specific CO₂ emissions of new passenger cars is available in the "Guidelines on fuel consumption, CO₂ emissions and power consumption of new passenger cars", available free of charge from all sales outlets and from Deutsche Automobil Treuhand GmbH (DAT).