Dassault Systèmes 3DEXPERIENCE® platform, backed by digital process planning and multidisciplinary simulation, enables car manufacturers and engineering services to certify on time and within budget.

A combined set of end-to-end workflows and verified industry specific simulation processes for digital vehicle design and homologation, built on longstanding expertise and partnership with the automotive industry aims to satisfy WLTP requirements for faster digital certification and market launch.
INDUSTRY CHALLENGES

- Order of magnitude increase in required testing for vehicle type approval
- Reported vehicle emissions increase under WLTP making targets more difficult to achieve
- Risk of vehicle launch delays due to inability to meet certification requirements
- Extremely limited physical wind tunnel time due to high demands of WLTP

BENEFITS AND DIFFERENTIATORS

- Eliminates risk of delayed launch due to inability to meet requirements of WLTP
- Significantly reduces need to obtain scarce wind tunnel time for homologation
- Eliminate logistical overhead of managing 1000’s of physical parts for aerodynamics certification
- Ensure that designs will meet targets as feedback on variants can be obtained early in the design cycle
- Reduce the number of physical tests needed for certification by over 80%

OUTCOME-BASED SERVICES

Dassault Systèmes supports automotive manufacturers to meet strict WLTP emission standards with digital certification early in the development and design process. SIMULIA simulation solutions can replace the lengthy physical wind tunnel test process, with a digital representation of a vehicle model under real-world operating conditions to provide accurate emission output results. SIMULIA simulation solutions takes the evaluation and certification process a step further by identifying vehicle variants, that can be modified to improve the gas mileage and vehicle carbon emissions to design and certify even an entire fleet of cars in an expedited timeframe. Dassault Systèmes offers both software as well as expert services to assist automotive OEMs with digital evaluation and certification.

USERS

- Head of Engineering
- Aerodynamics Analysts
- Aerodynamics Supervisors
- Powertrain Engineers
- Tire Engineers

KPIs

- Certification process developed by SIMULIA in conjunction with Vehicle OEMs, Technical inspection services & Government regulators to ensure applicability across industry
- Utilizes industry leading SIMULIA portfolio, providing predictability and confidence for Vehicle OEMs
- Future proof certification procedure as Dassault Systèmes is involved with UN Economic Commission for Europe (UNECE) and the European Commission (EC) for updated regulations
- 3DEXPERIENCE platform streamlines homologation process and ensures traceability of every configuration