Urban Mobility & Light Vehicle Development Services

Applus+ IDIADA offers a one-stop shop solution for Urban Mobility and Light Vehicle development projects. Our services in this field are tailored to clients developing any kind of vehicle targeting the Urban Mobility ecosystem:

e-kick scooters

e-bikes

e-scooters

Motorcycles & 3-wheelers

Urban light delivery/services vans and robo-taxis

Microcars & Quadricycles

Robo taxis & Autonomous Urban Shuttles

Urban Air Mobility (eVTOLs)

Applus+ IDIADA offers product development leadership with turnkey project capabilities by combining our expertise in both module design and attribute development:

Styling and Concept Definition

Development of styling and vehicle concepts, aimed at functional, ergonomic, modular, and space-efficient solutions.

Powertrain Development

Definition and integration via CAD/CAE tools of complete powertrain modules aimed at being compact, reliable, and energy efficient. High experience in electric vehicle architectures.

Connectivity & ADAS

Definition and integration of the required hardware to cover required connectivity features and desired Driver Assistance functions, as well as vehicle connectivity.

Durability, Reliability & NVH

Virtual development and testing validation to meet key vehicle-level requirements such as Durability, Reliability, and Noise Vibration & Harshness.

Thermal Management

Energy-efficient and integrated-management development approach. Definition, dimensioning, and validation of both propulsion/energy storage systems and cabin thermal comfort.

Structural/Non-Structural Components Development

Lightweight-oriented and cost-affordable component design and integration via CAD/CAE tools for complete vehicle body and chassis modules.

Electric & Electronics

Definition and development of the Electric & Electronic architecture, pursuing simplicity and regulations compliance. Deep expertise in associated domains like Functional Safety and Cyber Security.

Vehicle Dynamics & Braking

Virtual development and testing validation to meet requirements for Vehicle Stability, Handling, Comfort, and Braking performances.

Passive Safety

Virtual development and testing validation to maximize the occupant protection performance and vehicle crashworthiness under different load cases.

Vehicle Performance and Driveability

Virtual development and testing validation of vehicle range, energy consumption, gradeability, acceleration, payload capacity, etc.

When it comes to Urban Mobility and Light vehicle development, Applus+ IDIADA's value is based on 5 pillars:

1. TECHNICAL COMPETENCE

Proven capacity for product development: program management, design, simulation, and testing.

Our recognized know-how in homologation is a key asset to come out with a legal requirement compliant product.

2. HUMAN CAPITAL & INTERNATIONAL FOOTPRINT

Proven capacity for product development: program management, design, simulation, and testing.

Our recognized know-how in homologation is a key asset to come out with a legal requirement compliant product.

3. BENCH/LAB FACILITIES

We put at the project service our market-leading bench test & labs for vehicle/systems validation.

Complete range of laboratories and test benches to carry out required vehicle & subsystem level validation for Urban Mobility programs.

4. DIGITAL SOLUTIONS

Powerful & reliable tools to optimize virtual development activities. Quick and reliable software tools adapted to the requirements and specificities of Quadricycle product development process and features.

5. PROVING GROUND FACILITIES

Most comprehensive independent proving ground for vehicle validation. Complete range of instrumentation kits, workshops, and test tracks required for full vehicle performances validation.

ⓘ CONTACT INFORMATION

Headquarters & Technical Centre · *L'Albornar - PO Box 20* · *E-43710 Santa Oliva (Tarragona) Spain*

For further details, please contact: ✉ *Chassis_development@idiada.com* 📞 *+34 977 166 023*