



YOUR DEVELOPMENT PARTNER

IDIADA CAV Testing Facilities

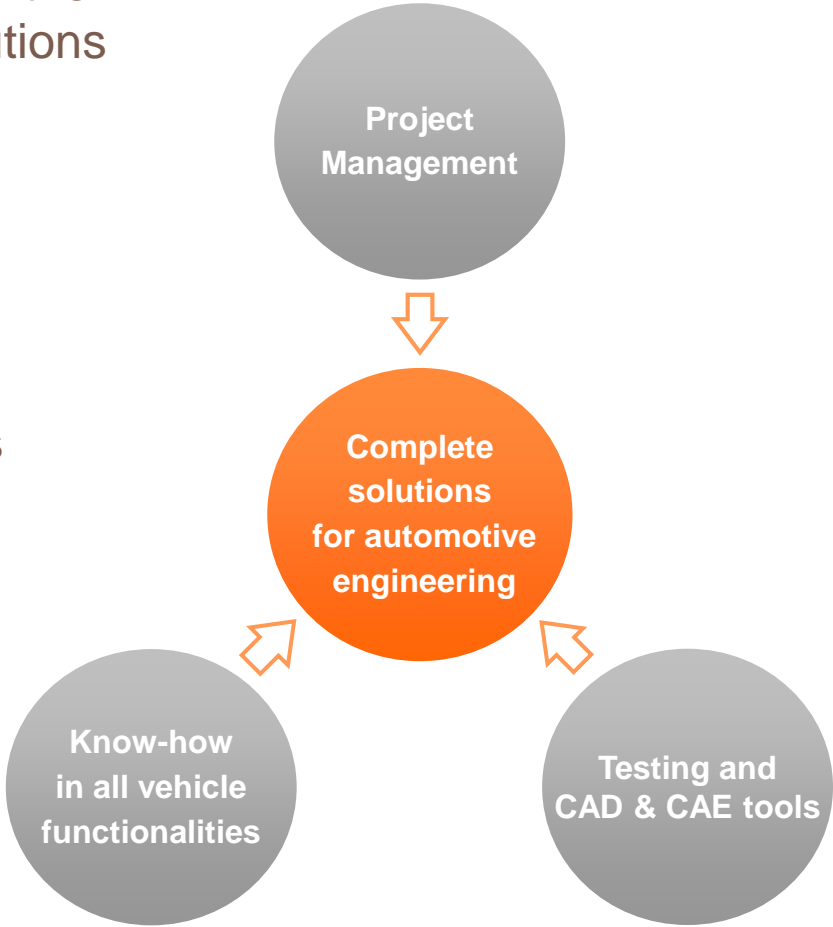
November 2017

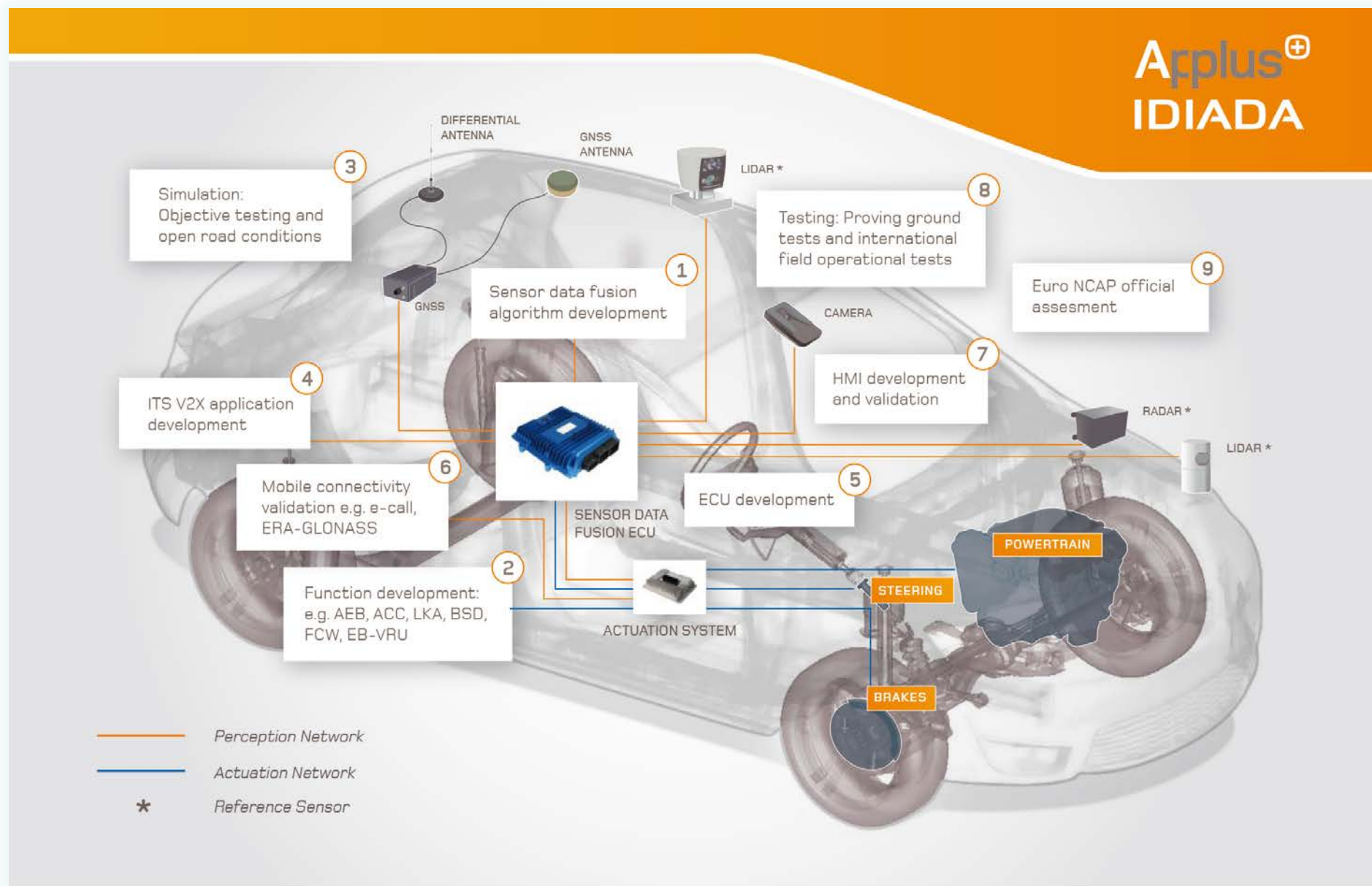
Who we are & what we do

Applus IDIADA is an engineering partner to the automotive industry providing complete solutions for product development projects worldwide

Our assets:

- ⊕ Team of more than 2.500 professionals
- ⊕ First class state-of-the-art testing facilities
- ⊕ International presence in 25 countries with 55 local offices
- ⊕ Innovation in new services and technologies

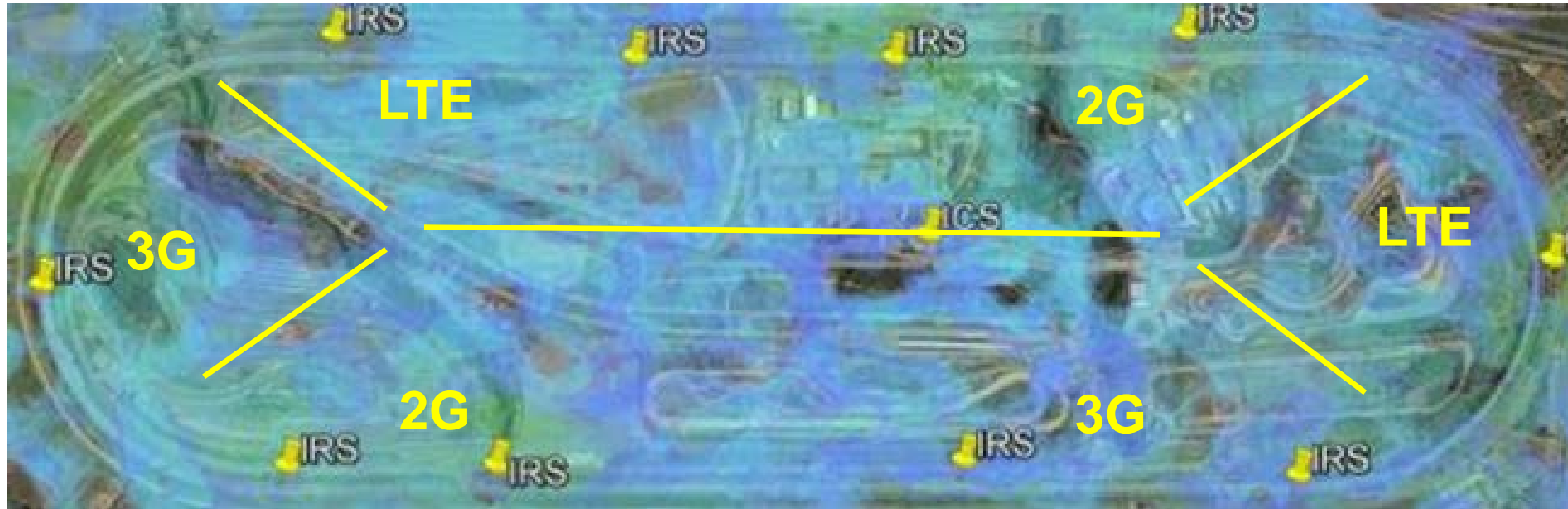






- Independent and multiuser proving ground
- 370 hectares
- All-year-round testing with favorable climatic conditions
- Safe, versatile, comprehensive, repeatable test tracks
- D-GPS full coverage
- Digitised test tracks – HD Maps available
- ETSI G5 (802.11p) full coverage
- Exclusive mobile network under design

Complementing 'real world' drive tests with replicable, well defined lab tests



Sample Network Configuration – repeat test scenarios until eg. service behaves optimally

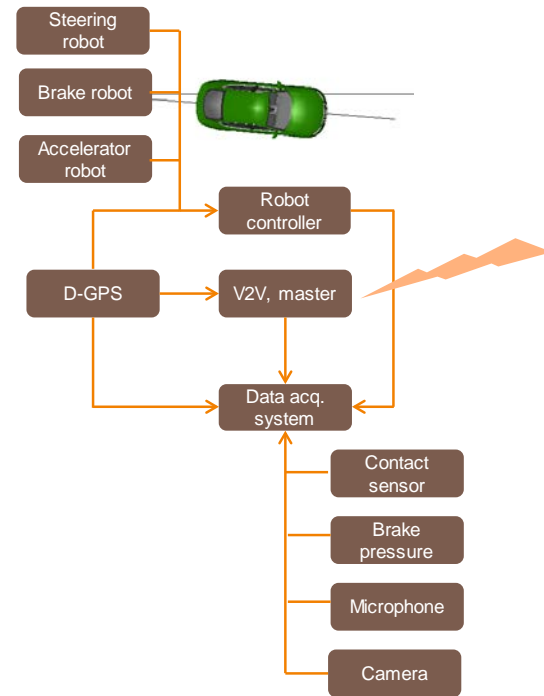
Using real mobile networks, non-simulated, with latest features as deployed to operators world-wide

Vehicle functionalities can be tested in a controlled environment using different technologies

Cellular – DSRC Hybrid development framework

Tools for ADAS / C&AD testing

Specific equipment for ADAS / C&AD - vehicle control



Test targets for ADAS / C&AD



catalonialivinglab.com

7 Routes

- Camprodon - Prats de Molló
- Daurada Coast
- Garraf Coast
- Garraf Tunnels
- Surrounding Barcelona
- Surrounding Granollers
- Surrounding Llívia

7 Areas

- Barcelona Airport
- Barcelona Eixample
- Barcelona Forum
- Barcelona Zona Franca
- Granollers Centre
- Tarragona Riu Clar
- Vilanova Centre

3 Test Tracks

- Applus IDIADA
- Circuit de Catalunya
- ParcMotor Castellolí

Other routes and areas can also be provided to fulfil the industry needs.

Legal framework

A legal directive specifies the requirements to obtain special authorizations for testing on roads open to general traffic:

- Technical description
- Vehicle inspection
- Dynamic validation

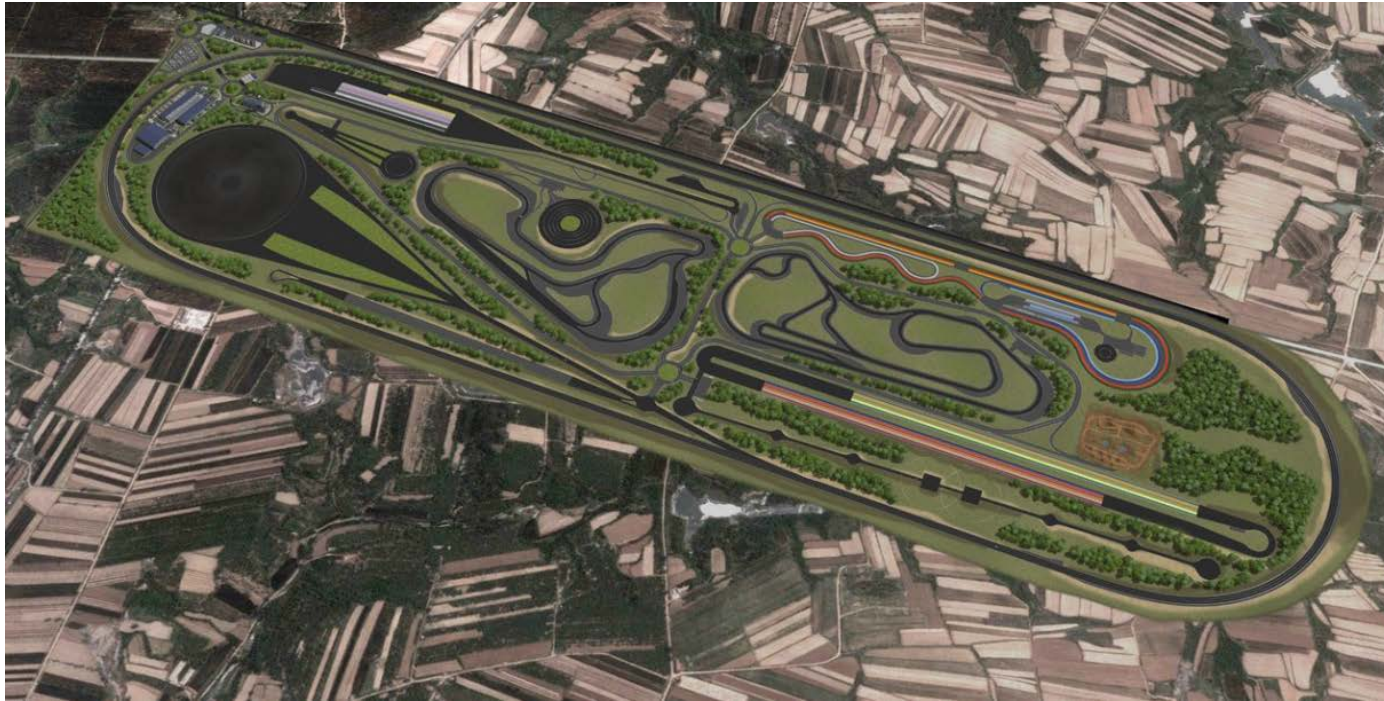
The Government of Catalonia provides a **one-stop-shop** to ease the admittance procedure of automated vehicles.

Selection criteria

Routes and areas based on a comprehensive market research, including interviews with leading car manufacturers and their suppliers:

Presence of sensor blockers	High traffic sign density
Presence of sky blockers	Varying road characteristics
Presence of road obstacles	Different intersections
Presence of communication issues	Car Parks
High road user density	High speed road entries and exits

150 Ha - 16 tracks - 5.2 km high speed circuit



Start of operation progressive during the 2nd half of 2017



Thank you very much for your kind attention

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