

Proving Ground Design

Applus+ IDIADA is a leading expert in the design of automotive test centres, providing a multidisciplinary team that acts as a link between civil engineering and automotive testing.



We know that a test track is neither an **open road** nor a **racetrack**; it is actually a laboratory with very particular requirements that need to be fulfilled by studies and careful development. A [High Speed Track](#) with banked curves, a [Wet Handling track](#) with its own watering and recovery system, [durability surfaces](#), [Dynamic Platforms](#), [Braking Track](#), are clear examples of Test Facilities which require very particular testing infrastructure. Applus+ IDIADA has developed its own tools and software for the development of these facilities.

In-house developed tools

To carry out our test facility development projects, we have created our **own tools**, including high banked curves track design, maintenance, and asset management systems. This enables us to optimize the design and management of our clients' testing facilities, ensuring they operate efficiently and **cost-effectively**.

Master Plan according to test requirements

The design process starts with the generation of a **Master Plan**, which is based on the specific **test requirements** of each project. Our team carefully considers all the necessary components for the test centre, including test capabilities, safety, operation of the test facilities, and management.



One important aspect of our design process is **test mapping**, which is particularly relevant for connected and automated vehicles and ADAS systems. This ensures that the test centre is designed to accommodate these new technologies.

Our team also considers **land optimization** and execution cost while keeping the test capabilities and clients' interests at the forefront.

Once the Master Plan is approved and accepted by the client, Applus+ IDIADA proceeds with further design stages. These stages include:

- Pavement package design
- Special surfaces and inputs
- Geometry of the tracks and buildings
- Safety barriers definition
- CCTV control system
- Line marks for testing
- Test equipment
- Utilities
- Watering system

...and additional considerations related to the management of an automotive technical centre.

Quality acceptance criteria and detailed design review

Our deliverable can be used by any local engineering company to transform our design into local civil engineering standards that will be used by the contractor. Applus+ IDIADA also defines the **quality acceptance criteria** for the contractor, highlighting the items that are particularly important to meet in an Automotive Proving Ground and not usually considered in an open road.

After this process, Applus+ IDIADA will **review the detailed** design in order to guarantee the constructive design includes all the automotive value required for a Proving Ground.

We have extensive experience in creating **3D videos** and models for marketing purposes. Our team of skilled professionals designs and creates highly detailed, accurate and visually appealing models and animations that effectively convey the features and benefits of our clients' products and services.