



**Solutions for  
virtual  
test driving**

# IPG Automotive's Lap Time Simulation Virtual Competition



All Formula  
Student  
Team  
Classes  
Welcome!



**Submit your vehicle for final submission  
by **Friday 19th June 2022****

**Optimise  
Using  
CarMaker  
Simulation!**

## Non Geometric Data (NGD)

An online database where all virtual vehicle data can be stored and easily viewed by each team member.

## Virtual Prototype Manager (VPM)

Your virtual vehicle garage where you can build (using data from NGD) and store as many vehicle versions & variations as you like!

### Quick Start Guide:

1. Familiarise yourself with the [competition rules!](#)
2. [Register your team for the IPG Automotive Formula CarMaker program](#)
3. [Request your 2 free CarMaker licences](#)
4. Download [Formula CarMaker Package](#)
5. Open the Package and load the FCM\_Projects/FS\_LTS folder in CarMaker 10.2.1. This is where you'll find all the test runs for the competition
6. Now, it's time to create your winning vehicle, to do that start by creating an [IPG Webtools account](#)
7. In [VPM](#) build a vehicle and download it
8. Unzip your vehicle and copy the contents of the VehicleFiles into your CarMaker project
9. You are now ready to start developing and running your vehicle!
10. As you identify new optimal setups using CarMaker - upload the new data parameters e.g. spring stiffness to your team's [NGD](#)
11. Easily build new vehicles with the data uploaded in NGD using [VPM](#)

### *For a more detailed guide:*

- *Download the 'LTS Documentation' and 'Submission Guidelines' from the sidebar in NGD or VPM for a detailed explanation of how to:*
  - *Use the Web Apps for the competition*
  - *Submit your final vehicle*
- *Optimise your virtual race driver to your vehicle*