

Plan of Approach

EE4 Project TEAM 13

Sunpower



l **Plan**

Due to the fact that the world is becoming warmer and warmer which was caused by the CO₂ emission of people's life, the idea of solar vehicle came out because of its zero harmful emission. It does not require expensive fuel. It takes advantage of the sustainable solar energy instead of fossil fuel, which will help to reduce the CO₂ emission to the atmosphere. This is an effective way to keep the global temperature stable.

l **Goals**

In the search of our customer, Umicore Solar Team, they are considering to put a miniature version of their solar car on the market. Our goal is to develop such a toy. They want the proof that a small demo model (SSV) can operate on solar energy, without any battery. The behavior of this demo model must be predicted and compared with the Umicar on an energetic level. Moreover the SSV must be able to take part in a race.

l **Limitations**

First, the general limitation of solar vehicles is that the power from a solar panel is limited by the size of the vehicle and area that can be exposed to sunlight. Secondly, another drawbacks of our model is that it doesn't have a battery, so it can only work when there is light and stop immediately when there is no light.

l **Suppositions**

In the long run, we think that the main goal will be improving the efficiency of the whole vehicle. Therefore, with the same power we get from the solar panel, the maximum speed will be raised, or the load can be heavier. This is the main topic we will work on in the future.