



Plan of Approach

Introduction

The goal of the EE4 project is to make stuff work. For Electro-Mechanics, we have to build a small solar vehicle starting from a solar panel and a dc motor. We will have to design it from scratch and subject it to several tests. We will also have to analyze it economically. In the end we will compete with other SSVs in a race.

Deadlines

When	What	Where
Friday 18/02 18h00	Hand in cooperation contract, plan of approach, WBS, Gantt Chart	On Toledo
Friday 25/03 18h00	Hand in Case SSV part 1 and Simulink	On Toledo
Friday 25/03 18h00	First version Process Report	Online
Friday 25/03 24h00	Fill in PA1	On Toledo
Week 9	Test SSV	
Week 10-14	SSV race	Martelaereplein
Friday 13/05 18h00	Hand in case SSV part 2	On Toledo
Friday 13/05 18h00	Final version Process Report	Online
Friday 13/05 24h00	Fill in PA2	On Toledo

Project description

Objective

The main objective of this project is to design and build a small solar vehicle (SSV) and to optimize it for a race. Our team represents a fictitious company and our customer is the Umicore Solar Team. They want to raise additional money by bringing a miniature version of their solar car on the market. Before they develop their product they want to make sure it is possible. It is now our task to build a



demo model, predict its behavior and compare this to the Umicar on an energetic level. In the end the SSV must be able to compete with others in a race.

We will try to make our small solar vehicle as efficient as possible by spending more time on calculations and selecting the best materials for the SVV rather than working on its looks. In this way, we want to have the best possible car and win the race. If we make good progress we may consider to also go for the additional points given on beauty.

Team

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Communication

We will have a meeting once every week on Tuesdays. Mainly the communication between team members will go by mail because of the fact that the team members belong to different classes. If something necessary comes up, we will of course meet each other as soon as possible and not wait till next Tuesday. We will also share a Dropbox folder in which we can easily share and adapt all documents without having to mail every instance.



Bottlenecks

As with every project there are always some obstructions on the way, we may be able to avoid some but not all of them. It is therefore most important that we predict where these bottlenecks are so that we can minimize or in the best case avoid them as they come. Down below we have predicted several possible problems and how we may solve and/or prevent them.

- **Bad communication**

Normally this would not be a significant problem but since our group consists of Chinese and Flemish people this may form a potential bottleneck. We have to discuss everything in English and this can cause some confusion. We therefore have to make sure that at every instance everyone knows what is going on.

During this project, we will try to just work together and not split up in two different groups because of our language difference. After all, while we work together we can combine our strengths. By working together, our final result will improve.

- **Few moments together**

In our team are people of 3 different groups. It will be hard to find some time when we can work on the project with the entire team. Moments like those will be a rare occurrence but this can be solved by working late though this is not pleasant for anyone. It will be better to work with one or two people less once in a while than to spend a lot of effort into finding moments when everyone is available.

- **Choosing the right materials**

It could be that we do not put enough effort in choosing the right building materials who may seem good at first but show some limitations afterwards. It is therefore best that we do enough research on forehand.