A STUDY OF TOMOROW – AN ANALYSIS OF ENGINEERING

The present lines have the aim to present a study (TPE) we - French students of 1S1 atLP2I- have realized and worked on, since the beginning of the year.
We shall, at first, give an explication of this French A level project, called TPE. The TPE is a work of research realized within six months, during your form 1, in France. This must have as result a production of any type – a blog, article, video, thesis..) which is then examined.
This work is completed with an oral presentation. Students obtain a grade, out of twenty, part of your general A level result.
The three of us - Théo, Pierre and Nicolas - worked along to bring our project an end.
The topic we chose was: "how does the environmental awareness transform research and development in engineering". This theme must, indeed, appear very opened and inaccurate. We have thereby chosen a precise example, thanks to which we have exposed our idea: the project of Masdar City in Abu Dabi. Our final production is a corpus research report.
Our work was separated in three different parts: the first one dealt with the convergence the revolution of communications with engineering, thanks to the example of Masdar. The following two parts showed the experimentation realized in the city in habitation and transport's area and asked the question on its relevance in the rest of the world. The latter showed the evolution of transports and how it reflects society and a future conscientiousness.
In Masdar, the PRT -personal rapid transit- is actually tested. This car is entirely electric and driven with elector-magnets in an under-ground network. This implies a certain organization in the city. And that was, in fact, the topic of the second part.
Questioning on energy networks in habitations gives interesting technical aspects particular to future ecological city. We have learned that Masdar is equipped with the largest solar plant. Abu Dabi, still detaining the record of the largest water consumption. Masdar has the objective to lower its consumption per inhabitants, under 100liters. This is 50 litters under the French regular consumption, is it a huge dilemma?
We then looked to the cost of this ecological feat: around 18 billion. Are we able to operate this ecological and technical change?
We believe the technology and the science have to do so!

You can find our thesis (in french) in the following link: "TPE - ingenierie"