

“The Town I Want to Live in: A Sustainable Approach (MyTown2020)”

Environmental issues are a global concern nowadays. Natural resources management, goods consumption, wealth distribution, industrialization, pollution, energy production and use, water use, land use, intensive agriculture, food production..., are all aspects involved in environmental problems.

Carbon footprint and ecological footprint are two examples of how to measure the human impact on the Earth. Both show that we are living well over Earth's capacity, creating such severe problems as global warming and depletion of resources. Mankind must therefore find a way to a conscious and respectful economic progress that do not compromise the future generations' needs.

The solution is a sustainable development. Being aware that zero growth is never to be reached, green industry, circular economy, efficiency, conscious consumption, renewable energies, recycling, life-cycle analysis of products, offer solutions to the 21st century most challenging problem: saving resources and keeping the Earth as a liveable place for more centuries ahead. Most of these solutions are strongly dependent on technology and investment. In Europe we need to promote them.

European governments are now involved in the hard task of achieving the 2020 climate&energy package, the so-called 20-20-20 package (20% cut in greenhouse gas emissions, 20% of EU energy from renewables and 20% improvement in energy efficiency), a keystone of an ambitious strategy for sustainable development. A long-term objective of EU is the 2050 Energy strategy (energy transition consisting of long-term goal of reducing greenhouse gas emissions by 80-95%, largely by means of decarbonisation), which will become a crucial part of the sustainable development in this century. It is a task of the governments to implement solutions, but also a commitment of the citizens to use them after information and education campaigns.

In this project we would like to contribute to sustainable development by giving small-scale solutions for a big problem. And we are planning to do this by focusing the project on the students, because we think the best approach is to drag the students' attention to the issue. The closest reality to students is the place they live in, their town. They will inherit the town and they will live there for a long time, so they are the ones to redesign a 21st century urban environment. This is the main motivation for the project -what the students can imagine and do to improve their town in terms of life quality and sustainability, meaning that in terms of energy efficiency, less pollution and noise.

The project is structured following a four-phase concept:

- What is my town like
- How is the town I want to live in
- Let's design my new town
- My sustainable town in the future

PHASE 1 - WHAT IS MY TOWN LIKE

Duration: 6 months

Concepts development: Noise, air pollution, urban planning, open data

Method: Data collection

Evidences/documentation: Existing maps, field measurements, photos, interviews, statistics (respiratory and noise diseases)

Tools: Mobile phone apps: sonometer, air-quality apps. Mapping software

Products: Noise map, pollution map/chart, videos, infographics, PPT, webgraphics, etc

PHASE 2 - HOW IS THE TOWN I WANT TO LIVE IN

Duration: 6 months

Concepts development: Transport, energy efficiency, noise&pollution reduction, sustainable development

Method: Research

Evidences/documentation: Possible solutions to implement, establishing objectives & pre-planning

Tools: Internet search of existing models in the world

Products: Base designs, videos, infographics, PPT, webgraphics, etc

PHASE 3 - LET'S DESIGN MY NEW TOWN

Duration: 6 months

Concepts development: Urban planning, design, 3D printing, architecture

Method: Working out solutions

Evidences/documentation: Detailed urban planning with implemented improvements

Tools: 3D printing software (SketchUp, TinkerCAD or similar), mapping software (QGIS or similar)

Products: Advance design drafts and 3D models, infographics

PHASE 4 - MY SUSTAINABLE TOWN IN THE FUTURE

Duration: 6-8 months

Concepts development: Sustainability, projections, predictions

Method: Speculative imagining

Evidences/documentation: Research on how future cities will be like

Tools: Augmented reality (AR) apps (Wikitude, Augment3D or similar)

Products: AR basic simulations of sustainable solutions to be overlapped on real town's images, the designed models being the reference; infographics