

YEAR 2 – Integrated Design for Civil Engineers II

Group Design Project for Y2 students

Introduction

An interactive studio group project for Year 2 Civil Engineering and Geomatics students at the Cyprus University of Technology. The title of the project was the “Redevelopment of the Nicosia International Airport as an International Aviation Hub”. Nicosia International Airport is in the UN Protected Area which crosses the divided capital of Cyprus. The existing terminal, opened in 1968, but was short-lived as it was closed after the Turkish invasion in 1974. The area is currently controlled by UNFICYP which has its HQ there. Redeveloping such an airport as part of a solution of the Cyprus Problem would be a challenging engineering project as well as an inspiration to the future engineers of the island.

Activity Description

- The class was split into three competing Groups of 12-13 students each assigned to propose a total solution to redevelopment that should include: a planning study, conceptual solutions for the new and retrofit of existing terminal and a business model for such a venture including the cost of investment. Each group was allowed to choose its own name and branding.
- Each Group had four teams: a Project Management team (Coordinator & Secretary) and three consulting teams assigned to work on planning, buildings and business model respectively. The project was done during term time for 7 weeks and contact time 3 hours per week. During this time the Groups of students presented progress, had a site visit and received lectures, mentoring and critique from a wide range of professionals.
- The deliverables of the project included a 30 A3 page report with research, desk study, analysis and design of the new airport as well as a poster and a 7-10 minute presentation of each proposal (video links can be found below).
- Pertinent to structural and building engineering, students working in that area had to review solutions for reinforcement and retrofitting of existing damaged buildings, research design guidelines for airports and select appropriate structural forms for the different buildings. They were also exposed to specialized structural problems pertinent to airport structures such as vibrations from aircraft and compensating for expansion of large roof spans.

Highlights and resources

- A project website was created and a blog was kept during the project which attracted the attention of the national print and electronic media which showcased the project on numerous occasions. Two public presentations were also organized which were attended by representatives of the UN and the Republic of Cyprus Government Spokesman’s Office.
- The project website is www.nia-the-return.weebly.com.
- The blog is found here <http://nia-the-return.weebly.com/blog>
- Videos presentations created by students can be found here:
 - Phoenix <https://www.youtube.com/watch?v=xRsVL5LSC08>
 - Pegasus <https://www.youtube.com/watch?v=RHTiAm7wBiM>
 - Future revives the Past <https://www.youtube.com/watch?v=ERhrNTSJri8>

Student feedback

- Students got very inspired by the project and were fully engaged during the project, with almost perfect attendance to all project activities, including project extra-curricular activities.
- While it was frustrating at times being part of a large group, in the end they found ways to resolve disputes and deliver on time.
- The students felt to be treated as professionals, managing their own work and stepped up their game early on in the project.
- A very important experience for each student involved since each student led a certain task within the group.

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