

Nicosia International Airport



Courtesy of Andros Efsthathiou
www.isnotgallery.com

NIC
The return



Cyprus University of Technology
Dept of Civil Engineering & Geomatics
Integrated Design for Engineers II

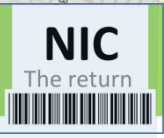
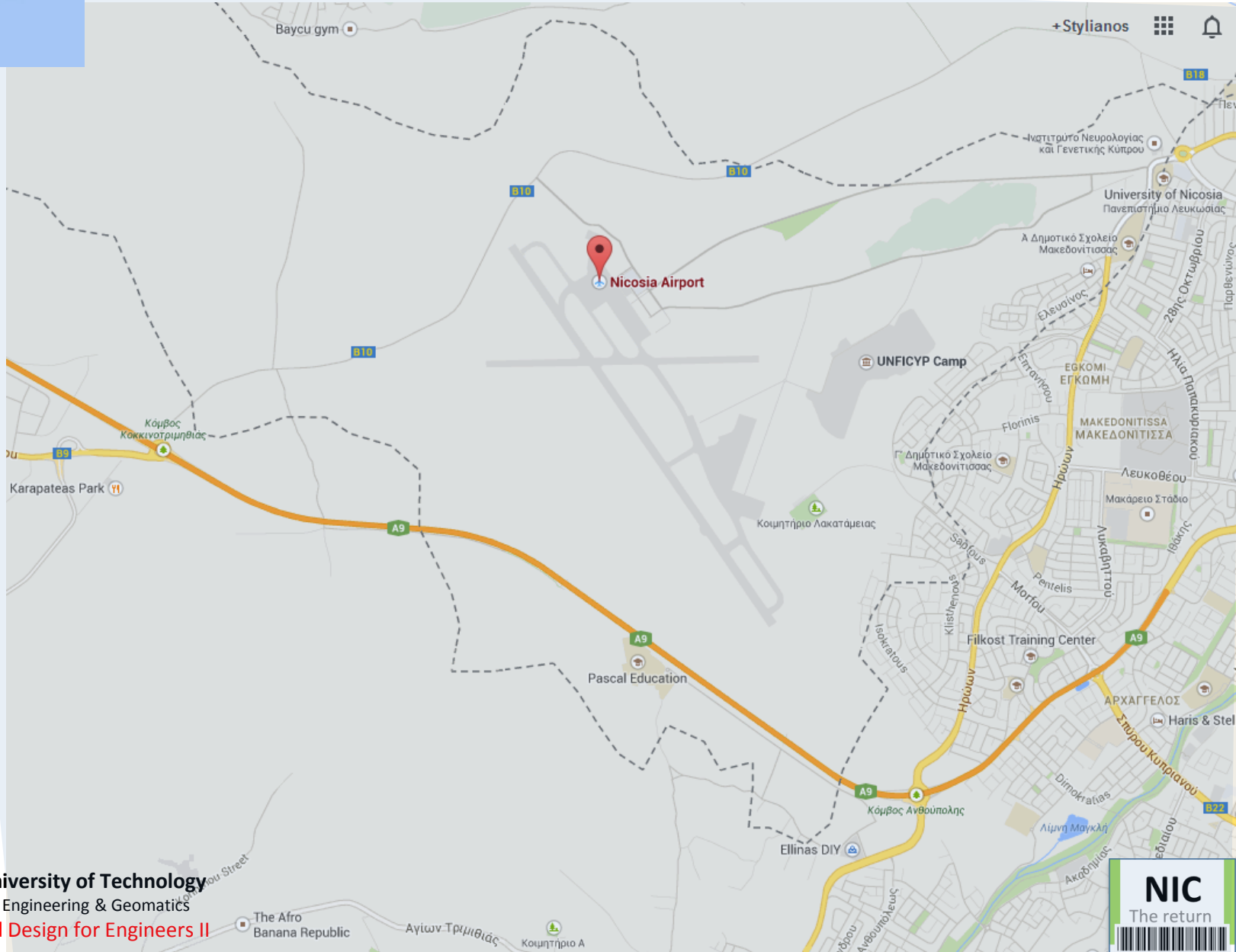
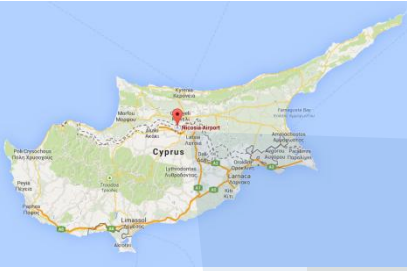
Nicosia International Airport

- IATA code: NIC
- It is located in the west of Nicosia, the capital of Cyprus.
- It initially operated as a RAF station during World War II (1939).

The emblematic “new” terminal was delivered in 1968. It was designed by German Architectural practice Dorsch und Gehrman.



Location



The terminal

Emblematic structure with
natural ventilation and lighting

Capacity to serve 800 passengers
and 11 aircraft

*Courtesy of Andros Efsthathiou
www.isnotgallery.com*



Runways

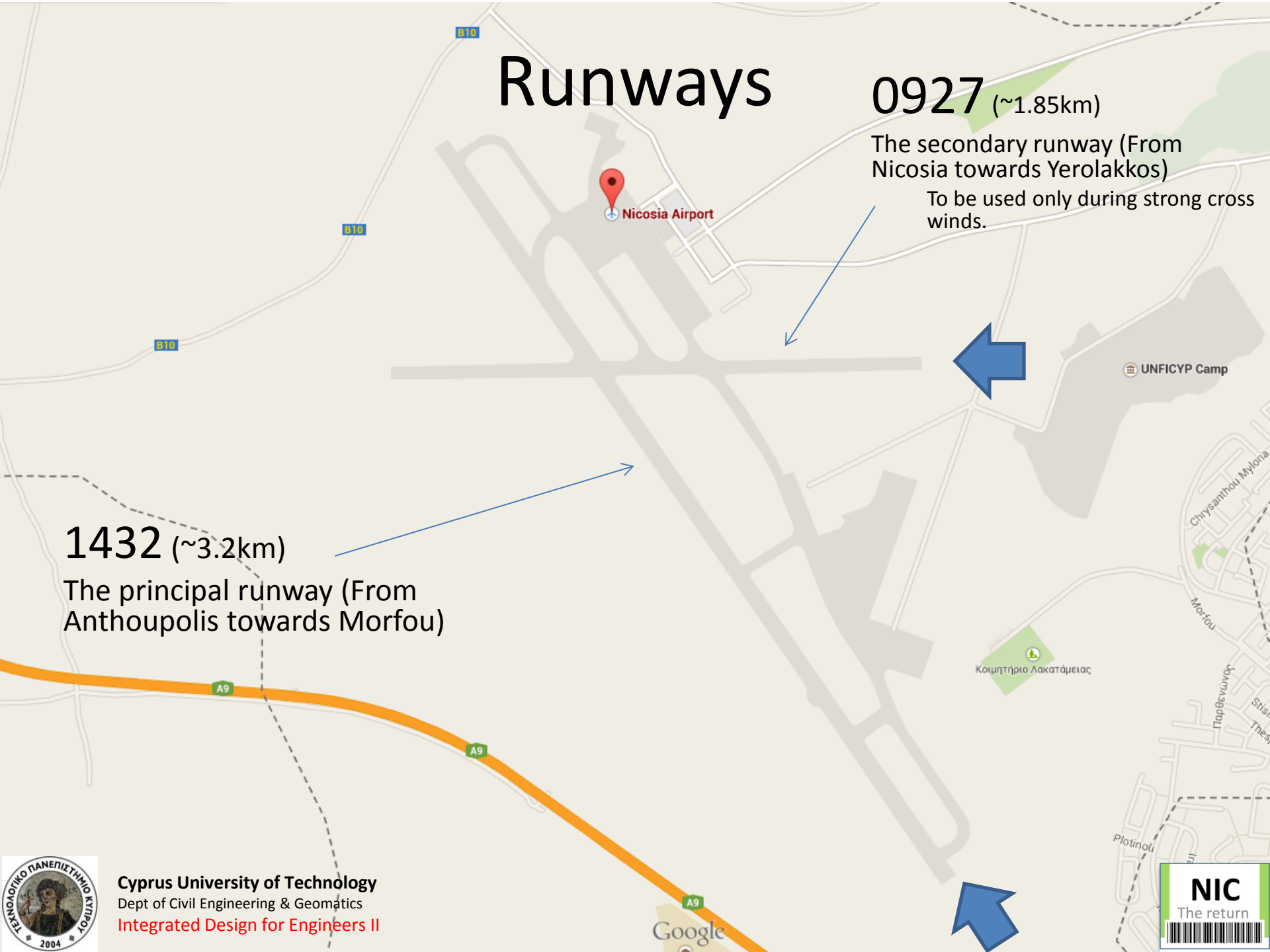
0927 (~1.85km)

The secondary runway (From Nicosia towards Yerolakkos)

To be used only during strong cross winds.

1432 (~3.2km)

The principal runway (From Anthoupolis towards Morfou)



The closure

20 July 1974

CY317 Last flight from London Heathrow



Courtesy of the Republic of Cyprus
Press & Information Office

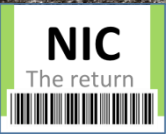
2014 – 40 years later

Imagine that the site of the Nicosia International Airport opens for redevelopment upon a settlement of the Cyprus Problem.



Cyprus University of Technology
Dept of Civil Engineering & Geomatics
Integrated Design for Engineers II

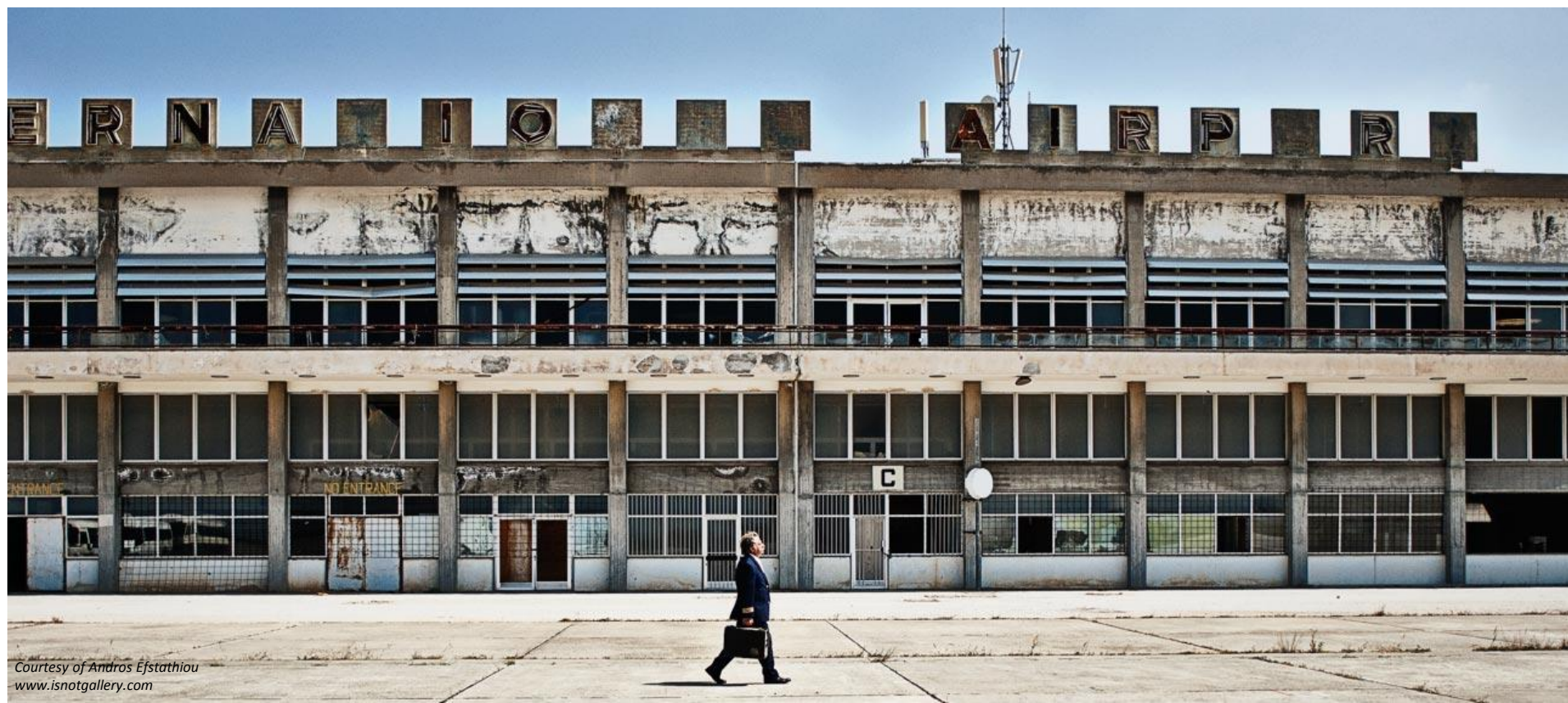
Courtesy of Andros Efsthiaiu
www.isnotgallery.com



Group Integrated Design Project

- Proposal for a feasibility study, concept design and business model for the redevelopment of the closed airport as an International Hub





Courtesy of Andros Efstathiou
www.isnotgallery.com

Aim

The preparation of a feasibility and concept design study that creates a compelling investment opportunity, while in the same time salvage a piece of History



International Hub

It's not a simple airport but a complicated system for the transfer of passengers and cargo.



Dubai International



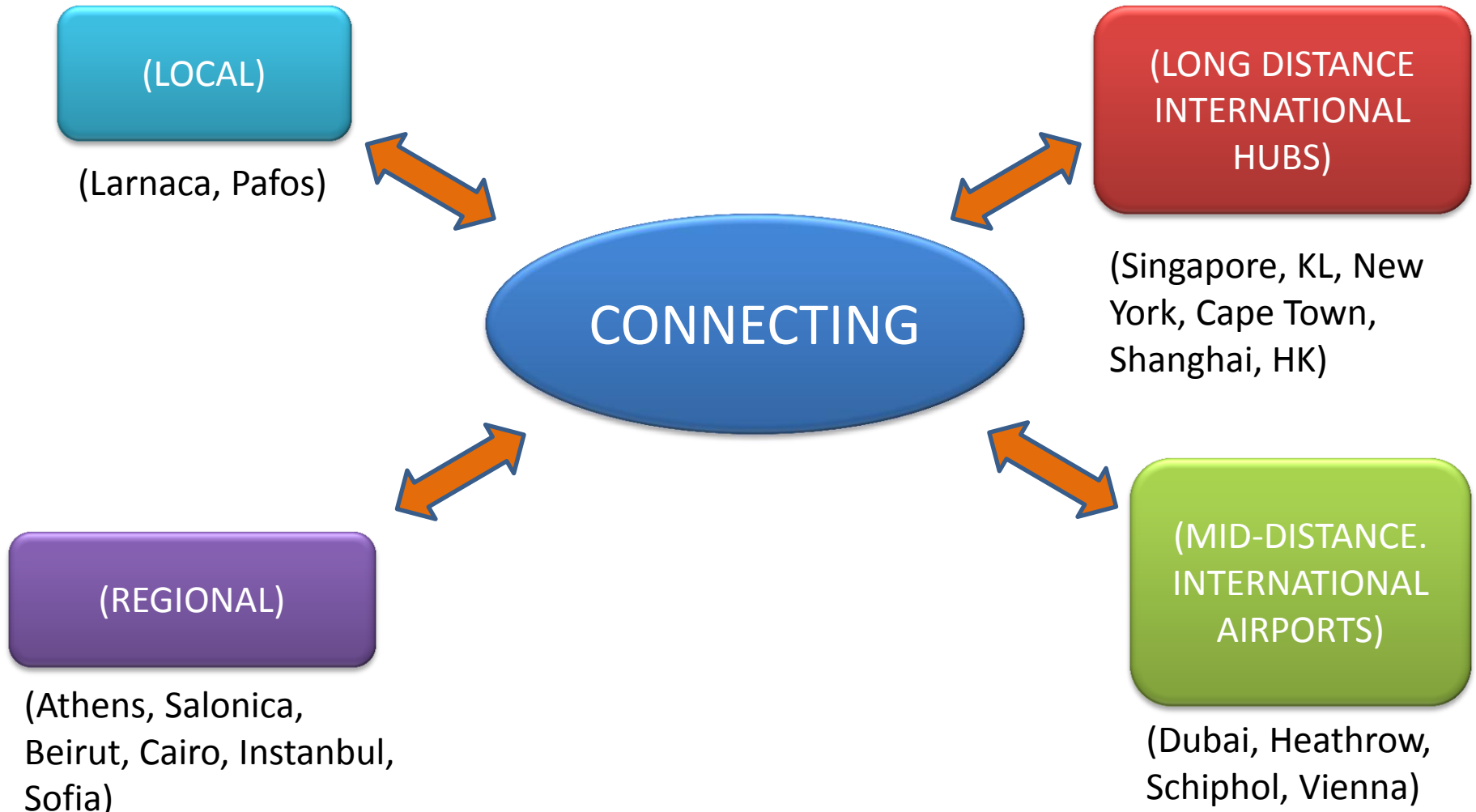
Frankfurt International



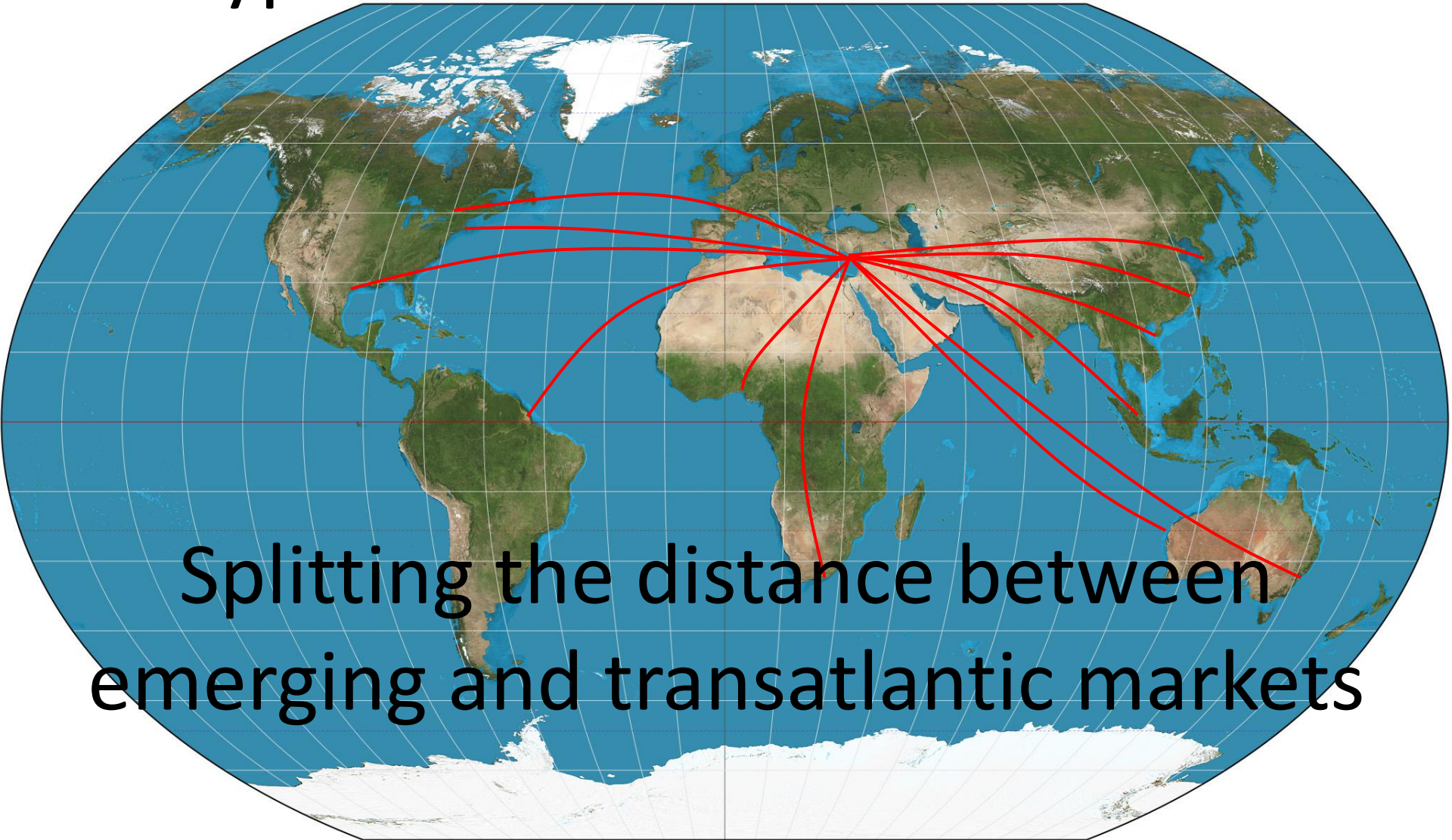
London Heathrow

The aim of a Hub is the optimized transfer of passengers and/or cargo with minimal delay and smooth connection to their final destination.

International Hub



Cyprus as an international Hub



Splitting the distance between
emerging and transatlantic markets

Cyprus as an international Hub



Gateway to/from Europe, North
Africa and Middle East



Remembrance

- Inter- and Intra-community struggle with Cold War in the background
- The existing terminal, in part or in whole should be renovated and utilized as a Remembrance memorial of the history of Cyprus.



Approaching the problem

- Research
 - Nicosia International Airport
 - History
 - Site and surrounding area
 - Geospatial / Geological Data



Approaching the problem

- Research
 - International Hubs
 - What are the characteristics of a successful hub
 - Building and runway design
 - General Arrangement
 - Operation and management
 - Business model and ways to attract investment
 - Benefits to local society/country/region
 - Successful examples



Approaching the problem

- General Arrangement
 - Building facilities
 - Runways
 - Control Tower
 - Parking spaces
 - Fuel storage
 - Cargo Handling
 - Other airport services



Approaching the problem

- Traffic / Transport
 - Traffic network within the airport
 - Optimized connection with other Cyprus airports/ports/cities.



Approaching the problem

- Building facilities
 - Estimation of typical load (No. of landings, no. of passengers, no. of parking space etc)
 - Concept design and sizing of new terminal
 - Emphasis on sustainable design
 - Emblematic buildingΜεγάλα ανοίγματα
 - Long spans
 - Natural ventilation/ lighting
 - Façade and roof technologies
 - At least one Biomimetic design application
 - Merging with current facilities for the creation of a remembrance memorial.



Approaching the problem

- Business model
 - Cost of Investment
 - Estimation of potential routes / connections
 - For passengers
 - For cargo
 - Ground services
 - Auxiliary services/industries that can be created around the airport
 - Benefit / Cost analysis for the venture
 - Ways to attract investment



Approaching the problem

- Project plan
 - PERT analysis for necessary steps
 - GANTT Chart for timetabling activities



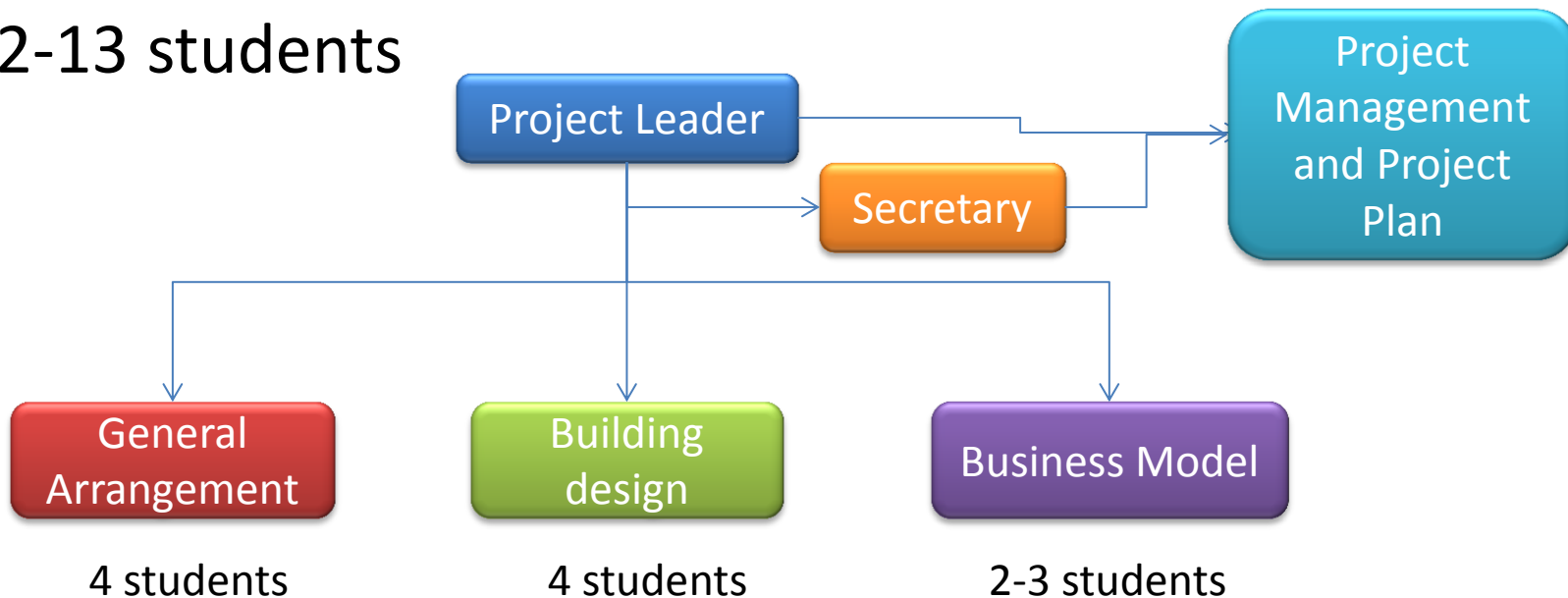
BREAK

- 15 mins



Group Hierarchy

- 3 Competitive Groups
 - 12-13 students



Proposal Coordinator and Secretary

Although every Group comprises 3 teams, it has to deliver a uniform proposal.

The Proposal Coordinator-PL and the **Proposal Secretary-PS** are responsible for the Project management and their aim is to create the best possible proposal.

The group management team is responsible for

- Coordinating the teams and monitoring compliance to the targets/timetables (GANTT-PERT) (PL).
- To call meetings with team leaders and keep minutes, monitoring the progress of the project and set targets for the next meeting (PS).
- To present the progress of the team at the interim presentations (PL).
- To write the introduction of the proposal with a brief history of the airport (PS).
- To proofread the final proposal (PL & PS).
- To write an Executive Summary (2 pages) that includes the most important points of the proposal. (PL & PS)
- To open and close the final presentation (PL)



Programme

Wk	Description	Deliverables/ Notes
26/2	Project Brief	
5/3	Interim Presentation 1 / Guest / Tutorial	Team structure, GANTT Chart, Risk Assessment
12/3	Guest talk & Tutorial	
19/3	Site visit	Departure 11.15. Meeting point coastal road, south of Ayia Napa Cathedral.
26/3	Interim Presentation 2 / Guest (AK) / Tutorial	
2/4	Tutorial	Report and poster submission
9/4	Video Presentation + Feedback	Video Submission



Evaluation

No	Description	Βαρύτητα* (%)	Υποβολή
1	Attendance at guest talks / site visit & Tutorials	8%	On the day
2	Interim presentation 1	6%	On the day
3	Interim presentation 2	8%	On the day
4	Poster	8%	4 / 4 / 2014 11:00 a.m. at the office
5	Proposal Report	25%	3 / 4 / 2014 00:00 a.m. pom281.cut@gmail.com
6	Video Presentation	12%	7 / 4 / 2014 11:00a.m. (CD / USB) At the office.



Guest talks+Tutorials

- Within the duration of this project there will be weekly guest talks and tutorial sessions to follow on the progress of the project from professionals from the industry, civil sector and others.
- 2% is allocated for attendance and contribution to each session.



Interim Presentation 1

- First presentation
- Up to 15 minutes per group followed by discussion
 - History of site
 - Understanding the scope of the project
 - Group structure
 - Risk Assessment
 - GANTT
- 6% breaking down to:
 - 20% Presentation quality, 20% Structure, 40% Content, 10% Individual Attendance, 10 % individual contribution)



Interim Presentation 2

- Second progress presentation
- Up to 15 minutes per group followed by discussion
 - Group's progress
 - Initial results
 - Deviations from initial plan and GANTT
 - Further work necessary
- 8% breaking down to
 - 20% Presentation quality, 20% Structure, 40% Content, 10% Individual attendance, 10 % Individual contribution)



Poster

- A1 Landscape
- It should present the scope of the project, the research and the general arrangement of the proposed design and all its relevant aspects.
- 8% breaking down to
 - 30% Structure, 20% Completeness, 50% Content
- See template on next page





Group Name



Ονόματα φοιτητών, ιακκε σωρπορα μεα συ, θε θαλε ιριυρε ραθιονιβυς σιθ. Θε δοσθυ, ιακκε σωρπορα μεα συ, θε θαλε ιριυρε ραθιονιβυς σιθ. Θε δοσθυ, ιακκε σωρπορα μεα συ, θε θαλε ιριυρε ραθιονιβυς σιθ. Θε δοσθυ, ιακκε σωρπορα μεα συ, θε θαλε ιριυρε ραθιονιβυς σιθ. Θε δοσθυ, ιακκε σωρπορα μεα συ, θε θαλε ιριυρε ραθιονιβυς σιθ.

Text/diagram

Intro

Text/diagram



Text/diagram

Text/diagram

Text/diagram

Text/diagram

Proposal Report

- 25% breaking down to
 - 15% Structure,
 - 15% Quality of presentation,
 - 40% Content,
 - 30% Individual contribution.
- A digital or physical model of the proposed solution must also be created to feature in the report and video.



Report structure

- The proposal report should not be longer than 30 A3 pages.
- It should have a cover with the title of the project, the name of the group and the names of each member under their team headings.
- A table of contents should follow.
- Whenever possible pages should be divided with an imaginary line across into two pages of A4, where on one side there is text (or bullet points) and other side diagrams or pictures.
- **An initial Strategic Proposal is not a long, endless essay.**



Report structure

- The proposal must be structured and cohesive. It must have an introduction and conclusions. It must have references to all sources, whether published or unpublished, following the ASCE bibliography style. Every page should be numbered and indication of the contributor in each section must be clear.
- Instead of Abstract, a separate 2-page executive summary must be handed in, highlighting all key points of the proposal.



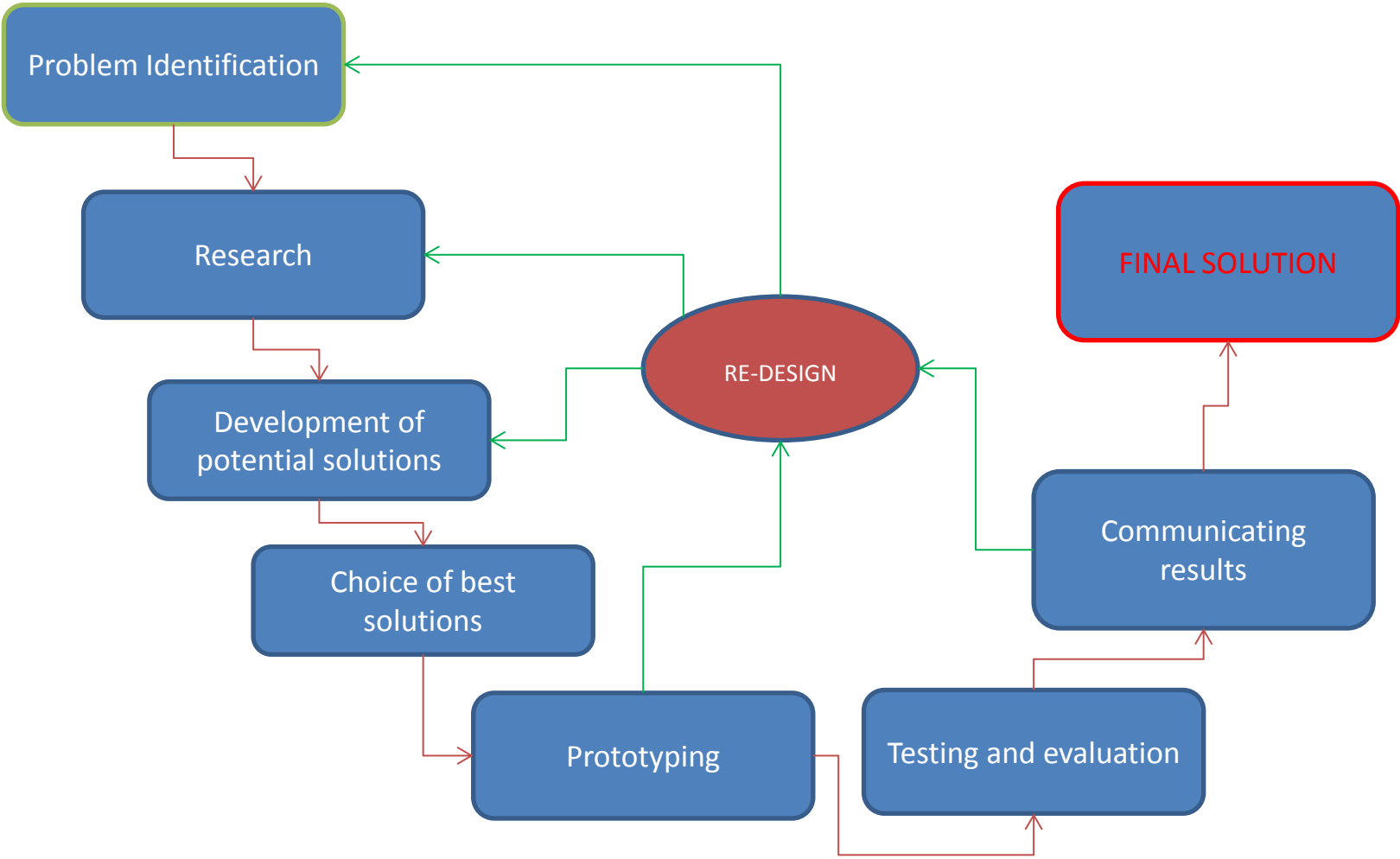
Video

- The last presentation will be a video-presentation. It will be a recorded slideshow with voice-over which will highlight the history of the site, the rationale of the proposal and why it should be the one selected for investment for this project.
- 12% breaking down to
 - 25% Structure, 25% Quality, 30% Content, 20% Popularity*

*The videos will be uploaded on Youtube on the 7th of April and will be posted on the project website. Just before the presentation on the final day, the likes and views of each proposal will be counted. Students should try and publicise their projects as much as possible. Tip: If the voice-over is in Greek, then add english subtitles and vice versa, or include a translation in the description.



Engineering Design Process



USEFUL TOOLS

- Pantognostis (CUT Library resources)
- Public services (UN, Press & Information Office, Dept of Civil Aviation)
- Google / Google scholar
- MS Project/Publisher/Powerpoint
- MS Excel / MatLAB
- Google Earth/Maps
- Google SketchUp
- ArcGIS or any other GIS software
- AutoCAD / Rhinoceros 3D
- Expedition Workshed's Engineer's Toolbox / Catastrophe
- Asknature.org
- Business Model Canvas
- <http://mashable.com/2008/02/21/screencasting-video-tutorials/>
- Anything else that you might find useful (SimCity/ Flight sim.!).



Questions?

NIC

The return



Disclaimer:
Many of the pictures in this document are property of the Republic of Cyprus Press and Information Office. Their reproduction or use without the written consent of the rightful owner is strictly prohibited. The same applies for the photographic material of Mr Andros Efsthathiou (www.isnotgallery.com)