cmapER
Innovative learning platform for knowledge integration in Energy Retrofit

MILESTONE 1.1

1. GENERAL INFORMATION

PROJECT: MALTA STOCK EXCHANGE

CONTEXT: VALLETTA, MALTA

ORIGINAL USE:BRITISH GARRISON CHAPEL (1855)

USE: OFFICE

DESIGNER(S): BRITISH ROYAL ENGINEERS (Original project)

COMPLETION DATE: 2001

KEYWORDS: Active system, Passive systems, Building Management System (BMS), Bioclimatic strategies, Passive downdraught evaporative cooling system (PDEC), Night time convective ventilation (passive night cooling), Well-being, Adaptability of Protected Building.

H2020 MSCA IF2016
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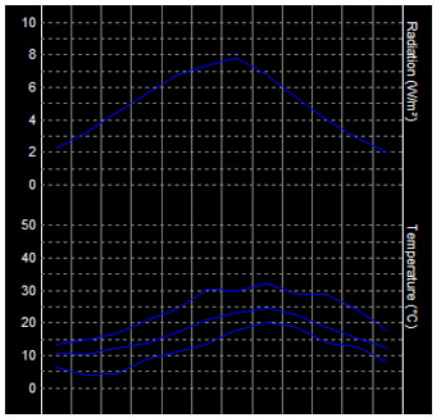
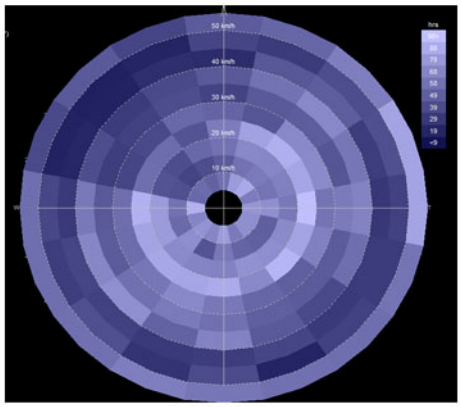
OXFORD BROOKES UNIVERSITY

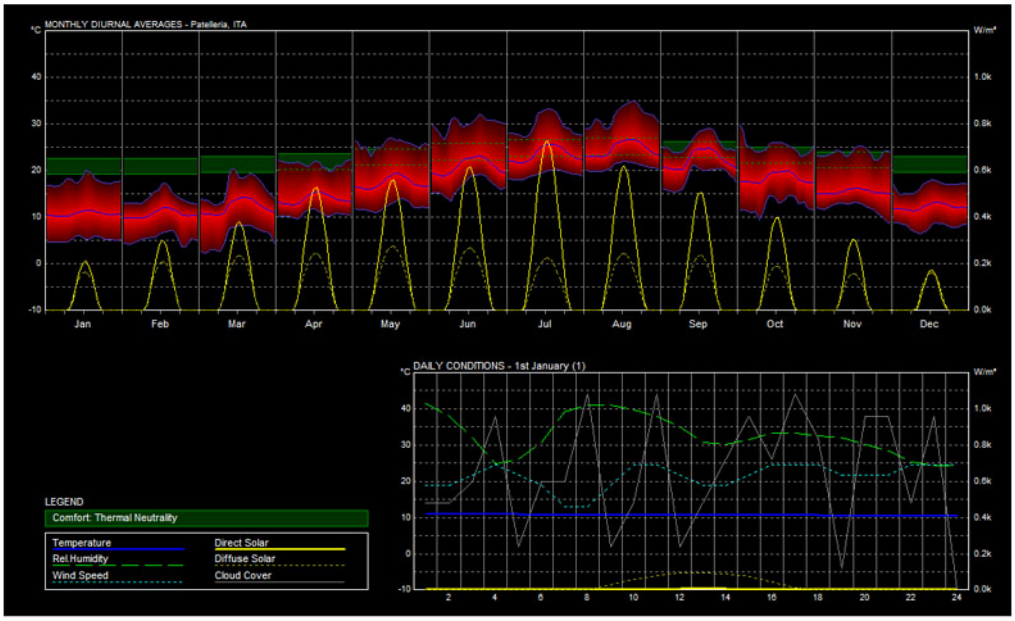
2. CLIMATIC FEATURES

CLIMATE SUMMARY:

- MONTHLY DATA: RADIATION (W/mq); MAX, MID, MIN TEMPERATURE ˚C
- PREVALLING WIND (WIND FREQUENCY – Hrs)
- HOURLY DATA – MONTLY DIURNAL AVERAGES
- DAILY CONDITION (1ST JAN

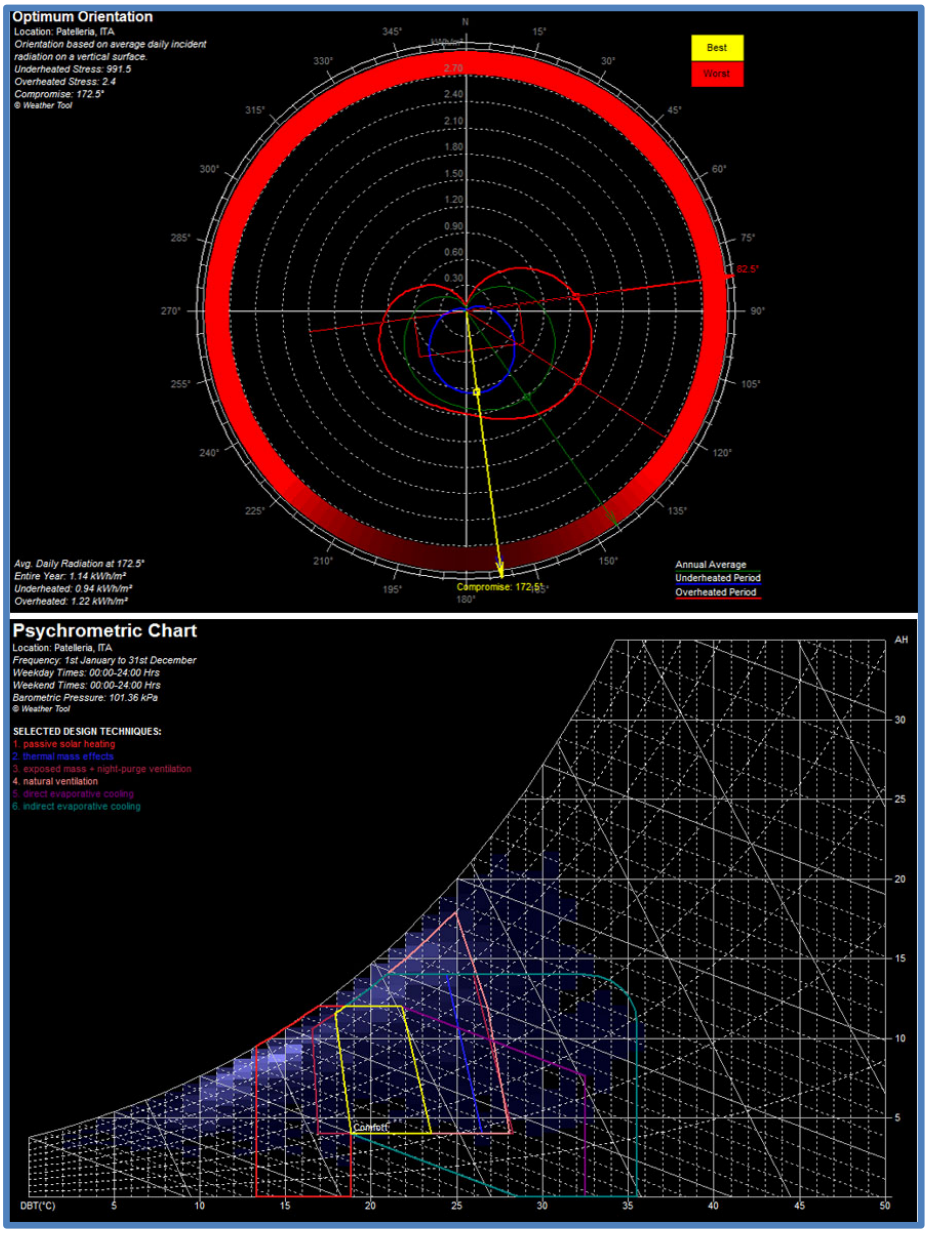






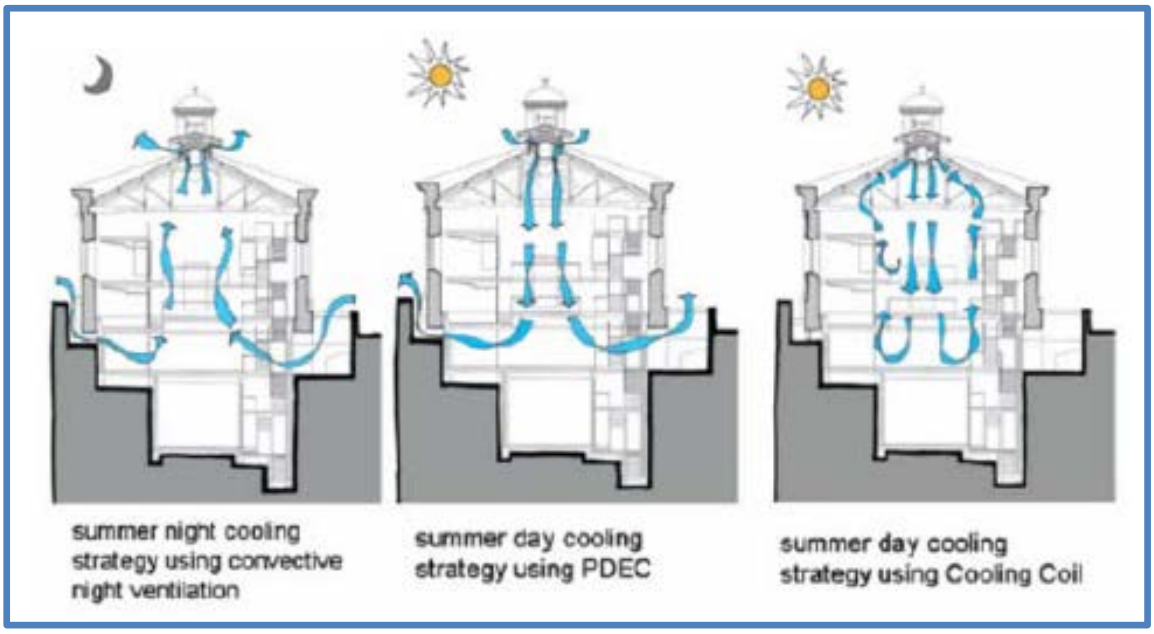
3.BIOCLIMATIC FEATURES

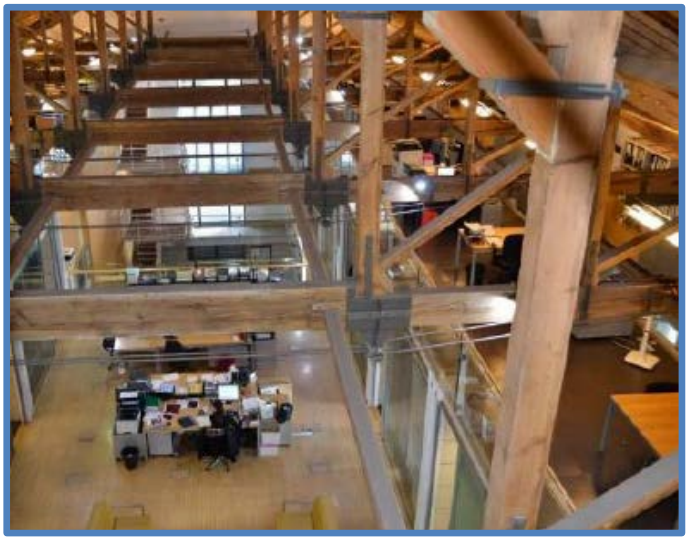
- OPTIMUM ORIENTATION
- COMBINATION OF PASSIVE ENERGY STRATEGIES



4. URBAN AND/OR BUILDING FEATURES

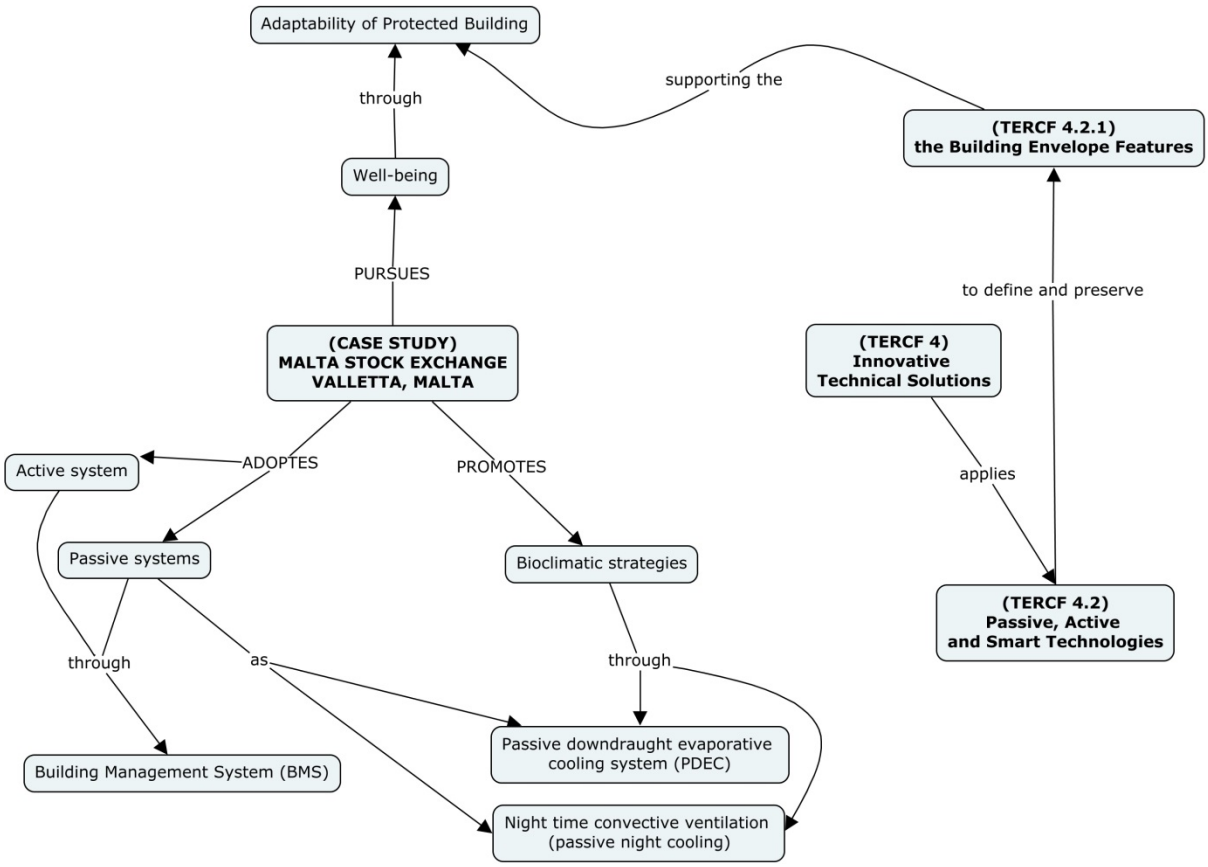
The project proposes a hybrid downdraught cooling system in order to maintain the comfortable indoor conditions in the central atrium of the Malta Stock Exchange. So, while the cellular offices surrounding the atrium and meeting rooms are air-conditioned, the 14 meter high atrium avoids the need for conventional air conditioning which reduces energy and maintenance costs. During the summer, the air in the atrium is cooled either by evaporative cooling by means of hydraulic nozzles or by indirect cooling by chilled water coils.





5. FOCUS QUESTIONA AND MAP

How to increase the efficiency and ecology of building plant systems?



6. REFERENCES

http://www.ehcmap.eu/intellectual-outputs