



No.	Name	Place	automation		safety				energy		water		Indoor environment				lighting				Building Area (m <sup>2</sup> )
			B1	B2	S1	S2	S3	S4	E1	E2	A1	A2	I1	I2	I3	I4	L1	L2	L3	L4	
1	Science and Technology Centre	Nicosia	x		x	x	x		x	x	x		x	x	x	x	x	x	x	x	16800
2	Student Services Centre	Nicosia	x		x	x	x		x	x	x		x	x	x	x	x	x	x	x	1600
3	Rectorate Building	Nicosia	x		x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	1500
4	Arena Sport Complex	Nicosia	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	9000
5	Engineering Laboratories	Nicosia	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	3000
6	Graduate and Education Studies Building	Nicosia	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	6000
7	Çevik Uraz Centre	Nicosia	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	5600
Total																					43500

Smart building implementation

$$\frac{43500}{144160} \times 100\% = 30\%$$



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Science and Technology Center



Student Services Center



Education and Graduated Sciences Building





Automation	
50%	<ul style="list-style-type: none"><li>• <b>HVAC System:</b> The duct temperature, pressure, and humidity, as well as exhaust temperature are connected to the BMS, and if their value exceeds defined limits, an alarm is generated.</li><li>• <b>Central Vacuum System, Central Fume Collection:</b> allowing for early identification of units requiring maintenance. Sudden breakdown would signal via alarms and then appropriate action can be taken to protect the product.</li><li>• <b>Technical Steam System:</b> Should, for instance, the pressure or temperature in the piping system fall below the defined regulatory values for clean steam, the BMS shall trigger an alarm, indicating a threat to product quality.</li><li>• <b>Hot Water System and Central Heating:</b> Temperature and pump control monitoring via the BMS allows for a proper functioning of hot water distribution through the facility.</li><li>• <b>Chilled Water System:</b> Control of the facility chillers could be supervised by BMS to monitor proper behavior of the system in terms of water/coolant temperature control or pump control to assure proper distribution within the distribution loop.</li><li>• <b>Sprinkler System (for fire safety)</b></li><li>• <b>Electrical Monitoring System:</b> The BMS may monitor the consumed electrical power and the state of main electrical switches.</li><li>• <b>Interactive support for users via APP or online service.</b></li></ul>



## Safety

50%

- **Intruder Alarm System:** When magnetic sensor will detect the movements in the door or window, it would send signals to the control box which would in turn send a signal to the alarm device.
- **Fire – Fighting System:** It consists of three basic parts: 1- A large store of water in tanks, either underground or on top of the building, called fire storage tanks 2- A specialized pumping system 3- A large network of pipes ending in either hydrants or sprinklers.
- **Video Surveillance:** A surveillance system capable of capturing images and videos that can be compressed, stored or sent over communication networks.
- **Anti – Flooding System:** Waterproofing, Flood the basement

## Energy

75%

- **Monitoring:** Automatic acquisition and logging system of energy consumption.
- **Management:** Automatic management system for energy supplies and production.

## Water

62.5%

- **Monitoring:** Automatic acquisition and logging system of water consumption. → Flowmeter are Installed
- **Recovery:** Rainwater recovery system for covering the flushing and irrigation.



## Indoor Environment

100%

- **Thermal Comfort:** Monitoring of environmental parameters related to thermo-hygrometric comfort (e.g. air temperature, relative humidity, air velocity, etc.)
- **Air Quality:** Monitoring of pollutants (e.g. VOC, PM, CO<sub>2</sub>)
- **Real – Time:** Programming and management in real time according to the occupancy profile of the premises.
- **Passive System:** Passive cooling and/or exploitation/limitation system for free supplies.

## Lighting

100%

- **LEDs:** high-efficiency luminaires.
- **Sensors:** Automatic lighting control.
- **Shielding:** Shielding adjustment and solar control.
- **Natural light:** Passive systems for natural light exploitation.





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High Speed Wi-Fi and Emergency exit button



Fire Alarm, Fire extinguisher and Card reader door lock



Motion sensors, Highly efficient VRF and Air Ventilation System



Temperature and CO<sub>2</sub> Sensors, LED illumination, Automatic door and high-tech teaching devices





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Shading System



Building Integrated Photovoltaic System (BIPV)



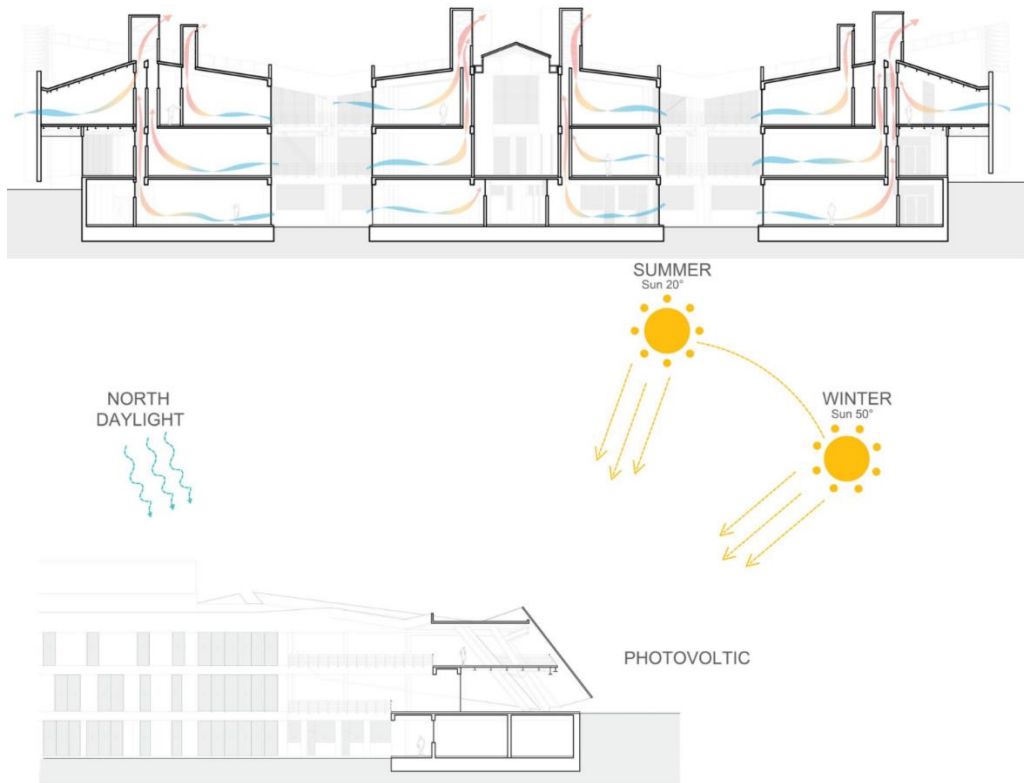
Solar Chimney







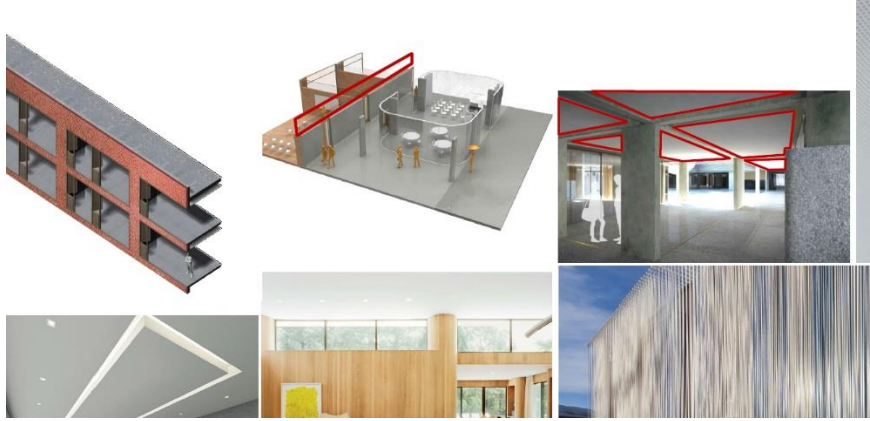
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