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Mitigation Enabling Energy Transition in the MEDiterranean region

# BUILDING MANAGEMENT SYSTEM EDE8

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## Training on GRASSMED – meetMED II

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Date

# OUTLINE

- ✓ What is a BUILDING MANAGEMENT SYSTEM (BMS)?
- ✓ What do BMS involve?
- ✓ How to comply with GRASSMED?

# What is a **BUILDING MANAGEMENT SYSTEM (BMS)**?

A building management system (BMS) is a COMPUTER BASED control system that can be used to monitor and manage the mechanical, electrical and electromechanical services in a facility. Such services can include power, heating, ventilation, air-conditioning, physical access control, pumping stations, elevators and lights



Higher energy efficiency, lower operating and maintenance costs, better indoor air quality, greater occupant comfort and productivity, reduce fuel consumption and CO2 emissions, are the major achievements of a successful effective BMS.

# What are BMS capabilities?

A BMS system will include Sensors, Pressure Switches, Flow Meters, Controllers, Relays, Communication Protocols, API's, Interfaces to MODBus and User Interface as its basic components that work together to deliver this control and monitoring.

These components together will enable the BMS to:

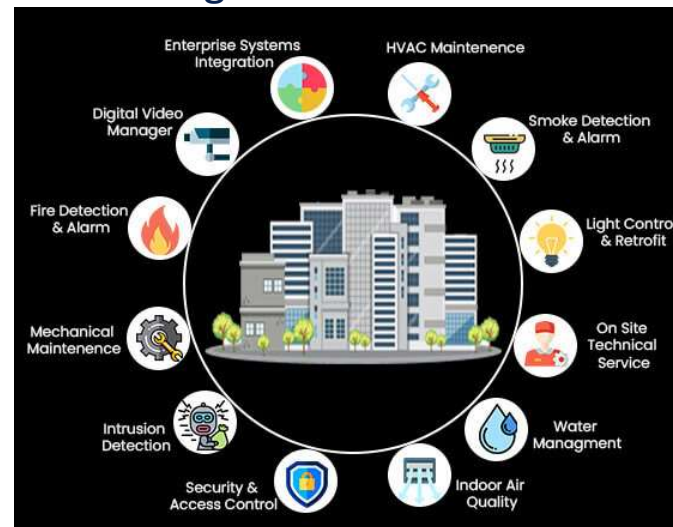
- Improve heating and cooling systems of building.
- Reduce heating and cooling costs through automatic permanent system optimization.
- Lower wear, tear and maintenance costs significantly.
- Minimize initial investment.
- Provide permanently comfortable indoor atmosphere via automatic temperature control, by employment of indoor quality sensors.
- Reduce fuel consumption, and CO2 emissions for sake of reducing environmental impacts of excess use of energy.

# What do BMS involve?

The three basic functions of a computer based BMS are to CONTROL, MONITOR and ultimately OPTIMIZE the distribution of task between a building's energy systems.

1. Room Controls: Comfort and energy savings can be assured by demand-led control of lighting, heating, ventilation, air conditioning (HVAC) systems, fire detection, security, etc...

2. Plant Controls: Heating and cooling energy is provided only when and where required for maximum energy savings.



4. Integration: includes lighting, security, heating, ventilation, and air conditioning, providing huge potential for reducing energy and operational costs.

3. Monitoring: Seamless monitoring of processes allows strategies providing minimal energy use and lowest operating costs as well as lower wear, tear and maintenance costs significantly.

# How To Comply With GRASSMED?

The intent of a BMS system is to improve heating and cooling systems of building, reduce heating and cooling costs, provide permanently comfortable indoor atmosphere.

Scoring points will be awarded as long as the residential or commercial building have installed such a BMS. The table below highlights the scoring points for each category mentioned:

Requirement Applied	Scoring points
<b>Maximum Scoring for Residential Buildings</b>	<b>15</b>
<b>Maximum Scoring for Commercial Buildings</b>	<b>15</b>
Power Systems control (PV, Generator,...)	2
Electric Appliance control	3
Heating, Ventilation and Air-conditioning HVAC System / CO <sub>2</sub> sensors for Mechanical Ventilation control	10
Illumination system control	Refer to credit EDE-5A - lighting



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