Sustainable Buildings (Green Buildings)

These are buildings designed to be good for the environment and save resources like water, energy, and materials.

Key Features:

- Use solar panels to get power from the sun
- Made from recycled or natural materials (like bamboo or reused wood)
- Have green roofs (plants growing on rooftops!)
- Use rainwater collection to water plants or flush toilets
- Designed to stay warm or cool without needing too much electricity

Examples:

- The Edge in Amsterdam — one of the greenest office buildings in the world
- Bosco Verticale (Italy) — a "vertical forest" with trees growing on every floor

Smart Buildings

These buildings use technology and Artificial Intelligence to make life easier, safer, and more energy-efficient.

Key Features:

- Automatic lights that turn off when no one is in the room
- Smart thermostats that change the temperature based on weather or time of day
- Sensors that check air quality, light levels, or motion
- Security cameras and alarms that are connected to phones
- Can be controlled with apps or voice commands

Examples:

- Smart homes with Alexa or Google Assistant
- Airports, museums, and offices with smart doors, lights, and temperature control