Building Automation System

Imagine Innovate Inspire

A Building can operate on Fingertips...

An Intelligent building is a distributed control system with a centralized network system of Hardware and software that monitors and controls a building's facility systems (HVAC, electricity, lighting, Security, alarm system, access control, entertainment system, plumbing, water supply, etc...).

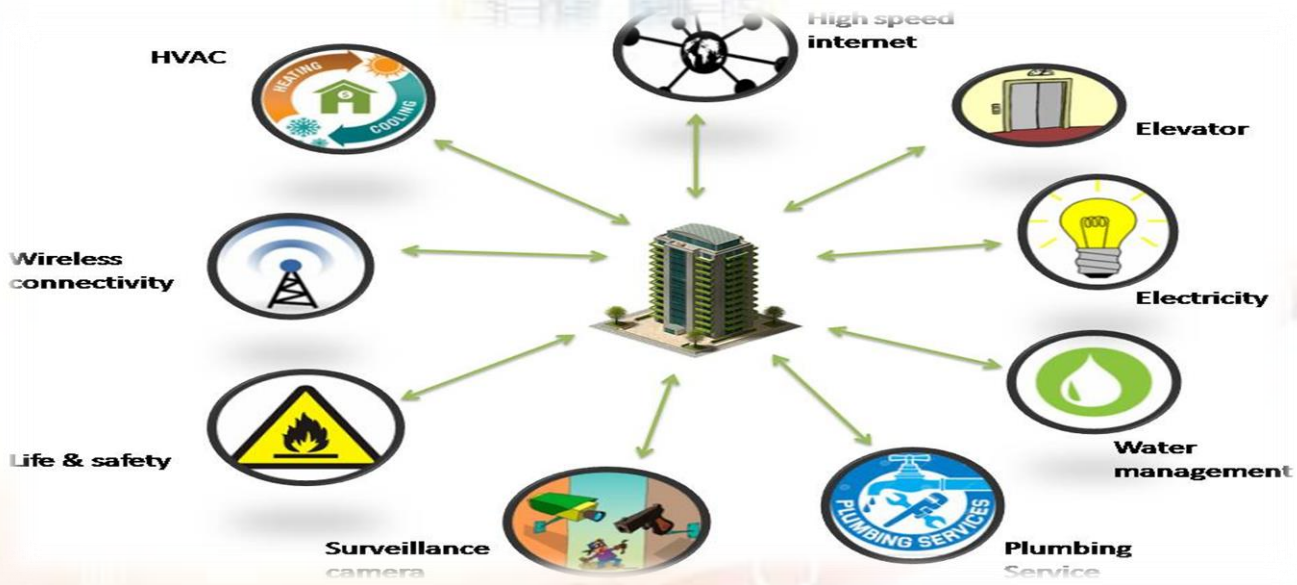
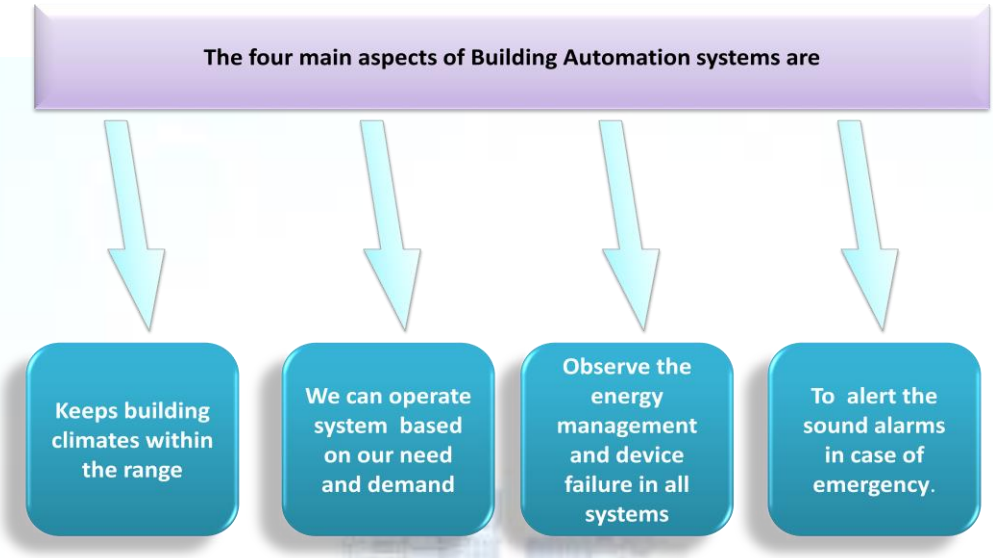


Figure: Building Automation

When facilities are monitored and controlled in a flawless fashion, tenants enjoy a more on edge working environment and facility management benefits from sustainable practices and reduced energy costs.

Building Automation System



Picture: BAS

Importance of Building Automation system (BAS) in today's world?

Problems facing with the existing building are there is no fire alarm system, insufficient ventilation, difficult to control the lighting and other electronic device from one place, no indication for leakage of gas, water wastage because of pipeline or taps leakages, no way to monitor the pollution and changes in the environment and no proper management for maintaining the garden.

In BAS, there is a balance between monitoring and reacting technologies. The first step on the road towards truly connected real estate is in the monitoring technology. These are chip-based sensors which monitor key factors

important in aligning core operational services, and which are connected to a building's management system (BMS) either wirelessly or through the existing electrical infrastructure. These can be added to existing services, but in the future so-called 'dust technologies' will integrate these wireless sensors into the fabric of the building itself, providing low-energy wireless monitoring and control.

Even before the implementation of a full intelligent building program, by using sensors and other devices will facilitate building managers to identify waste, efficiency savings and view a real-time dashboard of their building or portfolio.

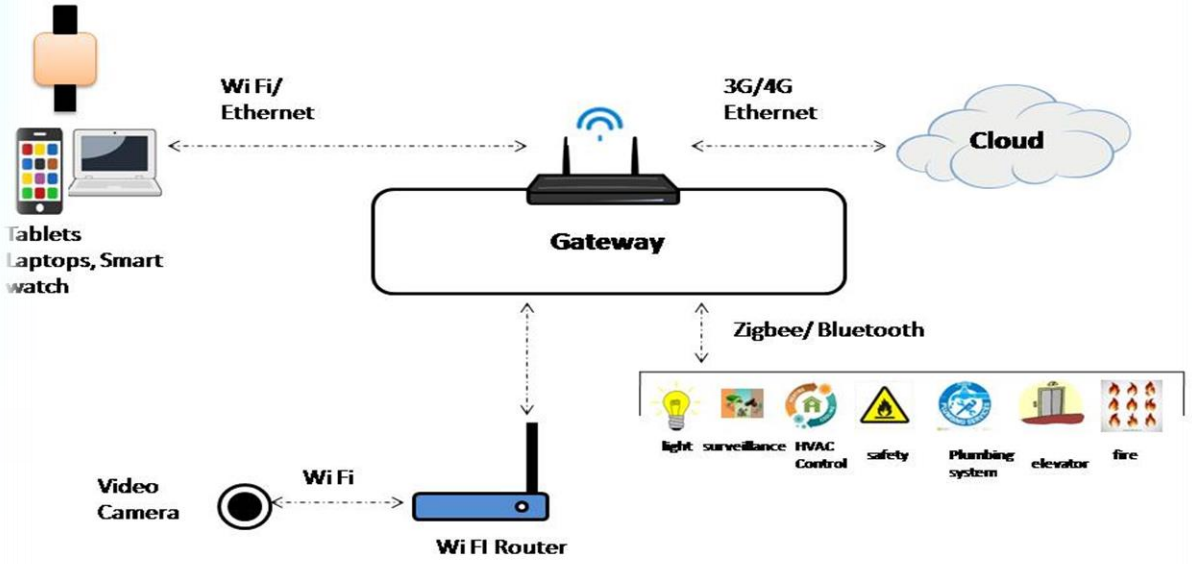
Digitization from the computers, Internet and Smartphone's had and will continue to make a huge impact on economies worldwide. However, the emergence of the Building Internet of Things (BIot) will take digitization, data generation and the subsequent economic transformation to an unprecedented level.

Imagine Innovate Inspire

How does Building Automation System Works…?

The BAS unit in the building monitors and track the status of light, electrical appliances, water management, gas leakages, pollution and other systems. BAS is an incorporation of several modules which are connected to processor/controller which acts a Master. The Slave device contains sensor unit& communication module this sends information about current status of room or building. Master device collects the data from the all Slave devices and sends to the cloud through Ethernet/ Wi-Fi which is accessible through the Mobile application.

Building Automation System



Block Diagram of Building Automation System configuration Example

Picture: Possibilities

Building Automation System also does…?

- ☞ **Room automation:**
  - → The most common example of room automation is corporate boardroom, presentation suites, and lecture halls, where the operations of the large number of devices that define the room function.
  - → One can operate by using mobile application.

Imagine Innovate Inspire

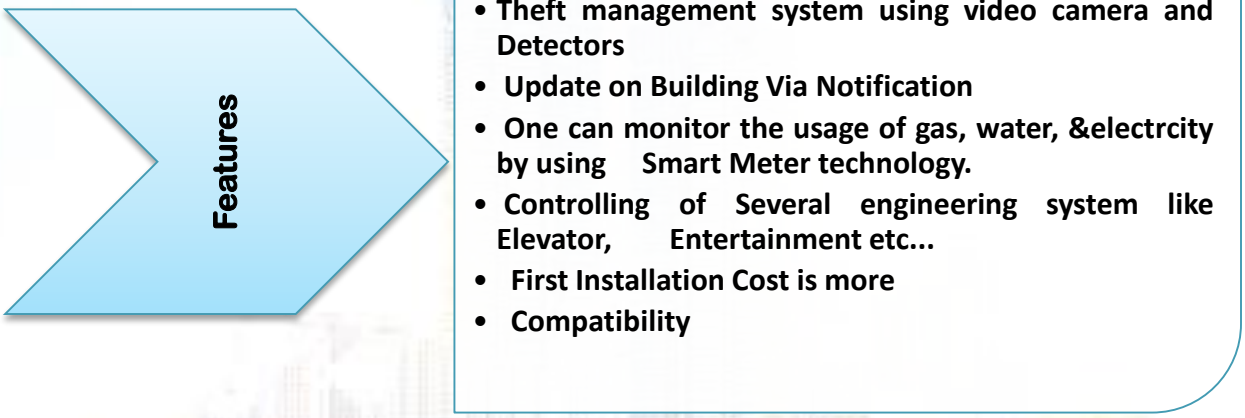
- **Water management:**
  - → One can have management system for the water which can monitor the Real time usage of water and also have information about Flooding, Leakage and other issue's.
  - → If the usage of water increases, the system alert with the electronic signals and it will be indicated on the mobile application.
- **Lighting and Electrical appliances:**
  - → By using the BAS one can monitor and check the status of the electronic devices which are in using the building by the using the mobile application or web page.
  - → By using the IoT we can control the electrical energy.
  - → Avoiding the short circuit.
- **Gas and pollution monitoring:**
  - → By using the sensors we can monitor like, temperature, pollution, humidity, and Usage of the gas we can also monitor if there any leakage.
- **Security:**
  - → There are many simple , connected security solution for the smart home that are inexpensive alternatives to 24/7 monitored security systems.

Building Automation System

Imagine Innovate Inspire

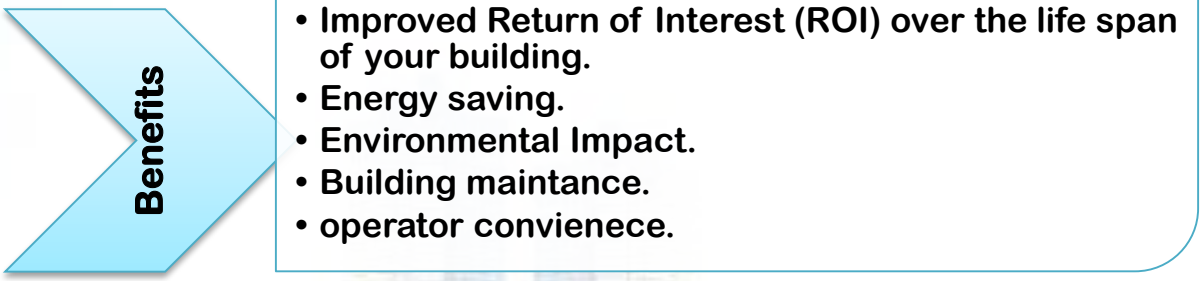
→ **Wi-Fi enabled cameras, connected motion sensors and smart smoke alarms can all be monitored from inside or outside a home via live video feed, email and text alerts.**

Features of Building Automation System(BAS):



Building Automation System

Benefits



Conclusion

Building Automation system can avoid the abrupt accidents, wastage of power and also uses energy efficiently, provides safety and security.