



ALL ABOUT

BUILDING AUTOMATION SYSTEM

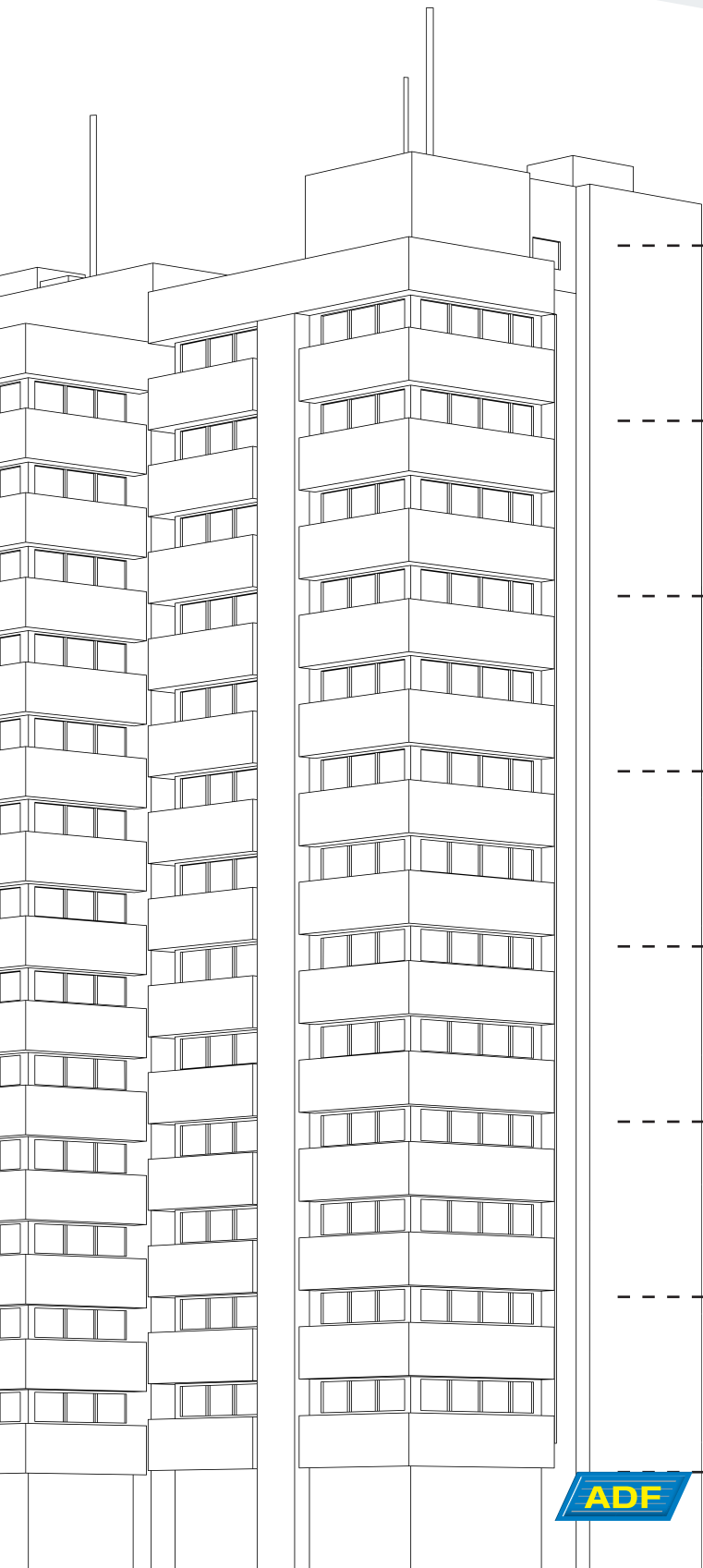
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WHAT IS BUILDING AUTOMATION SYSTEM?

Building Automation is monitoring and controlling a building's systems including: mechanical, security, fire, access, lift, energy, lighting, heating, ventilation, and air conditioning.

A centralized, networked system of hardware and software that monitors and controls a building's facility systems (electricity, lighting, plumbing, HVAC, water supply, etc.).

WHAT IS BUILDING AUTOMATION SYSTEM?



FIRE

- Functionality checks and detector service



SECURITY

- Doors and proximity intrusion



ACCESS

- Doors and buildings



ENERGY

- Utility management for:-
 - Electricity
 - Water
 - Back-up generation



LIGHTING

- Schedules and occupancy sensing



LIFTS

- Traffic optimisation, breakdown and maintenance



COMMUNICATIONS

- Video and data



HVAC

- Air-handling unit, boilers, pumps, fans, variable air volume and air quality

CORE FUNCTIONS OF BUILDING AUTOMATION SYSTEM?



- ▶ CONTROL
- ▶ OPERATION
- ▶ MONITOR
- ▶ MANAGEMENT
- ▶ ANALYSIS



to control building's environment



to monitor & correct system performance



to alert or sound alarms when needed



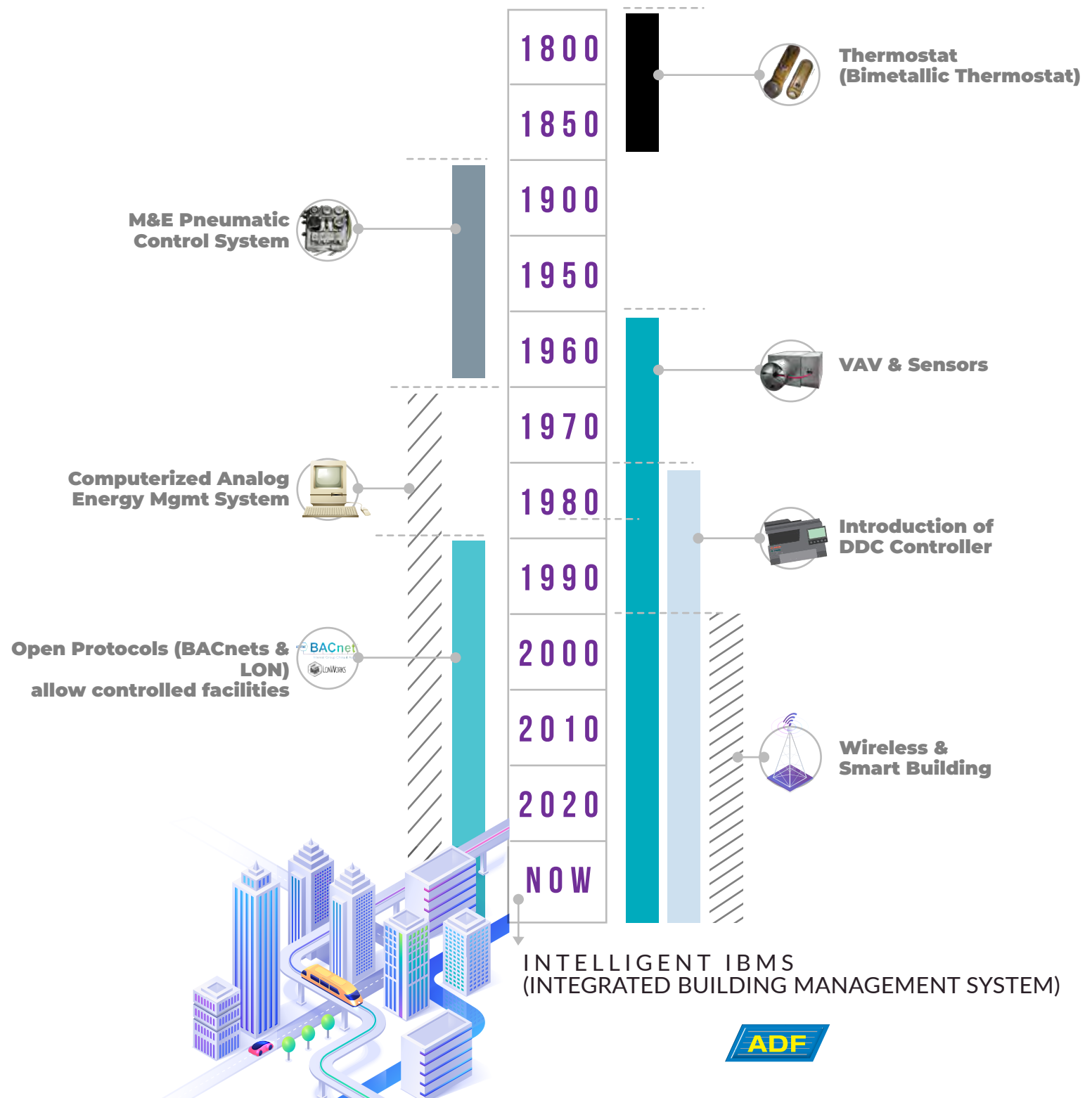
*to operate system according occupancy
& energy demand*



*to analyze & optimization data collected
for provide real time feedback*

*“In the world of analytics,
there's no shortage of smart,
innovative people to learn from.”*

EVOLUTION OF BUILDING AUTOMATION SYSTEM?



BASIC COMPONENT OF BUILDING AUTOMATION SYSTEM?

WORKSTATION



*Use to interact with BAS
where building data reported*

CONTROLLER



*Brains of the system,
take data from sensors &
sent back to workstation*

SENSORS



*Devices measure value.
Eg: Temperature, CO2 output..*

OUTPUT
DEVICES



*Carry out commands
from controller.
Eg: Relays & Actuators.*

COMMUNICATION
PROTOCOLS

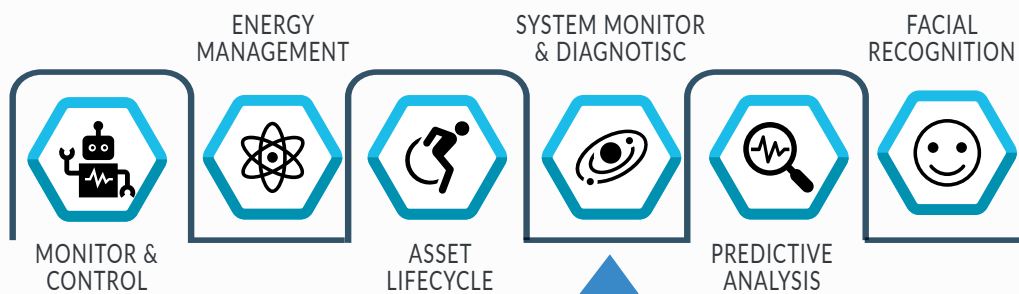


*Language spoken
among BAS.
Eg: BACnet, LonWork...*

WHAT BAS CAN DO

"BAS various components within a building's structure. Performance and Sustainability is key for today's building operation."

Smart Building Services



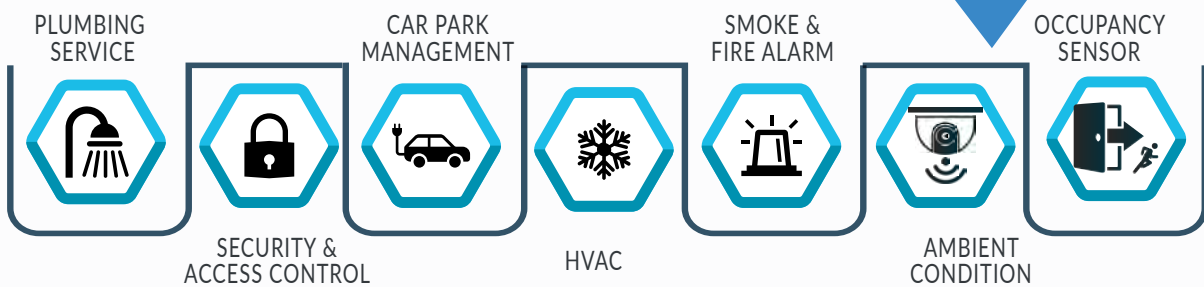
DEVICE CONNECTIVITY & COMMUNICATION

DATA MANAGEMENT

ANALYTIC

OPTIMISATION

Building Assets and Sensors



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WHY BAS IS IMPORTANT

SAVE COST

BAS reducing energy consumption via data collected & utility bills by automate sensors and timers



ENVIRONMENTALLY FRIENDLY

BAS efficiencies equate to a reduced environmental impact which means better air quality for everyone.



REAL TIME UPDATE

BAS allows to monitor and control building's systems from anywhere, anytime.



PRODUCTIVITY

BAS allows your systems to run more efficiently, eg. to break down and require repairs which can be disruptive to a business's daily operations.



COMFORT

Smarter control of the building's environment to maintain an ideal level of comfort & reduces complaints and resolution time.



SECURE

BAS connected to security systems in order to increase safety and peace of mind.



GLOSSARY

BAS

BUILDING AUTOMATION SOLUTION

An integration of digital, electronic, and/or pneumatic controls & devices to provide unattended and automatic operation of buildings systems.

BMS

BUILDING MANAGEMENT SYSTEM

A system for centralizing and optimizing the monitoring, operating, & managing of a building.

EMS

ENERGY MANAGEMENT SYSTEM

A set of automated controls and software that will monitor and optimize the use of energy in commercial buildings

ELV

EXTRA-LOW VOLTAGE SYSTEM

An electricity supply voltage which carries a low risk of dangerous electrical shock & deployed in buildings for of better control and security.

DDC

DIRECT DIGITAL CONTROL

Innovation with idea small, affordable microprocessors in the '80s method by which the components of a digital system communicate.

API

APPLICATION PROGRAMMING INTERFACE

Common in computer programming. It describes the code that defines how two or more pieces of software communicate with one another.

AHU

AIR HANDLING UNIT

In HVAC refers to equipment includes a blower or fan, heating/cooling coils, controls, condensate drain pans, and air filters.

VAV

VARIABLE AIR VOLUME SYSTEM

HVAC system that has a stable supply-air temperature & varies air flow rate to meet the temperature requirements

HVAC

HEATING, VENTILATING & AIR CONDITIONING

Referred to as climate control and is particularly important in the design of medium to large industrial and office buildings.

“ BAS now the hub whereas before you could argue that it was the IT system that defined the criteria for the design of the building. ”

VISION & MISSION

*To become the innovative
technology leader
to enhance quality of life.*

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ADF BAS SYSTEM ARCHITECTURE

LEVEL 1 | GRAPHICAL USER INTERFACE



ADFvision

Server Station & Client Workstation



ADFanalytic



ADFcloud

LEVEL 2 | SYSTEM CONTROLLER



XTEC-X1



XTEC-UC



XTEC-VAV



XTEC-D1

LEVEL 3 | SENSORS AND FIELDS DEVICES



XTEC-VAT



VAV-AVB



EFM01



UFM01



CD02

Let us tell you more about Building Automation Solutions
can how they useful to you.
Contact us by today...



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ADF Technologies Sdn. Bhd. is a privately-owned company, established in year 2006 and is accredited with MSC status. Headquartered in Penang, ADF has an operation office in Kuala Lumpur and has branches in Kota Kinabalu and Kuching.

Under the leadership of ADF's founders, their skills and experience in engineering and IT has successfully led ADF into becoming one of the leading solution and service provider in Building Automation System (BAS) and Energy Management System (EMS) in the building industry. With constant innovations and unceasing research and development from time to time, ADF has its own line of products that are used in all the awarded projects.

Adopting the Open System technology (BACnet® & LONWORKS®), we are able to implement an end-to-end solution that is open, interoperable and multi-vendor, through strategic partnerships with international partners.

Diversifying from what we have and do best, we also offer solutions and services for Audio Visual (AV), Extra Low Voltage (ELV) and Security Management System which are widely used in malls, offices, hotels, universities, hospitals and even guarded residences.



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