

SMART BUILDING MANAGEMENT PLATFORM

BRIEF DESCRIPTION

In the past, buildings were basically managed using centralized technologies, forcing the technical manager to make a decision or leaving it to systems whose operation was based on time periods, turning equipment on and off.

These technologies worked without “looking at” the needs of users operating blindly without consideration of the ambient conditions, at a time when environmental and energy concerns were mere mirages or did not even exist.

COMPLEX SYSTEMS

Even today a very large number of buildings built as recently as in the 70's and 80's work this way, expending energy unnecessarily, without great comfort for the users of these buildings and giving rise to a huge carbon footprint.

Another noteworthy aspect of these systems is that they were, and still are, complex systems to install that require the permanent use of specialized vendor technicians for their normal operation and maintenance. This extraordinarily expensive and exclusive service from the supplier.

SMART ANALYSIS

Currently the management of a building obeys a set of basic criteria based on a continuous analysis of the space occupation. Continuous or real-time analysis assumes the collection of local information on:

- Occupancy of space, whether occupied or not,
 - How space is occupied by groups of people or individuals,
 - The busiest time periods at the site,
 - Temperature and humidity *in situ*; inside and outside,
 - Ambient noise level,
 - The amount of natural and artificial light,
 - The indoor air quality,
 - The energy consumption, by area or equipment,
 - The water consumption,
 - And others specific operation according the building activity.
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NEVER TOO BRIGHT.
NEVER TOO DARK

The information is collected automatically and regularly, at a frequency determined by the building's technical manager, and analyzed by specific algorithms that will determine the best decision to make and when.



DIGITAL TRANSFORMATION PROCESS

After, the information collected from each of the sensors and processed by the system becomes data, important data for the efficient current and future management of the building.



BUSINESS RULES

These collected data are now analyzed by functional rules directly responsible for the operation of the building's equipment, turning them on only when necessary, in the case of illumination only in the appropriate amount to the time and place, or turning them off when the system determines that there is no justification for staying on, in the case of HVAC equipment specially when the premises are likely to be unoccupied, or to maintain comfort, by keeping the room half-lighted or maintaining the ventilation system operating for a period of time.

LOCAL INTELLIGENCE

All these operations are performed immediately and automatically without any human intervention, using the equipment more efficiently and only when needed.



SIMPLIFIED PARAMETERIZATION

All automatic activity developed by a Smart Building Management is based on the parameterization of a set of actions, developed by the technical manager of the building, as, being responsible, he should be the one to determine the limits of action of the system. It will also be up to this technical manager to determine at which threshold levels the system sends warnings and alerts to the APP.

How Smart Technology is Shaping the Future of Buildings

NON INTRUSIVE TECHNOLOGY

The technology used on this platform is completely wireless and each of the devices has embedded intelligence.

Each device is capable of making real-time decisions based on what it was parameterized for.

It can also continue to function normally in the event of possible communication failures without endangering its activity.

All of this information is then sent to a gateway, which forwards it to the Cloud.

Platform access can be in local or remote mode using a pc, tablet or smart phone.

REPORTING



The information sent to the technical manager is only information where the system needs higher decision to make a decision, all other information is executed according to predetermined rules and constitutes a history of system activity.

NEURONAL ANALYSIS



Past and present data are further analyzed by predetermined models allowing the building manager to obtain very useful predictive analyzes at the level of:

- Predict water and energy consumption,
- Local usability to optimize maintenance,
- Equipment malfunctions,
- Optimizing equipment operation,
- Other according to building's activity.

IoT INTERNET OF THINGS



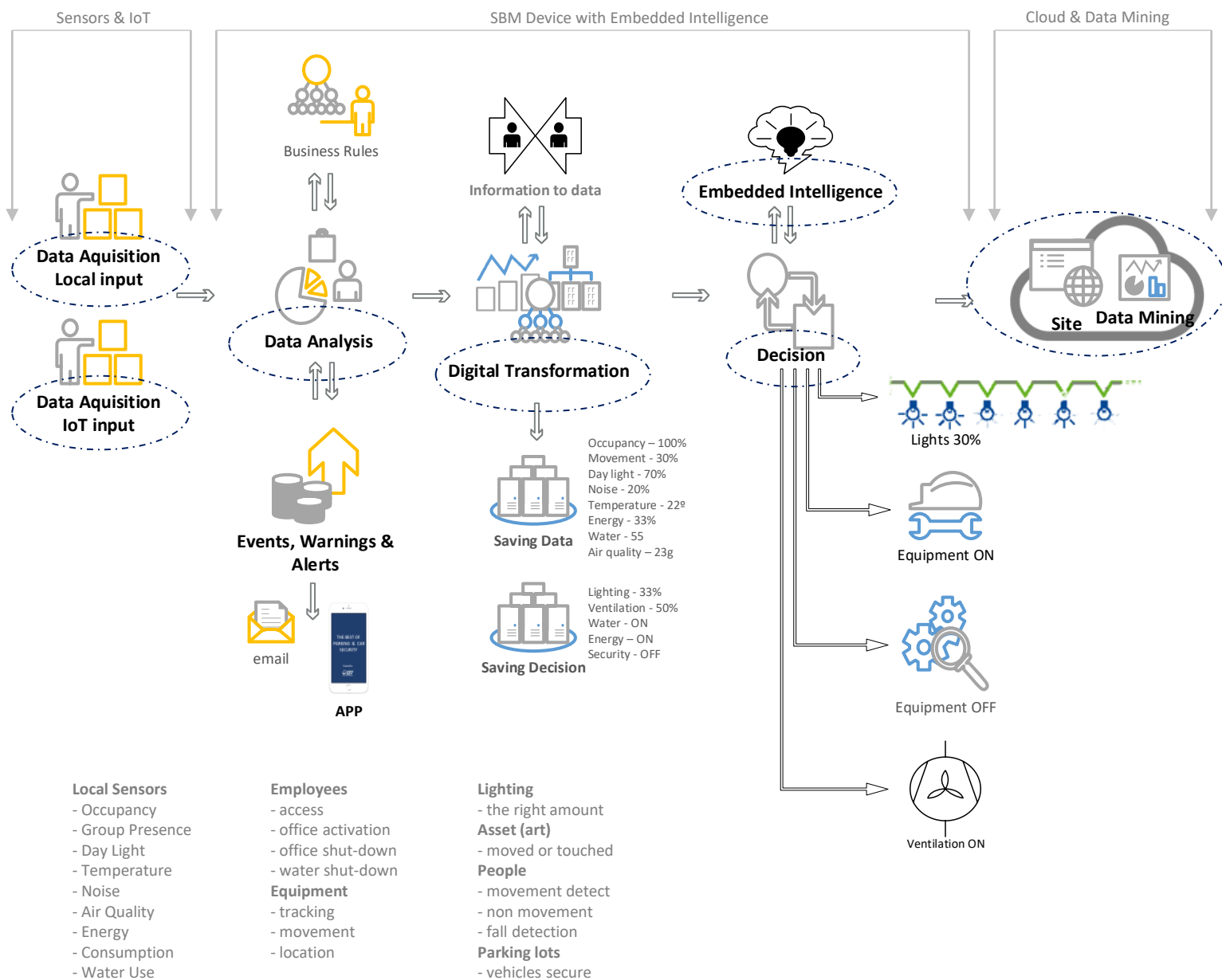
The SBM platform is also equipped with an IoT device that works only in the system intervention area and is therefore not intrusive. It can be used for:

- Manage people access to a particular location,
- Activate equipment when the person carrying it enters that location,
- Match the brightness of a location with the one settled in that device,
- Inform the location of a equipment to which the device is associated,
- Secure a work of art by telling if it was moved or touched,
- Actively secure a vehicle after parked in the park,
- Alert if a person or equipment is leaving a particular zone,
- Alert if the user of the device does not move, e.g. for 30 minutes,
- Alert if device user has fallen,

Smart Building Management is a non cabled intelligent platform that create and uses it's own network.

Each SBM device has embedded intelligence and use wireless communication, takes decisions in real-time according to it's own configuration and exchange data and actions with the other devices when adequate and necessary.

The IoT devices are used to control personnel access, equipment mobility and geo-fencing, safety of vehicles when parked, security of the important assets, shut down of equipment or offices when personnel absence is detected, among other uses.



Energy, facilities, operations and building managers know how crucial it's to understand how IoT data is important in a Smart Building.

SBM, is installed and operates in buildings with different uses, namely:

- Offices,
- Office buildings,
- Schools of various types,
- Gymnastics Pavilions,
- Libraries,
- Parking lots,
- Public swimming pools,
- Public markets,
- Industrial associations,
- Industrial units,
- Service stations,
- Municipal buildings,
- Government buildings,



Others in Europe.



We are committed to driving a future enabled by more intelligent and sustainable buildings, through innovation and integration.

IsGreen bring technologies from across our expertise to improve building efficiency and occupant comfort.

We combine control solutions with building automation systems, all to minimize energy and water consumption, maximize comfort and enhance productivity.