Intelligent Building Technologies

Successfully constructing, operating, and maintaining a building throughout its lifecycle requires accurate forecasting of capital expenditures and equipment replacement. Precise equipment performance insights come from harnessing complete building data from many different systems – massive, scattered, and complex – and referencing it against itself in a single tool. Building data is the golden thread that links all lifecycle phases together, giving you an accurate representation of an asset's performance. Unfortunately, most building owners and operators lack the resources and tools to **harvest and harness** all building data…until now.

Intelligent Building Technologies services is a building lifecycle management strategy based on the premise that when all building data is brought together, the solutions to a building's cradle to grave challenges are right at your fingertips. With them, you have better insights into the health of your building and its assets. This health performance can be tracked throughout the entire lifecycle of the building.

Our Intelligent Building Technologies services are designed to reduce operating costs, the largest component of building lifecycle expenditures and preserve a building's residual value over time. Intelligent Building Technologies services for **construction and operations** represent a combination of real-time sensor data, 4D scheduling and asset management, each communicating with a client's CMMS for work order creation and regulatory documentation.

Intelligent Building Technologies services aims to empower project stakeholders to make informed decisions related to risk management, safety and operational efficiency. The more visibility we can provide our teams, the better their decision making becomes. Intelligent Building Technologies services is not a product, it is a service designed to add value during construction, but also provide owners with enhanced controls options and a technology platform ready to incorporate modern building automation devices with legacy building controls.

Intelligent Building Technologies services for Construction (Consultation, Design and SaaS)

Intelligent Building Technologies services, offered by Gilbane Facilities Management Services (FMS) uses flexible, low-cost IoT hardware applications to enhance the visibility of seen and unforeseen conditions for the project team. Environmental monitoring for quality control, life safety solutions, site cameras, material and asset tracking, and trade management are all enhanced with Intelligent Building Technologies data.

We have developed ruggedized hardware packs and provide all the equipment necessary to set up a network independent of the Gilbane proxy. Intelligent Building Technologies services hardware serves as the communication and data collection hub for digital site solutions, while remaining independent from sensitive Gilbane Building Company ERP functions within Procore and other Gilbane Technology Group applications. The same Intelligent Building Technologies services hardware used for jobsite data collection is now in place and ready to deliver value to the owner during the Intelligent Building Technologies services operations and management phase of the building.

Intelligent Building Technologies services hardware component examples include:

- › Low Voltage and Data Wiring Pulls
- › Life Safety (CO2, IAQ, VOC)
- › Asset Performance Monitors
- › Water Management Systems
- › Lighting Controls
- › Energy Submeters
- › P2P Communication Equipment

- › Weather Stations
- › Access Control
- › IP Video
- › Site Security
- › HVAC Integration
- › Environmental Monitors (temp, humidity)

Intelligent Building Technologies services for Operations

Gilbane FMS access to the project during the construction phase allows us to install scalable automation and monitoring infrastructure at a fraction of the cost of post-construction installations. Based on our design discussions with a client's Facilities Management team, we design a hardware deployment compatible with their specific project and risk profile. At this juncture, wiring is pulled, communication components are added, and sensors are installed before the sheetrock and finishes are installed.

Intelligent Building Technologies services for building operations is predicated on the application of flexible, low-cost IoT hardware enhancing the forecasting power of a client's enterprise resource planning specifically through a real-time data integration with the CMMS. Examples of optimized operations include PM schedules based on performance data instead of relying on a fixed time interval.

Automatic water shut-off upon leak detection is a major beneficial operations bi-product of Intelligent Building Technologies services. Logic is applied to understand the effects of closing the valve and tracking proliferation to make the best decision. This process occurs simultaneously with the dispatching of a technician by generating a work order in the customers maintenance system. This service can be performed regardless of use during the construction phase.

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