NEXUS

Summary

The Nexus Open Standard, Multiprotocol Integration and Data Management Platform allows building owners and operators to integrate to a suite of Suite of Nexus and Third-Party Applications including:
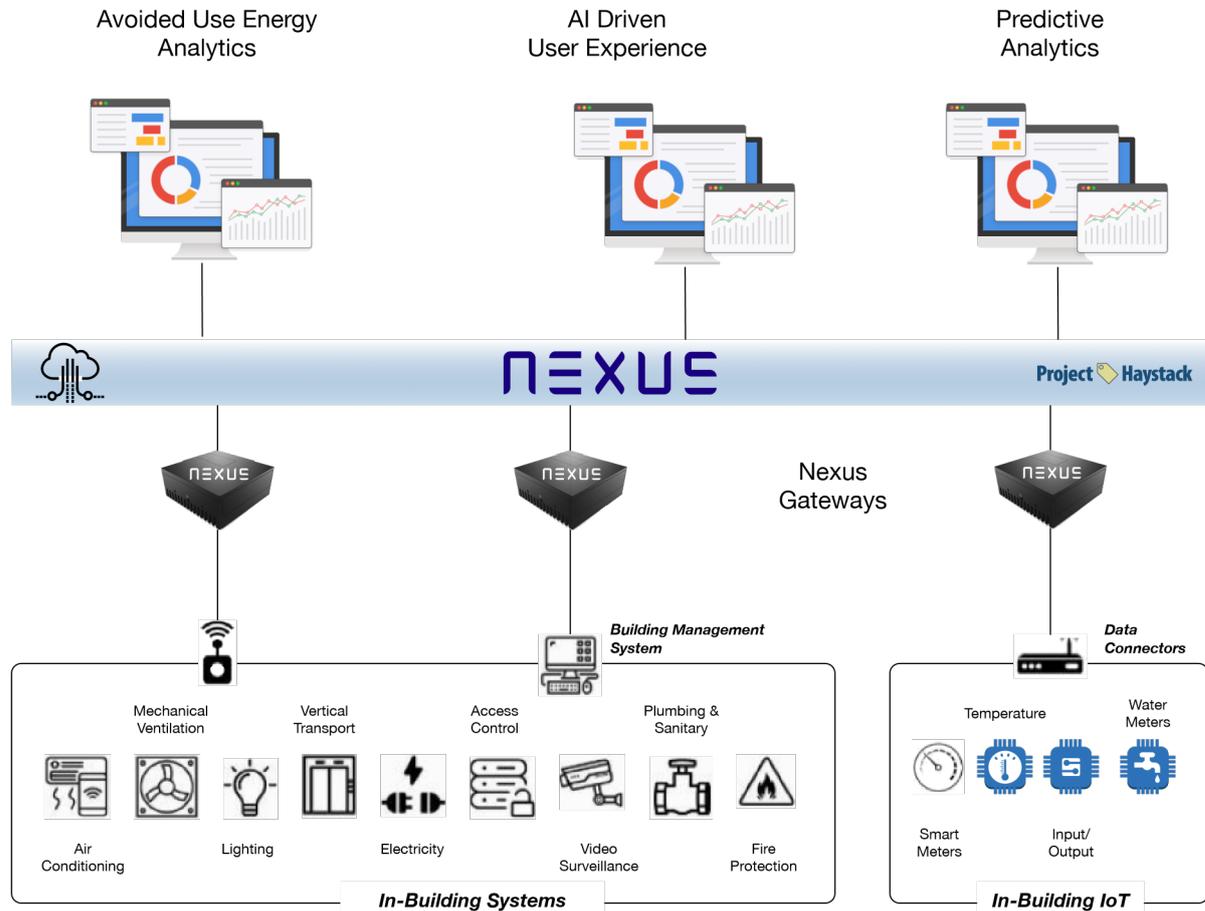
1. Avoidable Energy Analytics

2. Nexus Next Generation User Experience

3. Predictive Analytics

4. Software applications based on the Haystack Open Standard

The challenge in current Building Systems domain is that device data are stored in many different formats, communicated via numerous protocols, have inconsistent non-standard naming conventions, and have very limited descriptors to enable us to understand meaning without direct human knowledge of the device producing the data.

On the other hand, a new generation of software applications like AI driven Analytics promises to help us benefit from that data. In the buildings industry those benefits include; improving the performance of our facilities and equipment systems by detecting faults and inefficiencies, reducing energy use and costs, streamlining maintenance operations, measuring and managing occupant comfort, satisfaction and productivity, meeting regulatory and reporting requirements.

Thus, there is a need for a tool or a platform to accurately collect data from multiple data sources and ensure the data's integrity, security and availability to successfully select, deploy, and capitalize on new generations of advanced third-party energy and operational technologies and applications. Applications such as: Visualization & Reporting, Fault

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Detection & Diagnosis, Predictive Analytics & Maintenance, and Continuous Improvement & Optimization.

Background

Building Management Systems are large siloed applications which generate their own data sets and architectures. Often, they are proprietary in nature and are not integrated with other vendor environments.

In addition, a new generation of smart devices and equipment are creating dramatic increases in the amount and type of data available from our facilities.

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conventions, and have very limited descriptors to enable us to understand meaning without direct human knowledge of the device producing the data.

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Thus, there is a need for a tool or a platform to collect accurate data from multiple data sources and ensuring the data's integrity, security and availability to successfully select, deploy, and capitalize on new generations of advanced third-party energy and operational technologies and applications. Applications such as: Visualization & Reporting, Fault Detection & Diagnosis, Predictive Analytics & Maintenance, and Continuous Improvement & Optimization.

Nexus' Open Standard, Multiprotocol Integration and Data Management Platform can integrate to the participants existing Building and Management Systems and to a new suite of Nexus Applications like, Avoidable Energy Analytics, AI Driven User Interface and Analytics and other Software applications based on Haystack Open Standards

Description

The solution comprises two primary components:

1. Nexus Open Standard, Multiprotocol Integration and Data Management Platform, which:

     a. Provides an energy and operational data warehouse and analytics engine

     b. Provides a hardware normalization layer that streamlines the integration

into facilities.

    c. Enables the integration of 3rd party application solutions

    d. Enables the injection of energy and operational data into the corporate business intelligence layer.

    e. Creates an open architecture that facilitates the creation of custom applications

2. Nexus Gateways.

3. The Nexus gateways provide a data protocol interface to:

    a. Building Management Systems (BMS)

    b. Power Management Systems (PMS)

    c. Utility Systems (Electricity, Gas, Water)

    d. Security Management Systems (SMS)

    e. IoT Devices

    f. All other Building Systems