IDC MarketScape: Worldwide Smart Building Energy Analytics 2011 Vendor Assessment

IDC Energy Insights: Distributed Energy Strategies

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IDC ENERGY INSIGHTS OPINION

This IDC MarketScape study demonstrates how eight influential Smart Building Energy Analytics vendors perform against key success criteria (see the Market Strategies section) within a comprehensive and rigorous evaluation framework. This study on Smart Building Energy Analytics assesses solutions from BuildingIQ, EnerNOC, GridPoint, Hara, IBM, Optimum Energy, SCIenergy (formerly Scientific Conservation), and Serious Energy. In addition:

- The Smart Building Energy Analytics market is new and rapidly evolving to reflect increasing clarity in market demands. As a result, while some elements of these solutions are fairly commoditized, much of the design reflects unique vendor perspectives on customer needs. IDC Energy Insights defined a spectrum of sophistication for each of the subcriteria impacting go-to-market, offering, and business strategies and capabilities. These metrics reflect IDC Energy Insights' definition of a Smart Building and the evolution of sophistication in facilities management enabled by Smart Building Energy Analytics.

- Although the vendors evaluated in this study are spread among the "Leaders," "Major Players," and "Contenders" categories, the newness of the Smart Building Energy Analytics market and the rapid pace of change in the market lead us to believe that these positions are likely to change in the near future. The vendors continue to refine their solution, hone in on target markets, and differentiate themselves from their competitors.

- The Smart Building Energy Analytics market is dominated by privately held vendors, and as a result, it is difficult to gather market share information through the primary research process of this study. IDC Energy Insights modeled the market share and growth projections used in the IDC MarketScape tool according to data publicly available or reported by the vendors regarding revenue, square footage under management, or number of customers and the 2010–2015 IDC Energy Insights Smart Buildings Global Forecast.

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This IDC Energy Insights study assesses Smart Building Energy Analytics solutions using the IDC MarketScape model. This assessment discusses both quantitative and qualitative characteristics that determine success in the market from the perspective of the solution capabilities today and vendors' business strategy for the near term. In particular, this assessment focuses on:

- Vendors that sell Smart Building Energy Analytics solutions to building management decision makers

- Customizable solutions that enable facility optimization for improved energy efficiency

- Vendors with significant momentum in the North America marketplace as well as business strategies or activities globally

This study evaluates a particular subsegment of the Smart Building Energy Analytics vendor market focused on commercial and industrial building management and, therefore, omits similarly influential vendors whose solutions are primarily utilized in datacenters or the residential sector or those focused on manufacturing process efficiency.

Methodology

IDC MarketScape criteria selection, weightings, and vendor scores represent well-researched IDC Energy Insights judgment about the market and specific vendors. IDC Energy Insights analysts tailored the range of standard characteristics by which vendors are measured through structured discussions, surveys, and interviews with market leaders, participants, and end users.

Market weightings are based on user interviews, customer feedback, and the input of a review board of IDC experts in each market. IDC Energy Insights analysts base individual vendor scores, and ultimately vendor positions on the IDC MarketScape, on detailed surveys and interviews with the vendors, publicly available information, and end-user experiences in an effort to provide an accurate and consistent assessment of each vendor's characteristics, behavior, and capability.

IDC Energy Insights selected eight vendors to be evaluated in this IDC MarketScape study. The study process included the following steps:

- Vendors were introduced to the evaluation criteria and market-specific definitions.

- Vendor briefings closely followed an IDC Energy Insights questionnaire designed to capture data related to the strategy and

capabilities of each vendor and solution from the perspective of the market success criteria.

- Customer reference interviews explored the functionality and utilization of the Smart Building Energy Analytics solution and the customer satisfaction with the solution and the vendor, based on the capabilities criteria.

- Vendors were then given the opportunity to provide any feedback in response to the results of IDC Energy Insights' analysis of their particular solution. The particular weight of each market success criteria and the results of IDC Energy Insights' analysis of the vendors' competitors were not, however, shared with the participants.

SITUATION OVERVIEW

Introduction

Smart Building Energy Analytics solutions are the pivotal piece of intelligence from the end user's perspective because they bring heightened visibility into facility operations and maintenance to enable a new level of sophistication in building management. To provide some context and rationale for this study, IDC Energy Insights provides the Smart Building concept definition in the section that follows.

Definition of a Smart Building

A Smart Building is defined as a facility that utilizes advanced automation and integration to measure, monitor, control, and optimize building operations and maintenance.

Smart Buildings are the next generation of commercial and industrial facilities that enable stakeholders from information technology, facilities management, and the C-suite to come to one table and establish management strategies to achieve a wide range of business objectives.

The economics of building management coupled with strategic sustainability goals put new pressures on facilities management personnel working with already constrained resources. More sophisticated controls, automation systems, and analytics are all tools building management looks to for meeting the challenges of shrinking budgets and new mandates. Smart Building solutions provide heightened visibility into building operations to enable adaptive, real-time control for optimizing how the facility runs. At the core of a Smart Building is the convergence of building automation and information technologies to facilitate the sophisticated management

and utilize large and rapid streams of data. Smart Building Energy Analytics are the tools that provide an interface and a control center for building management decision makers.

Definition of the Smart Building Energy Analytics Market

Smart Building Energy Analytics are available in an evolving software applications marketplace with players from an array of venture-funded start-ups to heavy hitters from information technology and building automation and controls. There is growing demand for Smart Building Energy Analytics as stakeholders face increasing constraints in terms of both personnel and budgets. Energy Analytics can be seen as a cornerstone in the concept of a Smart Building because the sophistication of the visualization, analysis, and optimization functionality of these applications enable effective deployment of increasingly complex energy management platforms.

Overview of the Smart Building Energy Analytics Market

From the demand side, the Smart Building Energy Analytics market is unique in terms of the horizontal nature of the end-user segmentation. Building management is a ubiquitous challenge across industry sectors defined by characteristics more closely tied to regions than business segments. These characteristics include energy costs, real estate vacancy rates, policy incentives and mandates, and revenue-generating opportunities such as demand response programs.

From the supply side, the Smart Building Energy Analytics market can be segmented by vendor characteristics or go-to-market approaches. As mentioned previously, the vendor landscape can be segmented into three main categories: large IT vendors, building automation system/building management system (BAS/BMS) vendors, and start-ups. In addition, these vendors may target distinct segments of the commercial and industrial building market in terms of either building size/energy load or business type.

IT SUPPLIERS

Market Strategies

Market-Specific Evaluation Criteria Defined

The IDC MarketScape evaluation framework is built upon clearly defined business strategy and capability metrics. IDC Energy Insights has defined Smart Building market-specific definitions for subcriteria applicable to the analytics solutions evaluated in this study under three main categories: offering, go to market, and business, as presented in Tables 1 and 2. First, the strategy criteria frame the level of success of a vendor's forward-looking practices for the next two to three years.

The capabilities criteria, on the other hand, measure the success of the solutions as available to the market today. These criteria provide the backbone of the vendor and end-user interviews that guided IDC Energy Insights' analysis of each of the eight solutions evaluated for this study. IDC Energy Insights provided the list of criteria to each vendor participating in the study to ensure a certain level of transparency in our evaluation. The first step in the engagement was to present the vendors with the criteria list and definitions and allow for feedback relative to the categories.

The IDC MarketScape model includes an expansive list of subcriteria associated with the three market success criteria for capabilities and strategy: offering, go-to-market, and business model. Each vendor that participated in the study responded to questions associated with each of the IDC subcriteria to provide a comprehensive picture of its offering and business. Tables 1 and 2 provide the market-specific definitions of the most influential subcriteria for identifying market differentiators.

The vendors' performance for each of the subcriteria was evaluated on a scale of one to five, based on discrete measures of success. The scoring demonstrated the particular leadership, vision, or weakness of particular aspects of the vendors' solution and business model. The challenge in scoring this particular group of vendors is that they represent a new market that is rapidly evolving. Potential buyers have demonstrated uncertainty in the value of solutions, the demand for particular functionality, and familiarity with solution providers. As a result, the scoring reflects how well each vendor and solution match IDC Energy Insights' definition of a Smart Building and how well Energy Analytics enable an evolution to intelligent facility management.

TABLE 1

Strategy Criteria: Smart Building Energy Analytics Market-Specific Definitions

Strategy Criteria	Subcriteria	Market-Specific Definition
Offering strategy	Functionality or offering road map	Strategy for enhancing visualization, analytics, and optimization capabilities of future versions of the product
	Delivery model	Strategy for delivery model execution and adaption to customers' shifting demands
	Portfolio strategy	Strategy for providing complimentary services and technologies including controls, automation, integration, enterprise applications, and demand response
	Range of services strategy	Strategy for implementation and support services
	Future integration strategy	Strategy for integration of HVAC, lighting controls, and automation as well as enterprise applications
Go-to-market strategy	Sales/distribution strategy	Strategy for distribution either through channel partners or direct to end users
	Marketing strategy	Strategy for all relevant facets of marketing (e.g., brand development, promotion, and demand generation) that matches where revenue is predicted to flow over the next five years
	Customer service strategy	Strategy for retaining customers and continuing to innovate in customer retention and service areas, with the implication that the company will be able to achieve the level of service and support demanded by customers over the next three years or as a low-cost provider and has a plan in place for customer service that will be universally embraced
Business strategy	Growth strategy	Management has a strong formula for growth for the company and one that aligns well with the market trends anticipated over the next two to three years. In addition, growth strategy will encompass plans for international market expansion.
	Innovation/R&D pace and productivity	The company's innovation model maximizes its potential to generate market value.
	Financial/funding model	The company's strategy for generating, attracting, and managing capital maximizes its potential for creating market value.

Source: IDC Energy Insights, 2011

TABLE 2

Capabilities Criteria: Smart Building Energy Analytics
Market-Specific Definitions

Capabilities Criteria	Subcriteria	Market-Specific Definition
Offering capabilities	Functionality/offering delivered	Smart Building Energy Analytics offer three main tools for building management: visualization; algorithms for analysis of energy consumption, building operations, and maintenance; and optimization metrics to identify and prioritize best practices
	Delivery model appropriateness and execution	The vendor has developed a delivery model that matches the appetite of the particular market segment targeted for its offering.
		The software component of a full Smart Building solution is a minority share of cost; however, vendors must still ensure their product remains in line with the competition.
	Portfolio benefits delivered	The vendor either provides controls, automation, and integration technologies and services in addition to analytics or has a network of partners to do so.
	Range of services	Implementation and support services
	Integration	Capability to integrate with automation and control systems, enterprise applications
Go-to-market capabilities		Pricing model — identification of customer preferences — SaaS, service, and so forth (In addition, any flexibility in configuration of contract models to approach different segments of the target market would be reflected in this subcriteria.)
	Sales/distribution structure, capabilities	Distribution approach either through channel partners or direct to end users
	Marketing	Marketing engagement approach with the targeted market segment
	Customer service	Approach to implementation and support services
Business capabilities	Growth strategy execution	Growth approach and execution for supporting entrance into the Smart Buildings market for commercial and industrial buildings
	Innovation/R&D pace and productivity	Innovation, R&D, and project-development approach
	Financial/funding management	Approach used to fund project development to date

Source: IDC Energy Insights, 2011

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Criteria Weightings and Rationale

The IDC MarketScape tool pulls the scores inputted for each of the subcriteria into an extensive macro that computes the results using weights designed to reflect the relative importance of one criterion or subcriterion over another. Market-specific conditions and understanding provided the rationale for the particular weights illustrated in Table 3.

Unlike the list of criteria and their market-specific definitions, the weight attached to each subcriterion was not disclosed to vendor participants to mitigate any influence the weighting rationale could have on vendor responses to the IDC MarketScape questionnaire.

TABLE 3

Strategy and Capabilities Criteria Weightings for Smart Building Energy Analytics Vendors

	Subcriteria	Weighting
Strategy criteria		
Offering strategy	Functionality or offering road map	4.75
	Delivery model	0.25
	Portfolio strategy	2.00
	Range of services strategy	1.00
	Future integration strategy	2.00
Offering strategy total		10.00
Go-to-market strategy	Sales/distribution strategy	2.00
	Marketing strategy	3.00
	Customer service strategy	5.00
Go-to-market strategy total		10.00
Business strategy	Growth strategy	5.00
	Innovation/R&D pace and productivity	3.00
	Financial/funding model	2.00
Business strategy total		10.00

TABLE 3

Strategy and Capabilities Criteria Weightings for Smart Building Energy Analytics Vendors

	Subcriteria	Weighting
Capabilities criteria		
Offering capabilities	Functionality/offering delivered	5.00
	Delivery model appropriateness and execution	0.25
	Portfolio benefits delivered	1.00
	Range of services	3.00
	Integration	0.75
Offering capabilities total		10.00
Go-to-market capabilities	Sales/distribution structure, capabilities	2.00
	Marketing	3.00
	Customer service	5.00
Go-to-market capabilities total		10.00
Business capabilities	Growth strategy execution	4.00
	Innovation/R&D pace and productivity	5.00
	Financial/funding management	1.00
Business capabilities total		10.00

Source: IDC Energy Insights, 2011

FUTURE OUTLOOK

IDC MarketScape Smart Building Energy Analytics Market Vendor Assessment

The IDC MarketScape graph in Figure 1 illustrates the results of the IDC MarketScape study. It is worth noting that the size of the bubble represents IDC Energy Insights' market share model.

IDC Energy Insights utilized square footage, number of customers, or revenue data to inform a model for calculating market share. These numbers reflect the position of the vendor today and do not reflect the

market penetration for new acquisitions, partner solutions, or customer/project pipelines.

FIGURE 1

IDC MarketScape: Smart Building Energy Analytics Vendor Assessment
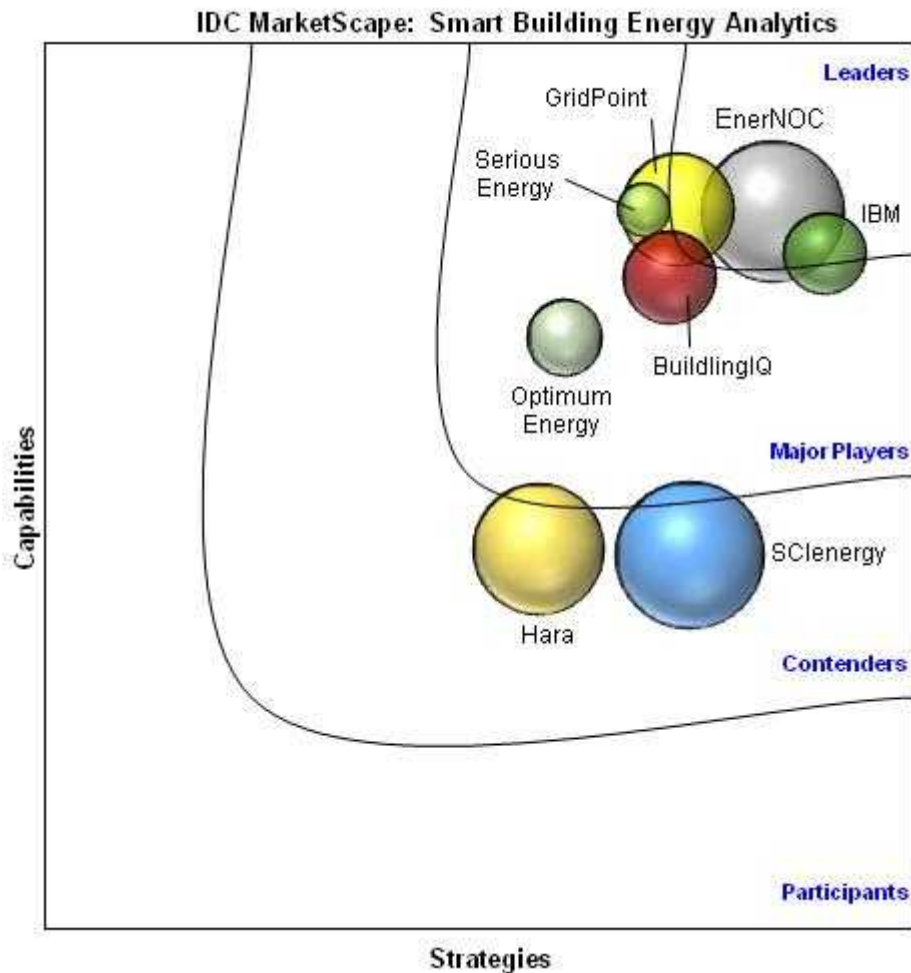
Source: IDC Energy Insights, 2011

Solution and Business Differentiators

The Smart Building Energy Analytics marketplace is ripe with activity from acquisitions to partnerships and alliances to venture capital commitments in start-ups. It is increasingly evident there is significant and growing demand for Smart Building Energy Analytics that can provide cost-effective data management to support more sophisticated facilities management. Energy efficiency and operational

improvements can support not only budgetary goals but also strategic sustainability and corporate social responsibility goals. As a result of the growing number of stakeholders involved in the process, implementing and maintaining an energy management program is becoming an increasingly complex process. Effective Smart Building Energy Analytics enable all stakeholders to ensure their particular goals can be achieved without sacrificing the goals of other business units. The key differentiators for the major players in this market are tied to the functionality and services that most effectively promote sophisticated or "smart" facility operations and maintenance.

Functionality: Visualization, Analytics, and Optimization

The functionality of the Smart Building Energy Analytics solution is characterized by visualization, analytics, and optimization design. The functionality of Smart Building Energy Analytics is a particularly important driver in the evolution of facility management because it provides the visibility and control to optimize building and asset performance for improved energy efficiency.

Customizable dashboards have emerged as the template user interface to meet the demand for data visualization to display the relevant, and often disparate, data for each stakeholder in the smart building management effort. Visualization tools are often one-click configurable by the user to provide greater flexibility for demonstrating the results of energy management efforts for various business objectives. Dashboards are a fairly commoditized aspect of Smart Building Energy Analytics at this point, and where the functionality splits between solutions is in the analytics and optimization capabilities and strategies.

The sophistication of the analytics underlying the energy management software solutions can differentiate one solution over another. Automation and controls are defining characteristics of intelligence in the spectrum "smarts" in this new field of facility management. As a result, the more sophisticated the underlying analytics, the greater the automation and control for energy management. The strength of particular vendors lies in the proprietary algorithms that drive HVAC controls to maximize energy efficiency efforts.

Optimization is also a priority when keeping the idea of automation and control in mind as an indication of intelligence in Smart Buildings. The capacity to identify, prioritize, and monitor action items related to the user's energy management goals can vary quite significantly. The functionality of the vendors' solutions for optimization ranges from data aggregation for work order tracking to adaptive, real-time automation and control of energy consuming assets within a facility.

It is possible to envision a spectrum of sophistication in energy management that drives a facility to a Smart Building. The top rungs

on this sort of intelligence later tie directly to optimization. Real-time adaptation through control of facility assets will enable the most sophisticated optimization of a building and produce a facility that is truly intelligent and reactive to external and internal changes in occupancy, weather, energy prices, and/or demand signals. Facility managers, IT staff, and the C-suite will cooperate and leverage Smart Building Energy Analytics solutions to effectively manage these most sophisticated and optimized facilities.

Services

Both the implementation and the support components of the vendors' service offering were evaluated to determine the market success of each vendor relative to customer service. Service was another area in which particular vendors differentiated themselves.

Implementation and support services range from online or phone remote services to onsite vendor support services to facilitate energy management programs. Smart Building energy management reflects a convergence of business and corporate strategies that bring a suite of drivers and demands under an umbrella of energy efficiency. As a result, energy management platforms can be onerous to implement, and the services component of the most sophisticated Smart Building Energy Analytics solution can bring together the various stakeholders to ease the process of improving energy and operational efficiency by facilitating collaboration in executing energy or operational changes.

Vendor Summary Analysis

The profiles discussed in the sections that follow highlight key attributes of each vendor and solution as well as leading indications of their position relative to their competition in this study.

BuildingIQ

BuildingIQ is ranked as a Major Player in this IDC MarketScape. It provides software that forecasts energy requirements to provide continuous optimization of building operations as one of a suite of Smart Building solutions designed around HVAC optimization. The software available today drives "intelligent" control of building HVAC systems. BuildingIQ's Smart Building Energy Analytics solutions include energy management and supervisory applications for report generation, analytics and benchmarking, energy optimization, and demand response. The company defines its uniqueness as "PEAC Energy Optimization," an acronym for its solution checklist that provides predictive, economics aware, automatic, and continuous facility optimization.

BuildingIQ can only be deployed in buildings with building management systems in place. The proactive management and control

of HVAC assets differentiate this vendor's solution, and as a result, this is not an Energy Analytics option available for use with less granular data pulled from revenue meters or utility bills.

The defining characteristic of BuildingIQ is the intellectual property developed by Australian national labs. This proprietary algorithm optimizes building energy performance by forecasting energy loads for early fault detection and by providing adaptive control of the BMS.

One unique differentiator of BuildingIQ is the ComfortIQ solution managed through the energy services network operating center. This application ensures the steps taken to optimize the BMS do not prohibitively impact building tenants using the ASHRAE 55 comfort model as a guideline. The validation and management of tenant comfort is a valuable aspect of the solution due to the persistent priority for tenant comfort in commercial and industrial buildings.

Furthermore, BuildingIQ recognizes that security is of paramount concern and has designed the BuildingIQ solution with this in mind, employing SSL communications plus proprietary data encryption, central server on secure, and high-availability hardware hosted by industry-leading cloud computing infrastructure provider.

EnerNOC

EnerNOC is ranked as a Leader in this IDC MarketScape. EfficiencySMART is the integrated software and services solution offered by EnerNOC, which utilizes building interval data to generate an ongoing list of energy optimization action items that can be prioritized, acted upon, and tracked with hands-on support from EnerNOC personnel. The solution suite includes EfficiencySMART Commissioning, Insight, and Services.

The services aspect of the EnerNOC solution is the key differentiator of the solution. EnerNOC has purposefully deferred from including controls as an aspect of its energy management solution in support of a fundamental vision for supporting existing facility personnel's management of building assets. The solution provides enterprisewide insight, continuous commissioning, project identification, and prioritization as a result of the analytics and energy management consultation. Each month, clients receive a "scorecard" of their building(s)' performance quantified in dollars, kilowatt hours, or GHG emissions derived from a continuous stream of 15 minute interval data. Leveraging the demand response backbone of EfficiencySMART, EnerNOC employs rule-based analytics.

Another key differentiator for EnerNOC from the business strategy perspective is the capacity to leverage an existing client base as a go-to-market strategy. EnerNOC can use the relationship built with the

company's large commercial and industrial demand response customer base to enter new contracts for its EfficiencySMART solution.

GridPoint

GridPoint Energy Management System is ranked as a Leader in this IDC MarketScape. It is a comprehensive enterprise application. The Smart Building Energy Analytics rely on a submeter network to derive lighting and HVAC energy load data. GridPoint Energy Manager is the user interface dashboard that generates reports, alarms, and energy project recommendations.

The GridPoint Energy Manager is a cloud-based analytics platform that drives energy savings through active control of a facility's energy consuming assets. The dashboard is a fully configurable interface. The user can access real-time energy-consumption data that is pulled from a network of GridPoint sensors and meters. Users can change the control setting to optimize the building performance for their particular goals by continuously using the "Dynamic Energy Diagnostics."

GridPoint differentiates itself by providing the hardware and software for proactive control of the energy consuming assets in a building. The control framework is the fundamental design aspect of the solution.

Where GridPoint truly steps aside from other Smart Building Energy Analytics solution is in the company's go-to-market strategy. First, while the solution is scalable for large buildings, GridPoint is striving to fill the gap in the market for small and midsize buildings generally part of a retail portfolio. Second, the GridPoint solution is offered in two tiers of hardware, software, and services configurations to meet the specific needs of particular market segments. Similar to some of the other vendors in this space, this Energy Analytics application is just one component of a suite of solutions GridPoint offers, which also include electric vehicle management and solar energy.

Hara

Hara Environmental and Energy Management is ranked as a Contender in this IDC MarketScape. It is a cloud-based software Smart Building Energy Analytics solution. There are five applications in the solution: Discover, Plan, Act, Innovate, and Value Chain. The key strength of the software is the capacity to consolidate building data across an enterprise into a single platform.

Hara's applications help users identify and prioritize energy-reduction opportunities, define targets, set caps on consumption, and track progress toward energy and environmental management goals. This is not a control solution and is scalable to large or small buildings because it does not rely on a sensor or submeter network.

Hara has been very successful in its go-to-market strategy. The company has aligned an extensive partner network including PricewaterhouseCoopers, URS, and HP. In addition, Hara has leveraged its implementation and advisory services to acquire 50 major customers with over 215,000 facilities in 97 countries.

IBM

On March 22, 2011, IBM announced the acquisition of TRIRIGA, a provider of facility and real estate management software. The acquisition added significant momentum to IBM's Smarter Buildings campaign that kicked off in 2009 with the launch of the Green Sigma Coalition. IBM is ranked as a Leader in this IDC MarketScape.

The analysis of the IBM solution is based on the analysis of the functionality of TRIRIGA TREES today and the strategy for an integrated Smart Building Energy Analytics solution under development. The primary differentiator of the IBM solution is the capacity to aggregate, analyze, and synthesize the data across a portfolio of buildings with disparate building management systems. Furthermore, the solution provides complete integration of energy analytics with facilities work management systems in a single solution to enable real-time energy alerts that direct actions to realize energy savings.

Key strengths of the solution tie to the business acumen of IBM. The marketing, sales and distribution, and services offering of IBM simply dwarf the budget and capabilities of other vendors in the space. IBM will leverage the extensive marketing reach of the Smarter Planet campaign to publicize the new Smart Building Energy Analytics solution. IBM Global Services can support the implementation and utilization of the new solution, and the extensive partner network of systems integrators will push the new application into the field.

The functionality of the Smarter Building solution will focus on facility management from a logistical perspective by streamlining work order management, providing transparency in data aggregation for a clear audit trail, and providing an enterprise view of energy management.

The solution does not, however, provide controls for building systems. In addition, the Smarter Building solution will not scale down to small buildings. The solution is most applicable and valuable to large enterprises that can utilize the comprehensive view of their assets through the solution.

Optimum Energy

Optimum Energy is ranked as a Major Player in this IDC MarketScape. It is an intelligent HVAC control solution. The major

strength of this solution is the control and optimization functionality. OptimumMVM is the Smart Building Energy Analytics solution that overlays the system to provide visibility and management of the controls for the user.

The Optimum solution relies on a network of meters throughout the HVAC system to track the flow of chill water and to monitor and control equipment based on operating efficiencies. The data runs through the building automation system and then into the cloud-based analytics layer.

A key differentiator for Optimum Energy is the equipment data embedded in the analytics layer. Optimum has accumulated 150 years of HVAC equipment operational data into the system to support the analytics of the operation of any particular HVAC system.

The proprietary HVAC control algorithms are based on relational control methodologies for power-based speed controls to optimize HVAC operational efficiency. The solution calculates the relationship between cooling tower fans, condenser pumps, chillers, and AHU fans for adaptive, continuous improvement of system performance.

In January, Optimum announced the solution will now be an integrated component of Johnson Controls' Central Plant Optimization 30 (CPO 30) solution. This is a significant partnership that holds potential for substantial market growth for Optimum Energy.

Serious Energy

Serious Energy is ranked as a Major Player in this IDC MarketScape. Serious Energy's SeriousEnergy Manager is a Smart Building Energy Analytics solution that provides monitoring, analytics, and control of energy consuming assets within a facility. The suite of applications combines energy analytics and control to promote behavioral change, monitoring and tracking energy and operational cost reductions, and improvements in operations and maintenance.

Proprietary algorithms drive "adaptive learning" for energy management, and the user interface includes spectral analysis or heat map efficiency analyzer for identifying and prioritizing project opportunities. The solution provides persistent commissioning that maintains the energy consuming assets within the facility to optimize operations and improve energy efficiency.

SeriousEnergy Manager also generates Saving Opportunity Reports that itemize opportunities for energy improvement measures, quantifies energy waste, and enables user-configured energy performance reports for communicating building performance relative to customized KPIs within a building or across a portfolio.

One key differentiator for Serious Energy is Serious Capital. Customers can utilize this financing for the material energy efficiency improvements provided by Serious Energy. Serious Energy Manager then tracks the savings to generate payments for energy efficiency investments, thereby overcoming the often insurmountable up-front cost of these capital investments. Serious Capital provides guaranteed savings of a performance contracting model.

SCIenergy (Formerly Scientific Conservation)

On August 29, 2011, Scientific Conservation and Servidyne announced the completion of a merger and a new solution provider branded SCIenergy Inc. SCIenergy is ranked as a Contender in this IDC MarketScape. The new solution will leverage key strengths from the former SCIwatch solution as well as the engineering services expertise of Servidyne. IDC Energy Insights recognizes the product evolution this merger and rebrand represent, and the changes are reflected in the strategy scores. The SCIwatch solution was assessed for this analysis to determine the capabilities scores.

SCIwatch was the branded Smart Building Energy Analytics from Scientific Conservation that provides predictive analytics for energy management. The Web-based software interface provides users with daily work order management and quantifies the cost of operational faults based on the estimation of excess energy costs.

SCIwatch leverages internal facility data and external price and weather data for use by the proprietary neural networks' artificial intelligence that predicts system faults. The solution drives "just in time" maintenance for improved operational efficiency by automating data collection and providing data warehousing, diagnostics, and work order issuance and management. SCIwatch interfaces with facility BMS but does not provide automation or control for energy management.

The SCIenergy solution will leverage the energy management analytics of SCIwatch and Servidyne's engineering services expertise including lighting upgrades and retrofits, retro-commissioning, LEED consulting, ENERGY STAR labeling, and demand response. The merger will significantly alter the previous service offerings of SCIwatch and broaden the energy savings potential with the new solution.

ESSENTIAL GUIDANCE

Actions to Consider

End Users

- Smart Building Energy Analytics should be used to enable collaboration between building managers, information technology personnel, and the C-suite on achieving a wide array of corporate social responsibility, sustainability, and budgetary goals by bringing a new level of transparency and control over energy consumption.

- There is a wide array of solutions available in the market, and a clear understanding of end users' particular needs for functionality and services must be used to drive the most effective investment. For example, a facility manager who has determined HVAC efficiency improvements will help him achieve cost reductions necessary to meet new budgetary goals would benefit from a Smart Building Energy Analytics solution that enables automation and control. On the other hand, a team that has identified corporatewide sustainability goals may find a Smart Building Energy Analytics solution with strong portfolio benefits including facility management applications and other complementary enterprise analytics most suitable. The bottom line is that end users must evaluate their goals and determine the appropriate scope of data analysis and level of control of their facility they want to transfer to third-party software and services providers.

- The particular configuration of end users' facilities must also be used to determine which solution is most applicable from integration and scalability perspectives, based on the existence or the sophistication of a building management system and sensor/submeter networks.

Vendors

- This IDC MarketScape highlights particular metrics for market success as defined by IDC Energy Insights. The comparison of any solution and business against these metrics will provide an objective review of the current capabilities as well as strategies for future product developments.

- IDC Energy Insights has also provided a definition of a Smart Building and the vision of the evolution in facilities management supported by Smart Building Energy Analytics. An internal review of a solution and business model against these definitions and the differentiators of the various vendors may provide a platform for discussion around business and product road maps.

LEARN MORE

IDC Energy Insights has published a series of Smart Buildings reports as part of the distributed energy strategies research program. The reports mentioned in the section that follows provide complementary information to this IDC MarketScape study.

Related Research

- *Perspective: Automated Demand Response — Taking DR to the Next Level* (IDC Energy Insights #EI228887, June 2011)

- *Technology Selection: Smart Buildings Global Market Forecast 2010–2015* (IDC Energy Insights #EI227827, April 2011)

- *Business Strategy: Smart Building Systems Challenges and Opportunities* (IDC Energy Insights #EI227915, April 2011)

- *Perspective: Schneider Electric's Le Hive Is a Test Bed for Smart Building Technologies* (IDC Energy Insights #EI226721, February 2011)

Synopsis

This IDC Energy Insights report evaluates eight influential vendors to highlight the particular strengths and weaknesses of their solutions and business models. Smart Building Energy Analytics are a cornerstone of the next-generation commercial and industrial facility that brings heightened visibility into operations and maintenance to enable sophisticated optimization to meet energy management goals.

"The Smart Building Energy Analytics market will continue to mature and evolve in the near term. Energy has transferred from a fixed to a variable cost of facility management, and as a result, Smart Building Energy Analytics are increasingly becoming valuable investments as facility managers and owners look for cost-effective, innovative solutions to drive down costs and achieve corporate goals tied to energy management," says Casey Talon, research analyst, Distributed Energy Strategies.

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