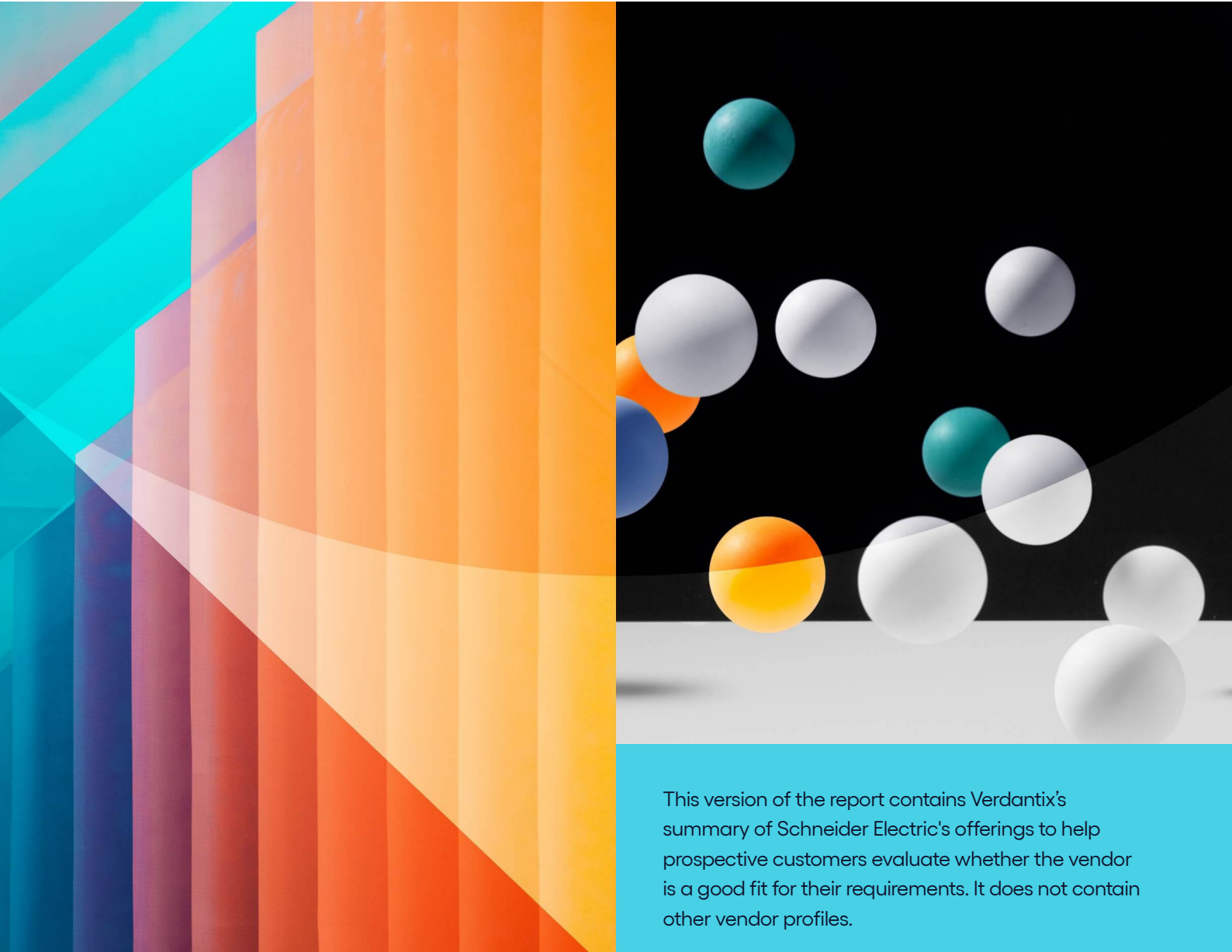


Smart Buildings

# Green Quadrant: Energy Management Software 2023

By Harry Wilson  
With Claire Stephens

December 2023



This version of the report contains Verdantix's summary of Schneider Electric's offerings to help prospective customers evaluate whether the vendor is a good fit for their requirements. It does not contain other vendor profiles.



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This report provides a detailed, fact-based comparison of the most prominent energy management software (EMS) vendors in the market today. Based on the proprietary Verdantix Green Quadrant methodology, our analysis encompasses one-and-a-half-hour live product demonstrations – with scenarios designed to showcase assessed functionality – and considers vendor responses to a 66-point questionnaire covering five technical, six functional and eight market momentum categories. We also conducted interviews with a global range of corporate EMS users and reviewed the data from our 2023 global survey of 303 real estate executives. Our analysis reveals a dynamic landscape, with customers looking to extend deployments, while vendors are pushing their solutions forward by incorporating greater levels of analytics – in particular those generated and processed by AI. In addition, vendors are working on different models of business support for implementing and running their solutions on behalf of customers as part of a managed services offering. The analysis finds that all solutions assessed offer a powerful energy management solution to their target customer base. Of the solutions assessed, the following eight vendors placed in the Leaders’ Quadrant: Bueno, EnergyCAP, Honeywell, Johnson Controls, MRI Software, Schneider Electric, Siemens and Spacewell. Beyond these eight firms, the analysis finds strong capabilities in all providers included, with models and capability sets that are narrower but still well-suited to their target customers’ needs.

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## Organizations mentioned

ABB, Accruent, Airbus, AMF Fastigheter, Asset Plus, AutoGrid, Automated Logic, Boeing, Boston Scientific, BrainBox AI, Brightly Software, British Land, Bueno, Canadian Department of National Defence, Carrefour, Carrier, Centrica, Chartered Institution of Building Services Engineers, Cloudfm, Co-op, Cushman & Wakefield, Cylon Controls, Dankse Shoppingcentre, Derwent London, Dexma, DFS, Dodge Industrial, Duke Energy Sustainable Solutions, EcoEnergy Insights, Ecopilot, Enel, Enel X, EnergyCAP, ENERGY STAR, EnerNOC, eSight Energy, Facilio, FM:Systems, FogHorn, Fortive, Gatwick Airport, General Dynamics, Glenwood Management, Greenergy Data Centers, Green Pea, GridPoint, Honeywell, IBM, Intellex, Intel India, JLL, Johnson Controls, Kangsheng Data Center, Kansas State University, Marriott International, Melbourne Cricket Ground, Mitie, Modbus, Morgan State University, MQTT, MRI Software, NABERS, Nemetschek Group, Nordomatic, OPPO, Park Holidays, PepsiCo, Pfizer, Planon, Redaptive, Robert Dyas, Sabroe, Saint-Gobain, Schneider Electric, Seoul National University, ServiceChannel, Siemens, Sobeys, Spacewell, Spica Technologies, Standard Chartered, Stanford University, Switch Automation, Target, Tempered Networks, UK Green Building Council, Urjanet, US Department of State, US Securities and Exchange Commission (SEC), UTC, Veolia, Walgreens, Wattics, Wendy's, Woolworths, York, Zenatix.

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# The state of the energy management software market

Over the past fifteen years, the market landscape for building energy management software (EMS) has gone through dramatic shifts. Energy management is firmly at the forefront of real estate executives' minds in a time of volatile energy prices and sustainability-related regulatory pressures. Coupled with new asset-specific realities, such as the continued presence of hybrid working policies and low office utilization or the expansion of healthcare facilities, executives are finding themselves under substantial financial and environmental pressures to ensure they are operating facilities efficiently and not wasting resources.

This report provides guidance for senior executives and decision-makers, including CFOs, Chief Sustainability Officers, Directors of Energy, Facilities and Real Estate, and Heads of Procurement. It helps those in industries such as banking, business services, healthcare, hotels and leisure, insurance, media and retail to select a software supplier to assist in managing their firm's energy supply, consumption and cost, from the office building to the enterprise level. These industries utilize multiple asset types, including commercial real estate, healthcare, hospitality, industrial and technology. Key questions covered in this analysis include:

- **What software applications are available in the market today to help achieve my firm's energy-related business objectives?**
- **Which energy management software applications are best suited to my organization's building portfolio?**
- **Which suppliers lead the market for building energy management software?**
- **What criteria should I use to shortlist suppliers of building energy management software?**

To answer these questions, Verdantix assessed the leading 15 EMS suppliers using a 66-point questionnaire; defined six usage scenarios for various user personas as the basis of one-and-a-half-hour live product demonstrations; and interviewed corporate EMS users. In addition, we leveraged our annual survey of 303 real estate decision-makers to validate buyers' motivators and priorities.

Of the 15 providers included in the analysis, Accruent, Bueno, Carrier, EnergyCAP, Facilio, GridPoint, Honeywell, Johnson Controls, MRI Software, Nordomatic (Spica), Schneider Electric, Siemens and Spacewell proactively participated in the study, with complete responses to the questionnaire and full product demos. ABB and Enel X were invited to participate but did not respond, as such their scoring has been completed based on extensive research of publicly available information.

Other vendors are also present in the market – Verdantix estimates there are currently hundreds of firms operating within the building energy management space – and have been reviewed at various times by Verdantix. AutoGrid was invited to participate, but declined due to acquisition by Schneider Electric and subsequent consolidation of functionality into Schneider's offering. IBM was invited to participate, but declined due to the positioning of its solution Envizi as an ESG management tool rather than a building energy management offering. Switch Automation was invited to participate, but declined.

The resulting analysis is based on the proprietary Verdantix Green Quadrant methodology, which provides a quantified, evidence-based and objective assessment of vendors of a comparable product or service.

## Energy shocks and sustainability put EMS back on the agenda

The energy management market has been somewhat cyclical over the last 15 years, in correlation with fluctuations in energy prices and perceptions of the importance of energy (see [Verdantix New Strategies For Corporate Energy Management](#)). Historically, where energy prices have risen, energy management investment and adoption have followed suit. We are currently in an upward cycle, driven by:



- **Geopolitical events causing volatility in energy prices.**

Lingering COVID-19 disruption in conjunction with the Russian invasion of Ukraine drove energy prices to record highs in 2022, and the Israel-Hamas conflict of late has done little to quell energy woes. In the upcoming 2023 Verdantix smart buildings global corporate survey, 62% of real estate executives indicated that volatile pricing is having a significant to moderate impact on their real estate strategy. In the 12-month period October 2022 – October 2023, the Henry Hub Natural Gas front month futures price has varied from a low of \$1.94 per million Btu (MMBtu) to a high of \$7.60 per MMBtu, motivating firms to adopt energy management solutions to identify superfluous consumption and limit risk exposure.

- **Firms looking to weather economic uncertainty.**

The role of the office post-pandemic is still uncertain: low office utilization is driving down valuations on a global scale (see [Verdantix Market Insight: The Commercial Real Estate Market In Turmoil](#)). Coupled with inflationary pressures and central bank interventions – 80% of global corporate survey respondents indicated inflation was impacting real estate strategy in some way – firms are prioritizing cost efficiencies across operations wherever possible, which in turn drives EMS adoption. On the other hand, other asset types are thriving; growth in healthcare and life science facilities contrasts the relative demise of the office.

- **Sustainability pressures from both legislators and occupants.**

Upcoming ESG regulations mandate emissions reporting. With facility energy consumption being the primary source of emissions for many firms, executives are looking for solutions to calculate and report on energy-related emissions and provide strategic interventions and guidance to reduce them (see [Verdantix Strategic Focus: Responding To ESG Disclosure Requirements In Real Estate](#)). The EU Corporate Sustainability Reporting Directive (CSRD) is set to come into effect in 2024, and the US Securities and Exchange Commission (SEC) climate disclosure rule – although delayed – is not going to disappear. This legislative pressure is combined with employee pressure. A [KPMG survey](#) of 6,000 adult workers in the UK found that 46% want their employer to demonstrate an ESG commitment and 20% have turned down employment offers due to subpar employer ESG commitments.

- **Net zero targets and commitments being announced en masse.**

Public and private businesses alike are establishing net zero targets and decarbonization strategies. Of the global firms assessed in the [Verdantix Climate Benchmark](#), 78% were found to have disclosed plans to achieve net zero emissions by 2050. Decarbonization is only effective when organizations are aware of their current carbon emissions; EMS offers building occupiers insights into their energy (and resultingly, carbon) consumption, and allows them to track and manage decarbonization projects over time. Through interviews with EMS buyers, Verdantix found that solution adoption closely followed commitment announcements – despite such a high proportion of firms disclosing goals to achieve net zero, only 25% were found to have a meaningful plan to achieve their targets. It is evident that organizations are turning to EMS as a result of top-down sustainability ambition.

## EMS is a different beast than 15 years ago

With energy management coming back to the forefront of executives' minds, vendors have sought to develop their offerings with deeper and richer functionality to capitalize on the next wave of customer spending. While EMS is a 'old' category, with a significant investment boom 15 years ago, the market restructured in the mid-2010s under the influence of cheap energy (see **Figure 1**). Most vendors had to change strategies, either selling out to large groups or pivoting to building internet of things (IoT) solutions (see [Verdantix The Future Of The Building Energy Management Software Market](#)).



Figure 1

The evolution of the EMS market

TIMELINE		2010-2015	2016-2021	2022-2025	2025 ONWARDS
CUSTOMERS	ENERGY PRICES	High and rising energy prices	Generally low energy prices	Return of high prices and high volatility due to ongoing geopolitical conflicts	Unknown and unpredictable path for prices presents uncertainty for customers
	CARBON	First wave of carbon reporting led by sustainability orientated firms	Voluntary carbon reporting by an increasing number of firms	Introduction of voluntary and mandatory regimes for net zero transition	Carbon compliance regulations take effect
	ROLE OF ENERGY IN PORTFOLIO OPTIMIZATION	Energy managed in silos	Shift to managing assets/space/ productivity	Energy managed in the context of asset optimization/hybrid working/wellbeing and employee conditions	Broader view of energy management including DERs/ grid interactivity. Refined EM based on improved data and OT control
VENDORS	INVESTMENT	First wave of investment	Investment shifts from energy to IoT solutions	Investment driven by new technologies – AI, cloud BMS, digital twins, IT/OT convergence, ML	Investment tied to path of energy prices and PE cycle
	FUNCTIONALITY DEVELOPMENT	Focus on 'core' EM solutions – M&T, bill management, visualization and dashboards	Expansion of 'core' functionality into asset insights and control. IoT data ingestion	Carbon management resurgence	Management of decentralized energy and grid interactivity, EV charging, time-of-use optimization
	MARKET STRUCTURE	Lots of new entrants with large amounts of capital	Market consolidation, IoT players come to the fore	Targeted acquisitions to enrich functionality. Niche entrants continue to emerge	Ongoing consolidation with few EMS specialists

Source: Verdantix analysis

As we look at the market and ask what EMS comprises of in 2023, executives need to be aware that:

- **EMS works to a broader scope than before.**

As vendors pivoted their way through the lean years of the EMS market landscape, they invested in IoT capabilities, better interfacing with asset management and control solutions, such as computerized maintenance management systems (CMMSs) featuring automatic fault detection and diagnosis (FDD) functionality. Verdantix defines a true end-to-end energy management offering as one that can provide customers with a solution across all six functional criteria assessed in this report (see **Figure 2**).

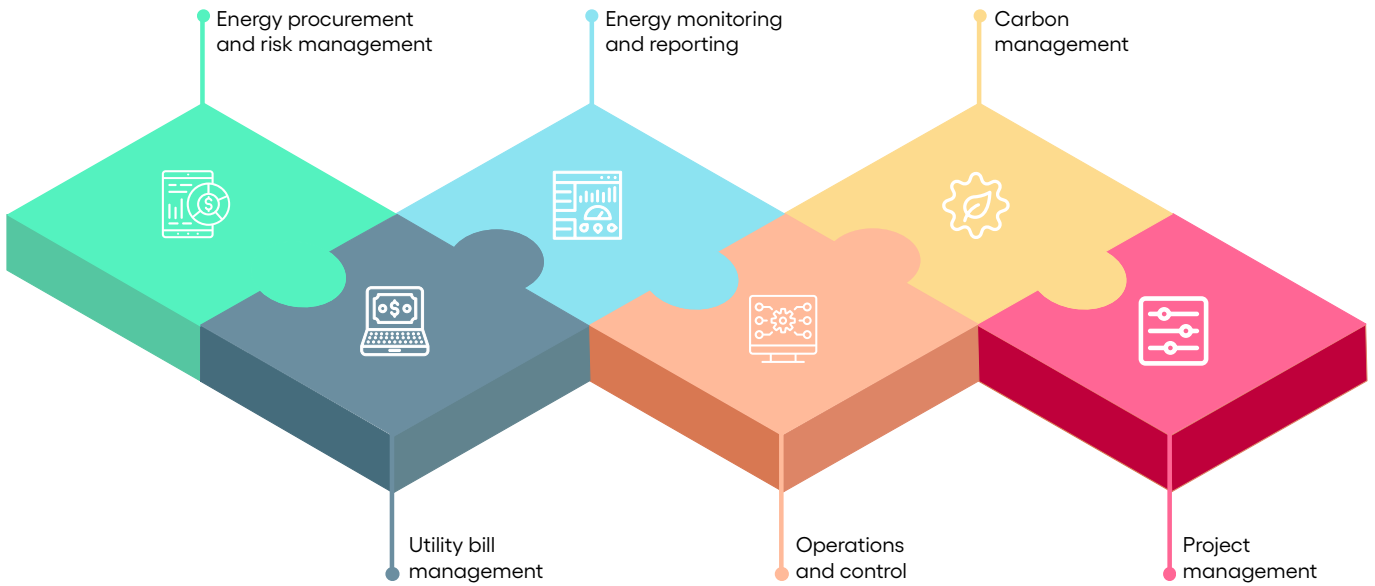
- **Firms have enriched their offerings with deeper functionality.**

The traditional core of EMS may not have changed in the last 15 years, but the functionality contained within it has become richer. Data collection enhancements have been prioritized to increase ease of use, with firms incorporating technologies such as natural language processing (NLP) for automatic utility bill ingestion and near-agnostic building management system (BMS) connectors to access existing siloed data. Coupled with machine learning (ML) powered demand and consumption forecasting, solutions in the market today offer far greater capabilities than their predecessors.



Figure 2

## The six functionalities of energy management software



Source: Verdantix analysis

- **Managed services have unlocked greater energy reductions.**

Service offerings are common in the market, providing bespoke energy solutions to customers. Firms such as Enel X and Siemens offer procurement and on-site distributed energy resources (DER) management services delivered by in-house consultants, presenting outcomes to users through the software. Schneider Electric has dramatically expanded its services through the customer life cycle (see [Verdantix Schneider Electric: Tackling The Broader Building Decarbonization Landscape At Scale](#)). Enel X also offers targeted investment planning for energy efficiency upgrades, including equipment procurement services, while Redaptive (an energy-as-a-service provider that Honeywell possesses a minority stake in) and Johnson Controls both offer equipment upgrade financing and management solutions.

- **Traditional building technology manufacturers are now software-focused digital solution providers.**

Traditional hardware manufacturers such as ABB, Carrier and Johnson Controls have developed new software solutions with a greater focus on equipment integration and control capabilities. These late entrants to this mature software market have made heavy investments, as well as acquisitions, to enrich functionalities. Carrier acquired EcoEnergy Insights in 2017 to provide energy management solutions to customers and Johnson Controls, after entering the space in 2011 with Panoptix, has launched IoT platform OpenBlue and enriched its offering with the acquisitions of Asset Plus, FogHorn and Tempered Networks in the last two years.

- **Open systems have successfully overthrown proprietary protocols.**

Communication protocols used within building equipment and sensors have become standardized and shifted away from historic proprietary protocols. BMS communication protocols such as BACnet and Modbus replace manufacturer-specific variants from vendors such as Honeywell and Siemens. Thus, sensors for measurement of environmental conditions, such as temperature and indoor air quality (IAQ), now interact over the MQTT wireless standard. Interestingly, this has been driven more from a vendor's perspective than a customer's – vendors have been forced to innovate to ensure maximum compatibility with existing building hardware, and software solutions today feature application programming interfaces (APIs) for maximum interaction.





- **IoT has unlocked granular equipment data.**

The internet-of-things-driven advancements in sensor and metering connectivity has allowed for the acquisition, consolidation and analysis of building data at a granular level without the physical infrastructure upgrade required previously (see [Verdantix Smart Innovators: Sensor Devices For Smart Workplaces And Built Environments](#)). Vendors such as Cloudfm, Centrica's Panoramic Power and Nordomatic's Spica Technologies use electrical monitoring to gather and send harmonic and power data to cloud hosted solutions for out-of-hours analysis, as well as predictive failure identification (see [Verdantix Do You Hear The Equipment Sing?](#)).

## Energy management software will continue to evolve in the next five years

The highs and lows of the last 15 years have shaped the EMS market as it stands today. What does the future hold? In the next five years, we will see:

- **Broadening of strategies to fully incorporate carbon management.**

Carbon management will become even more important in the short term with upcoming ESG regulation. The capture of energy consumption data will remain of paramount importance, however technology roadmaps will prioritize carbon calculations based on emission factors rather than cost calculations using tariff data. Verdantix has conducted a parallel Green Quadrant benchmarking study on carbon management software (CMS) (see [Verdantix Green Quadrant: Enterprise Carbon Management Software 2023](#)), and only Schneider Electric spans both studies. Carbon management will be more prevalent for some industries than others, as well as certain geographies. EMS catered to the Nordic regions, where the electrical grid is low-carbon, has little incentive to develop this functionality, while offerings catering to carbon-intensive Australia or India will need to adapt fast. We note that, in the long run, we expect tidal shifts in businesses' approaches and priorities regarding energy and carbon (see [Verdantix Strategic Focus: Building Decarbonization And Energy Management Will Decouple And Transform Over 30 Years](#)).

- **Continued convergence of IT and OT.**

Operational technology (OT) connectivity to control and extract data from building equipment is present in EMS today. However, we will see this functionality improve with new unified operations platforms (UOPs) – which will provide real-time control and optimization based on energy, asset and occupant analysis – and a gradual shift in BMS to the cloud. Connectors that sit atop existing BMS are currently available, allowing for read and write, however there are limitations to this approach, including minimum interval write-back. Another problem to overcome in this next stage of IT/OT integration is cyber security concerns: malicious attackers must not be able to control and hijack building operations (see [Verdantix Best Practices: Enhancing Your Smart Building Cyber Security Programme](#)).

- **AI taking centre stage within building operations.**

AI allows for pattern recognition and dependency identification multiple times faster than human capability. When tasked with energy management, and provided with a large abundant data set from building sensors and equipment, an AI can identify abnormal consumption and predict future consumption based on multiple factors such as occupancy patterns, weather and space bookings. Some existing solutions – such as Bueno's Smart Building Analytics – harness the technology for data cleansing and estimation of missing data. For solutions new to market, the incorporation of these features is significantly easier than incorporating them into legacy systems. Established vendors have been forced to replace their existing offerings to incorporate AI tools at the platform level: Honeywell replaced Honeywell Energy Manager with Honeywell Forge's Carbon and Energy Management and Siemens's Building X has replaced its Navigator product. We will see the emergence of new products from both existing and new vendors over the coming five years as vendors seek to capitalize on the improvements AI can bring to alarm management, fault detection, user communication and forecasting (see [Verdantix The New Landscape Of Energy Management Software](#)).





- **Sustained funding for niche solutions.**

In our latest proptech investment analysis, Verdantix found that early stage funding for emerging EMS remains strong, particularly when the solution differentiates itself from existing offerings (see [Verdantix Market Insight: Commercial Proptech Investment Trends H2 2022-H2 2023](#)). In the coming five years, we will continue to see niche entrants catering to specific industries and applications come to market, alongside consolidation of these new entrants into existing large solutions.

## EMS buyers demand cost-effective solutions that also support their sustainability agendas

To establish a clear view of buyer's needs and priorities in a period of such high demand, Verdantix leveraged customer interviews with assessed firms in this Green Quadrant alongside extensive research of publicly available case studies and other information. This research was supplemented by insights from the 2023 Verdantix smart buildings global corporate survey.

### Energy management is back as a top priority for real estate decision-makers

Our research shows that energy management has re-emerged as a key priority for executives because:

- **EMS can support executives' decarbonization and operations optimization priorities.**

In the 2023 global survey, 45% of respondents rank either decarbonization or building operations optimization as their highest priority over the next three years (see **Figure 3**). EMS adoption unlocks these priorities, motivating solution adoption.

*"We needed [Vendor's] solution to help us with understanding our energy use across all our sites... decarbonization is a key company priority and we need to know what we consume to reduce it."*

- **Firms are looking to reduce exposure to volatile energy prices.**

Geopolitical conflict may be localized in geography, but the impact on energy markets – and consequently building managers – is felt on a global scale. Verdantix finds that executives are prioritizing the reduction of their exposure to rising prices, with 73% of survey respondents indicating that the matter is a medium to high priority over the coming year. These findings were enhanced by primary interviews, where buyers express difficulty in operational budgeting and a new need to limit unnecessary consumption.

*"The fluctuating energy prices have made budgeting difficult, we have had to reduce our consumption to limit spend."*

- **Sustainability data collection and reporting channel users towards EMS.**

The new sustainability agendas coming into focus worldwide mandate organizations capture accurate energy consumption for their real estate operations (see [Verdantix Best Practices: ESG Data Management For Real Estate](#)). Of the firms Verdantix surveyed, 91% report that they will be pursuing the collection and reporting of sustainability and ESG data over the next 12 months. In the US, where the implementation of the SEC climate disclosure rule is looming – albeit uncertainly – this number increases to 94% of respondents. In interviews with EMS software users, buyers report that EMS is essential to satisfying not only federal but also local and state requirements.

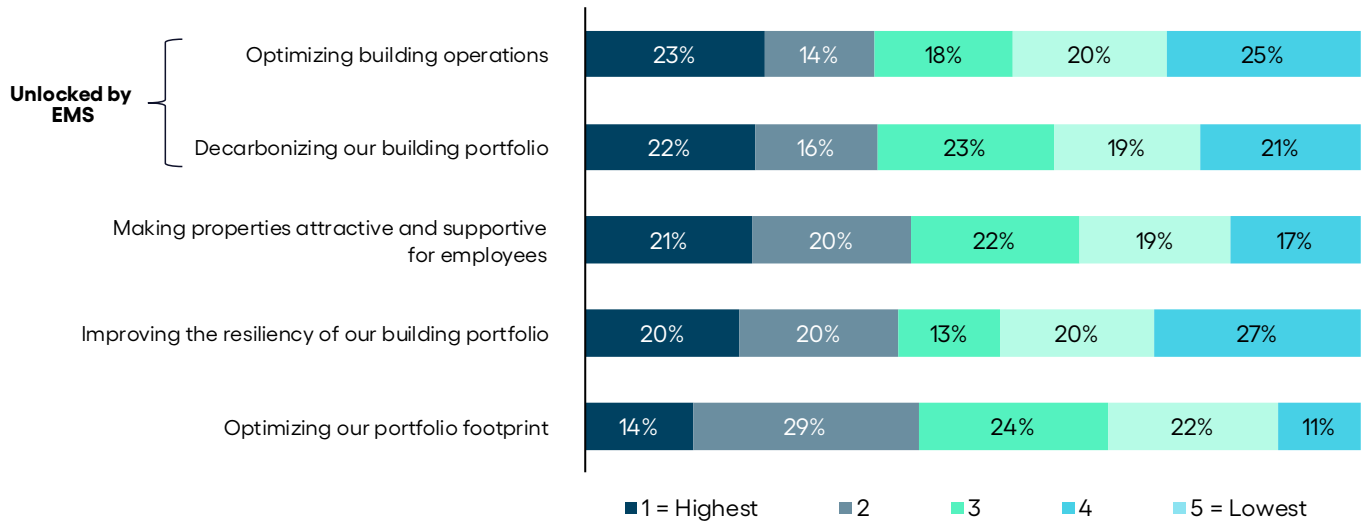
*"We are required by state legislators to submit energy consumption per building annually... it simply would not be possible without EMS."*



Figure 3

Real estate management priorities

Rank the following real estate management objectives by importance for your organization over the next three years.



Note: Data labels are rounded to zero decimal places.

Source: Verdantix 2023 Smart Buildings Global Corporate Survey

N=303

## Buyers plan to increase energy management solution investment

With energy management emerging as a key priority to reduce exposure to energy price volatility, cut costs and progress decarbonization plans, decision-makers are looking to increase spending. As such:

- **Investment in EMS remains strong as firms extend deployments.**

Energy management solutions are receiving continued investment from new and existing users. Verdantix data indicates 42% of real estate executives plan to invest in new energy management solutions or the expansion of existing deployments (see **Figure 4**). Of the 55% of respondents who report that they have no plans to invest at this time, 91% already have a solution in place. Through conversations with active users of the software, Verdantix finds typical deployment of solutions includes a trial set of facilities and, once this is successful, further investment is made. These deployments are often hindered by geographical borders; deployments across large regions are usually implemented country by country.

*“We have started with an initial trial of 300 sites, however we plan to widen this to cover our other facilities as soon as possible.”*

- **Firms are expecting to increase their use of EMS-related services contracts.**

While the expected response in a time of economic uncertainty is a general purse-tightening, 85% of executives in the Verdantix survey envision an increase in their use of energy efficiency and sustainability management service providers. None predict a decrease. Findings were similar for service providers covering building automation and occupant comfort, and asset monitoring and performance, with 54% and 57% of respondents respectively expecting utilization to increase (see **Figure 5**).

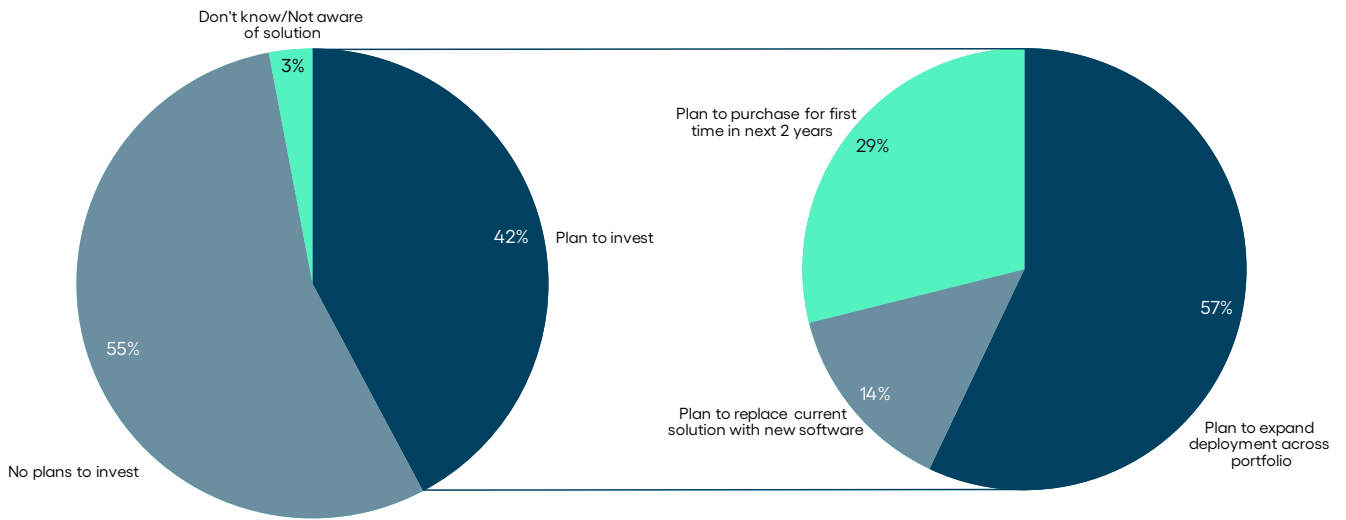
*“The managed services are essential... we couldn’t track our spend without their bill processing services, especially when we are so far removed from day-to-day building management.”*



Figure 4

### Energy management software investment plans

How do you expect your investment in energy management software to change?



Note: Data labels are rounded to zero decimal places.

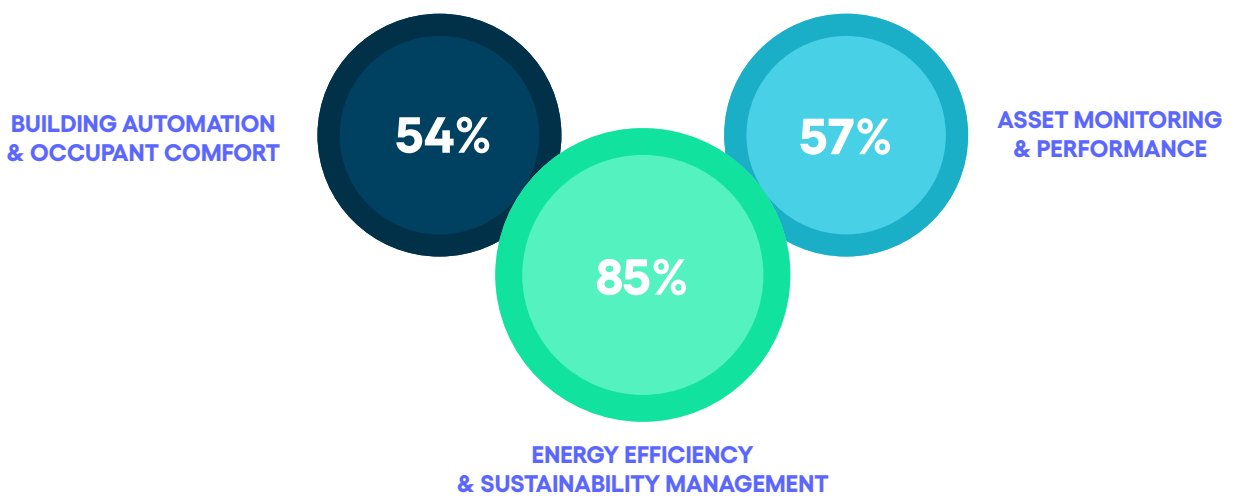
Source: Verdantix 2023 Smart Buildings Global Corporate Survey

N=303

Figure 5

### Executives expect use of service providers to increase for energy related activities

To what extent do you expect your use of service providers to increase for the following processes over the next 3 years?



Note: Data labels are rounded to zero decimal places, percentages reflect respondents that expect a "moderate" or "significant" increase to use levels.

Source: Verdantix 2023 Smart Buildings Global Corporate Survey

N=303



## Buyers prioritize open, integration-rich solutions

EMS must cater to buildings in use today, which feature a range of legacy equipment from varying manufacturers and, more often than not, occupants in place. Buildings are also equipped with a range of other software solutions – such as integrated workplace management systems (IWMS) and connected portfolio intelligence platforms (CPIP) – which allow for combined energy and space usage insights when integrated with EMS. Buyers demand:

- **Maximum integration with existing building equipment.**

Building equipment and cabling typically operates on a 20-year replacement cycle; the equipment represents a large capital expenditure for building owners and, as such, lifespan is extended as much as possible through maintenance. With existing buildings set to account for 80% of the building stock in use by 2050, according to [the UK Green Building Council](#), EMS must remain accommodating to a range of different equipment types of varying ages. Optimizing existing consumption, rather than optimizing consumption through more efficient equipment, reduces the investment required.

*"The key priority for us was a solution which could work with a range of equipment types and ages... we manage a collection of 2,000+ stores across America and it was important the equipment could work with whichever solution we chose."*

- **Little to no required physical infrastructure upgrade.**

Legacy BMS are still in use today, and even modern systems utilize serial and other outdated connections. Attempting to use this infrastructure to communicate with sensors, equipment and meters for anything more complex than simple commands or collection of periodic interval data is simply not feasible. Advancements in IoT technology and internet gateways have allowed for the connection of these outdated systems and assets to the cloud, and EMS vendors ensure that their solutions can sit atop existing systems with little to no physical upgrade required. While there is strong resistance to ripping out and replacing old equipment, the barrier is lower for implementing non-intrusive incremental hardware.

*"The solution's implementation was simple and sat atop our existing system... we were able to see insights at a level previously not possible within 2-3 months."*

- **Experienced vendors with a proven track record in their industry.**

The market is rich with a range of different solutions and buyers need certainty that their selected solution will deliver meaningful efficiencies to their operations. Certain solutions selected for analysis are targeted towards different industry verticals – EcoEnergy Insights (part of Carrier's Abound) is tailored directly to retail, and EnergyCAP has a proven track record serving higher education campuses. Interviewed firms indicate that they would both give recommendations to and expect recommendations from other organizations in their industry, and as such vendors should leverage their previous experience in dealing with customers' industries throughout any pre-sale commercial discussions.

*"We needed a vendor who spoke our language... the challenges of hospitality are unique and [Vendor] had a demonstratable track record of dealing with similar businesses. I would recommend [Vendor] to other firms in my sector."*



## Customers are figuring out how to best take advantage of the different service levels on offer

The widening of EMS functionality has been accompanied by managed services, increasing the number of service levels available to customers. Although these service-based models increase the efficiency improvements available to users, they also increase solution costs. Buyers:

- **Are fully aware solutions exist across a significant pricing spectrum.**

New innovative solutions are continuously coming to market and are challenging the historic players in energy management. Buyers speak of how they have seen new solutions emerging that offer similar solutions at lower price points. Vendors that offer managed services typically charge a higher price to cover the consulting teams, and often tie customers into a fixed duration contract with the strong incentive of guaranteed energy savings.

*“Competitive solutions are coming through which are a lot cheaper. [Vendor] needs to reevaluate their licensing fee and contract term or we may be forced to look elsewhere.”*

- **Need assistance in unlocking full solution capabilities.**

Corporate executives are only too aware of the limitations that can be posed by the lack of data availability from their estate. When vendors offer discrete packages across their complete solution, it can be difficult for customers to realize how they can use additional packages to further their energy management capabilities and cross-package functionality. This is particularly prevalent when customers utilize an IoT platform from larger vendors such as Johnson Controls, Schneider Electric and Siemens.

*“I was surprised [Vendor] didn’t offer sensor equipment, considering they offer building HVAC equipment... I want to get the most out of the solution.”*

- **Demand flexibility in solution implementation in large portfolios.**

Large portfolios can be managed at scale using a range of solutions present in the market today. However, certain buyer personas are quite removed from actual solution usage – take, for example, sustainability officers looking to report on carbon emissions associated with a multinational portfolio. In conversations with Verdantix, buyers emphasized the need for vendors to be flexible and agile to their needs and situations and recognize their role limitations.

*“[Vendor] is certainly more accustomed to dealing directly with building managers rather than corporate... this has made it tricky with such a large portfolio.”*

## Green Quadrant EMS 2023

EMS buyers across all building types seek comprehensive, cost-effective and integration-rich solutions that allow for the end-to-end management of building energy, while unlocking executives’ top priorities of buildings operations optimization and decarbonization. For the purposes of this report, Verdantix defines energy management software as:

*“Enterprise-scale software that enables firms to monitor, analyse, report and reduce energy consumption across building portfolios, for the purposes of cost and carbon reduction and ESG reporting.”*

This assessment encompasses applications deployed on-premise and those that are cloud-hosted.



## Green Quadrant methodology

The Verdantix Green Quadrant methodology provides buyers of specific products or services with a structured assessment of comparable offerings at a certain point in time. The methodology supports purchase decisions by identifying potential vendors, structuring relevant purchase criteria through discussions with buyers, and providing an evidence-based assessment of the products or services in the market. To ensure objectivity of the study results, the research process is guided by:

- **Transparent inclusion.**

We aim to analyse all providers that qualify for inclusion in the research. For those providers that offer insufficient information or are unwilling to cooperate fully on the 66-point questionnaire and one-and-a-half-hour product demonstration, we include them in the report based on public information, where this would provide an accurate analysis of their market positioning.

- **Analysis from the buyer's perspective.**

We integrate findings from our latest global corporate real estate survey of 303 decision-makers, many of whom have bought or plan to buy software products such as those analysed in this Green Quadrant. The data-driven survey findings inform how we define the relevant software categories, sub-categories and weightings that propel the Green Quadrant graphic output.

- **Scores based on evidence, briefings and customer interviews.**

To assess software vendors' expertise, resources, business results and strategies, we gather evidence from public sources and conduct interviews with multiple spokespeople and industry experts. When providers claim to be 'best in class', we challenge them to present supporting evidence.

- **Reliance on professional integrity.**

As it is not feasible to check all data and claims made by vendors, we emphasize the need for professional integrity. Assertions made by software providers are put in the public domain via this Verdantix report and can be checked by competitors and existing customers. Verdantix also retains previous iterations of vendors' Green Quadrant questionnaire responses and makes comparisons and scoring adjustments as needed, to ensure accuracy.

- **Comparison based on relative capabilities.**

We construct measurement scales ranging from 'worst in class' to 'best in class' performance at a certain point in time. A provider's position in the market can change over time, depending on how its offering and success evolves relative to its competitors. As a result, a vendor's Quadrant positioning may not necessarily improve – even if it adds new applications, makes a strategic acquisition or receives investment – as the assessment is relative to what other vendors are offering or have been doing since the previous Green Quadrant study. The Green Quadrant analysis is typically repeated every one-and-a-half to two years.

## Scope and methodology for the 2023 Green Quadrant EMS study

Verdantix studies reflect the current state of customer requirements and product capabilities. As such, we have developed assessment criteria to ensure alignment with the current state of the market. In this iteration of the Green Quadrant Energy Management Software study, the first update published since 2015, Verdantix:

- **Develops EMS scenarios from capability assessments.**

In this iteration of the EMS Green Quadrant, we detail a set of the most important and relevant capability areas in which customers expect vendor functionality. The framework of six functional capability and five technical capability areas was devised from a mix of previous Verdantix research (see [Verdantix Smart Innovators: Energy Management Software](#)) and feedback from vendors and customers.





- **Weights questionnaire categories to reflect market priorities.**

The Verdantix Green Quadrant evaluates the latest customer technology preferences to ensure that the weightings of all high-level criteria reflect global buyers' current priorities across all EMS components. Following extensive interviews with 303 senior real estate decision-makers, we applied adjusted weightings for each high-level capability criterion to mimic its relative priority for improvement and to reflect customers' EMS spending plans for 2023.

- **Includes coverage of customer success and adoption.**

A key, and often overlooked, criterion into which potential buyers require insight relates to the customer success strategies that vendors implement in the market. To account for these, we included questions around total customer count, renewal rates and strategy. Furthermore, we undertook numerous customer interviews with users of the vendor solutions featured in the Green Quadrant.

## Evaluated providers: selection criteria

To ensure the Green Quadrant analysis only compares suppliers providing similar products or services, we define clear inclusion criteria. The software vendors included in this study were chosen because their applications have:

- **Functionality to deliver at least three out of six EMS capabilities assessed.**

This study targets enterprise-class applications with a broad set of functionalities. Out of the six assessed functional criteria – energy procurement and risk management, utility bill management, energy monitoring and reporting, operations and control, carbon management, and project management – each application must be able to deliver on three at minimum.

- **Proven integration with building systems and equipment.**

Energy management software must integrate with a wide range of assets – including building controls, equipment, sensors and meters – to deliver energy, cost and carbon savings to users. The Green Quadrant analysis assesses software that provides automated and manual data capture for a range of different building systems.

- **Enterprise-scale product architecture.**

This study only considers applications with the capability to scale up to multi-country, multi-site deployments.

In addition to these product attributes, Verdantix includes only those suppliers with:

- **A standalone/dedicated EMS solution focused on monitoring and optimizing building energy consumption.**

This study only assesses vendors who offer a standalone EMS solution with the functionalities outlined previously. Some vendors included offer broader functionality than simply energy management, however only their relevant functionality and market momentum are assessed in this benchmark. This criterion allows for comparison across all vendors outlined and alleviates the burden on customers investing in large technology stacks. The assessed vendors and their solution packages are shown in **Figure 6**.

- **Revenues related to EMS greater than \$5 million.**

To ensure vendors selected for analysis were prominent in the market today, Verdantix included a minimum EMS revenue requirement.

- **Evidence of solution deployment for a minimum of five named customers.**

The Verdantix Green Quadrant EMS study is designed to assess the most prominent vendors offering EMS. All vendors disclosed at least five named customers who have adopted and deployed their software for energy management use cases.



Figure 6

Assessed vendor solutions

Vendor	Solution packages submitted for assessment
ABB	Ability: Asset Manager, Asset and Energy Manager, Energy Manager, Energy Simulator, OPTIMAX Plant Simulator
Accruent	AOEM, ServiceChannel, vx Observe
Bueno	Smart Building Analytics
Carrier	About Net Zero Management, The CORTIX™ Platform, The CORTIXedge™ Application, The CORTIXedge™ Cockpit, The CORTIXone™ Dashboard
Enel X	Demand Side Response, Energy Consulting Services, Energy Exchange, Utility Bill Management
EnergyCAP	Bill CAPture, CarbonHub, Smart Analytics, UtilityManagement
Facilio	Facilio Connected Buildings
GridPoint	GridPoint Intelligence
Honeywell	Honeywell Energy Manager, Honeywell Forge Sustainability+ for Buildings: Carbon & Energy Management, N4 Energy Manager
Johnson Controls	OpenBlue Enterprise Manager: Central Utility Plant Optimization, Equipment Performance Essentials, Net Zero Enhanced, Net Zero Essentials
MRI Software	MRI Angus, MRI eSight, MRI Evolution, MRI Forms Intelligence
Nordomatic (Spica)	Ecopilot
Schneider Electric	EcoStruxure: Building Advisor, Building Operation, Microgrid Advisor, Power Advisor, Power Monitoring, Power Operation, Resource Advisor
Siemens	Brightly Energy Manager, Brightly Stream, Building X Energy Manager, Building X Sustainability Manager, Navigator
Spacewell	Spacewell Energy: Analyse, Dashboards, Detect, Optimise

Source: Verdantix analysis

## Evaluation criteria for EMS

Verdantix defines the evaluation criteria for the Green Quadrant EMS study using a combination of previous research, interviews with energy managers and software executives, desk research, discussions with multiple customers, and staff expertise. Analysis was also informed by responses to Verdantix global corporate surveys of real estate executives. In this iteration of the Green Quadrant for EMS, offerings from 15 vendors are compared using a 66-point questionnaire covering five categories of technical capabilities, six categories of functional capabilities and eight categories of market momentum. In our analysis:

- Capabilities measure the breadth and depth of functionality.**

The Capabilities dimension, plotted on the vertical axis of the Green Quadrant graphic, is a measure of the breadth and depth of each software provider’s functionality. To assess this, we evaluated data for five technical capabilities and six functional capabilities. The technical capabilities are data capture; architecture, data audit and scalability; internationalization; mobile; and user interfaces. The functional capabilities are energy procurement and risk management; utility bill management; energy monitoring and reporting; operations and control; carbon management; and project management (see **Figure 7** and **Figure 8**).



- **Momentum measures strategic success factors.**

The Momentum dimension, plotted on the horizontal axis of the Green Quadrant graphic, measures each software vendor on a range of strategic success factors. The criteria that make up the Momentum score are grouped into six high-level categories: vision and commercial strategy; organizational resources; innovation and product strategy; customers; financial resources; and customer success and adoption (see **Figure 9**). Vendors also answered questions on two additional categories of partnerships and deal structure; these categories do not form part of the Momentum score, but help answer buyer questions to realistically assess their practical solution options.

Figure 7  
Technical capabilities criteria for energy management software

Capabilities	Questions
Data capture (12.5%)	<p>What functionality is provided to integrate with and control the building management system? Please provide examples of building management systems.</p> <p>What functionality is provided to integrate with building sensors, such as equipment and environment sensors? Please provide examples of sensor data captured.</p> <p>What functionality is provided to integrate with electricity and other primary energy source meters within a building, including both standard and smart meters?</p> <p>What functionality is provided to capture utility bill data and tariffs, and how is this information processed and utilized?</p> <p>What functionality is provided to capture asset level data and from which services/formats can this data be imported?</p> <p>What functionality does the offering have relating to climate and weather data and how is this information processed and utilized?</p>
Architecture, data audit and scalability (2.5%)	<p>Does the database software directly acquire data from real-time meters? If so, please describe the data volume transaction capabilities and storage capacity requirements necessary to process and store real-time meter data, and describe how scalable the solution is for larger data volumes.</p> <p>How does the software normalize, calculate and refine a raw stream of energy data into data sets and metrics?</p> <p>Is AI or machine learning (ML) employed to estimate data and increase efficiency?</p> <p>What data change controls does the system contain (e.g. time stamping) to ensure auditability?</p>
Internationalization (2.5%)	<p>How many languages does the software currently support? Is the language utilized natively, or is it translated?</p> <p>How many currencies does the software support for both utility bill tariffs and carbon credits?</p> <p>What units of energy metrics are supported? Is there the facility for conversion between metrics for both analysis and reporting?</p>
Mobile (2.5%)	<p>Is a mobile app provided for interaction with the software and for which platforms? What functionality does this app have with regards to data input and analysis?</p> <p>What functionality is provided for viewing and managing dashboards in a mobile browser?</p> <p>How can mobile devices be utilized to input data into the software? Describe the types of data suitable for upload and processing.</p>
User interfaces (5%)	<p>How adaptable is the user interface? (Assessed in product demo)</p> <p>Is the interface intuitive? (Assessed in product demo)</p>

Note: Technical capabilities account for 25% of the total capabilities score.  
Source: Verdantix analysis



Figure 8

Functional capabilities criteria for energy management software

Capabilities	Questions
Energy procurement and risk management (10%)	<p>What functionality is provided to support energy procurement decision-making (e.g. consumption forecasting, RFP management, supplier comparisons to identify the best rate deals)?</p> <p>What functionality is provided to support energy cost analysis? How does the software normalize data to account for fluctuations to analyse costs over time? To what extent is the software able to predict tariffs?</p> <p>What functionality is provided to analyse energy tariffs to identify the best utility rate structures for customers?</p> <p>What functionality is provided to help identify and manage energy risks, including procurement scenario planning? To what extent are on-site renewables included in this functionality?</p> <p>What functionality is provided for users to manage and generate renewable energy certificates or their equivalents? Please provide examples of managed and generated certificate types.</p>
Utility bill management (15%)	<p>What functionality is provided to manage energy supply and performance contracts by suppliers, including green energy contracts, PPAs and renewal reminders?</p> <p>What functionality is provided for utility bill validation and auditing? Please indicate details of the types of data audits carried out on the bills. To what extent does AI/ML optimize utility bill validation?</p> <p>What functionality is provided to create estimated bills? How does the software incorporate split tenancies into bill management and prediction?</p>
Energy monitoring and reporting (20%)	<p>What functionality is provided to forecast and budget for spend on energy and energy management?</p> <p>What functionality is provided to set energy targets for business units, facilities or management?</p> <p>What functionality is provided to track energy performance against targets?</p> <p>What functionality is provided to identify areas of energy waste or energy efficiency opportunities?</p> <p>What functionality is provided to benchmark facilities on energy consumption performance? What standard KPIs are buildings benchmarked against? Is this benchmarking utilized against any rating bodies such as LEED, NABERS or ENERGY STAR and are compliance certificates generated?</p> <p>What functionality is provided by the software to record progress against internal ESG targets and external ESG benchmarks?</p>
Operations and control (15%)	<p>What functionality does the software provide to determine the condition of assets? Can the software diagnose problems and faults?</p> <p>Does the software provide any functionality to schedule and manage maintenance work orders for energy consuming assets? Does this functionality include any predictive element and automatic work order generation?</p> <p>What functionality does the software provide to analyse the power factor of a facility or asset?</p> <p>How does the software integrate with a building's BMS to control equipment? What level of control is possible?</p> <p>Does the software provide functionality to directly control energy generating assets? Does the software offer any functionality for microgrid control/optimization?</p>
Carbon management (5%)	<p>What national and industry specific carbon emission factor data tables are included in the software application out of the box?</p> <p>What functionality is provided for mandatory and voluntary reporting of organizational carbon emissions?</p> <p>What functionality is provided to manage carbon credits and offsets?</p> <p>How does the software calculate fugitive emissions from processes or assets?</p> <p>What functionality is provided to analyse corporate carbon emissions?</p>
Project management (10%)	<p>What functionality does the software have for selecting new and upgraded equipment? How is a piece of equipment selected?</p> <p>What functionality does the software have for managing projects related to monitoring and improving energy efficiency?</p> <p>How does the software identify energy improvement interventions? How does the software evaluate the effectiveness of interventions?</p>

Note: Functional capabilities account for 75% of the total capabilities score.

Source: Verdantix analysis



Figure 9

Momentum criteria for energy management software

Momentum	Questions
Vision and commercial strategy (15%)	<p>What is your firm's vision for how the energy management software market will evolve?</p> <p>What is your firm's vision for the target customers/addressable market opportunities you seek to target over the next five years? Industries, geographies, revenue-size customers, functional budget-holders, functional solutions, etc.</p> <p>How will your firm's go-to-market strategy help you win in the EMS market?</p>
Organizational resources (10%)	<p>As of July 2023, how many employees does your firm have and how has this changed over the last two years? (please provide a percentage)</p> <p>What is the total number of employees dedicated to your EMS offering?</p>
Innovation and product strategy (20%)	<p>What is your firm's product roadmap for the next 18 months to support long-term viability and maintain competitive advantage(s)?</p> <p>Please state the % of revenue invested in R&amp;D and/or % of R&amp;D invested on new product development or other metrics to demonstrate re-investment into new product development for 2023.</p> <p>How often do you release new functionality? This includes design through deployment, quality assurance process (e.g. versions, testing of code and product functions).</p>
Customers (30%)	<p>As of July 2023, how many firms (logos) have deployed your energy management software? Please provide five named customers currently utilizing your software.</p> <p>As of July 2023, how many individual sites/facilities have deployed your energy management software? What is the largest site/facility currently utilizing your solution?</p> <p>In FY 2022/23, how many new EMS customers (logos) did you win?</p> <p>What % of your EMS customers renewed their contracts in FY 2022/23 compared to FY 2021/22?</p> <p>Please provide a breakdown of your customer base across the listed regions (please estimate the breakdown by number of customers).</p> <p>Please provide a breakdown of your customer base across the listed industries (please estimate the breakdown by number of customers).</p>
Financial resources (20%)	<p>What was your annual revenue in FY 2022/23?</p> <p>What percentage of total revenue relates to EMS use cases?</p> <p>By what percentage did your revenue grow in relation to EMS in 2022/23?</p> <p>Have you received any funding over the last three years (e.g. public, capital markets)?</p> <p>How many acquisitions have you made in the last three years to enhance your EMS offering?</p>
Customer success and adoption (5%)	<p>How many full-time equivalent (FTE) employees are dedicated to customer success and account management? How many client accounts, on average, is each responsible for?</p> <p>Detail the availability and location of customer care/support and differing levels of support offered. What types of support services are typically requested? What is the average response time?</p> <p>What is your net promoter score (NPS) on customer satisfaction? How else is client satisfaction measured?</p>

Note: Alongside the six criteria seen here, respondents were also asked questions pertaining to two additional Momentum categories - deal structure and partnerships - however these are unscored and hence not shown in this Figure.

Source: Verdantix analysis

We assess the evidence provided by all the software vendors using a quantitative model that starts with the sub-criteria scores. We score all sub-criteria between the values of zero ('no capability') and three ('best in class'). Each sub-criterion is allocated a percentage weighting, which is used to generate the overall score for each capability area. For example, 'energy monitoring and reporting' is one of the high-level criteria evaluated in the Capabilities section, and it is composed of five weighted sub-criteria that determine the overall energy monitoring and reporting score. Subsequently, we allocate each high-level criterion a percentage weighting that determines its contribution to the overall score for the specific capability. We base the weightings on customer interviews regarding the EMS functionality that is most widely used, along with analyst perceptions of the broader EMS landscape. The combination of high-level criteria scores in the Capabilities and Momentum sections generate the Green Quadrant graphic (see **Figure 13**) and rankings (see **Figure 10**, **Figure 11** and **Figure 12**).



Figure 10  
Technical capabilities scoring

	ABB	Accruent	Buena	Carrier	Enel X	EnergyCAP	Facilio	GridPoint	Honeywell	Johnson Controls	MRI Software	Nordomatic (Spica)	Schneider Electric	Siemens	Spacewell
Data capture	1.7	2.0	1.8	2.0	1.4	2.1	2.3	2.3	2.4	2.9	2.2	1.5	3.0	2.6	2.2
Architecture, data audit and scalability	2.0	1.2	2.0	2.4	1.4	2.4	1.6	1.2	2.4	2.4	2.0	1.8	2.0	2.4	2.0
Internationalization	1.8	2.2	1.4	1.6	1.6	2.2	1.4	1.8	1.4	2.2	2.0	0.8	2.0	2.6	3.0
Mobile	2.0	1.4	1.8	1.6	1.2	1.6	2.2	2.0	1.6	2.4	2.2	1.6	2.6	1.6	1.8
User interfaces	2.0	2.0	2.0	2.0	1.0	2.0	3.0	3.0	2.0	2.0	1.0	2.0	2.0	2.0	3.0

Vendor provides evidence of market-leading capability, supported by a broad set of references to customer examples	3
Vendor provides evidence of strong capability, supported by a broad set of references to customer examples	2
Vendor provides evidence of moderate capability, with limited references to customer examples	1
No response provided or publicly available, or supplier has a weak offering	0

Source: Verdantix analysis

Figure 11  
Functional capabilities scoring

	ABB	Accruent	Buena	Carrier	Enel X	EnergyCAP	Facilio	GridPoint	Honeywell	Johnson Controls	MRI Software	Nordomatic (Spica)	Schneider Electric	Siemens	Spacewell
Energy procurement and risk management	1.7	0.8	0.9	0.4	1.9	1.2	0.7	0.6	1.5	2.0	1.0	0.5	2.9	2.6	2.1
Utility bill management	1.8	1.2	0.6	0.6	1.6	2.0	1.6	1.0	2.0	1.6	1.8	0.2	2.6	2.4	2.2
Energy monitoring and reporting	2.3	2.0	2.3	1.8	1.7	1.7	1.9	1.9	1.9	2.4	1.8	1.6	2.5	2.5	1.9
Operations and control	2.5	2.3	1.9	1.6	1.5	1.3	1.8	1.1	2.3	2.7	1.3	1.1	2.5	2.5	1.3
Carbon management	0.6	1.3	1.0	0.9	0.6	2.2	1.2	1.2	1.7	1.7	1.9	0.0	2.6	1.9	0.7
Project management	1.0	2.0	2.4	1.8	0.8	1.6	1.0	1.0	1.8	2.6	1.4	1.0	3.0	2.4	1.6

Vendor provides evidence of market-leading capability, supported by a broad set of references to customer examples	3
Vendor provides evidence of strong capability, supported by a broad set of references to customer examples	2
Vendor provides evidence of moderate capability, with limited references to customer examples	1
No response provided or publicly available, or supplier has a weak offering	0

Source: Verdantix analysis





Figure 12  
Momentum scoring

	ABB	Accruent	Buena	Carrier	Enel X	EnergyCAP	Facilio	GridPoint	Honeywell	Johnson Controls	MRI Software	Nordomatic (Spicco)	Schneider Electric	Siemens	Spacewell
Vision and commercial strategy	1.4	1.6	2.0	2.0	2.0	1.8	1.8	1.4	1.6	2.0	1.8	1.0	2.4	2.8	1.0
Organizational resources	2.4	1.7	1.6	1.7	2.0	1.6	1.3	1.6	2.0	2.4	1.7	1.6	2.7	2.7	1.6
Innovation and product strategy	1.5	1.6	2.0	1.6	1.1	2.0	1.6	1.4	2.0	2.4	2.0	1.2	2.0	1.6	2.0
Customers	1.5	1.0	1.0	1.5	2.0	1.8	1.0	1.0	1.3	1.3	1.8	1.0	2.5	2.0	1.8
Financial resources	1.0	1.5	1.9	1.0	0.9	1.6	1.4	1.7	1.4	1.5	1.5	0.4	1.9	1.5	1.0
Customer success and adoption	1.0	1.0	1.3	1.3	1.0	1.3	1.3	0.5	1.0	1.0	1.8	1.8	2.0	2.0	1.8

Vendor provides evidence of market-leading capability, supported by a broad set of references to customer examples	3
Vendor provides evidence of strong capability, supported by a broad set of references to customer examples	2
Vendor provides evidence of moderate capability, with limited references to customer examples	1
No response provided or publicly available, or supplier has a weak offering	0

Source: Verdantix analysis



Figure 13

### Green Quadrant for energy management software 2023



## Capabilities

This dimension measures each software supplier on the breadth and depth of its software functionality across 11 capability areas, as outlined in **Figure 7** and **Figure 8**.

## Momentum

This dimension measures each software supplier on six strategic success factors, as outlined in **Figure 9**.

Note: A white circle indicates a non-participating vendor.  
Source: Verdantix analysis



# Schneider Electric energy management software overview

## Analyst insight

Schneider Electric is a \$36 billion digital automation and energy management group. Its offering is comprehensive across the categories assessed, with the firm scoring highest for both capabilities and momentum. Its energy management capabilities are housed in its EcoStruxure platform, and within this delivered through the Building Advisor, Resource Advisor and Power Monitoring Expert solutions. The platform is typically sold as part of a product-based managed services partnership. The firm has focused on growing software and service capabilities, acquiring IWMS/CPIP firm Planon (minority stake), DERMS provider AutoGrid and IoT-based energy solution Zenatix. Achieving the highest score possible for data capture, Schneider Electric's SmartConnector allows for maximum integration and control of existing and legacy building equipment and infrastructure, as well as incorporating external market data sources to influence energy decision-making. The firm secures the highest scores for energy procurement and utility management, with the solution managing 650,000 bills monthly and providing complete assessment and forecasting of various procurement options in terms of both cost and carbon. ML-backed AI is heavily utilized across the solution for forecasting at portfolio and asset level.

## Vendor info

<b>Firm name</b>	Schneider Electric
<b>Headquarters</b>	Paris, France
<b>Employees</b>	above 100,000
<b>Revenues</b>	\$25bn to <\$50bn
<b>No. of offices</b>	101-150
<b>Example customers</b>	Boston Scientific, JLL, Melbourne Cricket Ground

## Customer regional presence

North America	
South America & Caribbean	
Europe	
Middle East & Africa	
India & Central Asia	
China & Southeast Asia	
Japan, Australia & New Zealand	

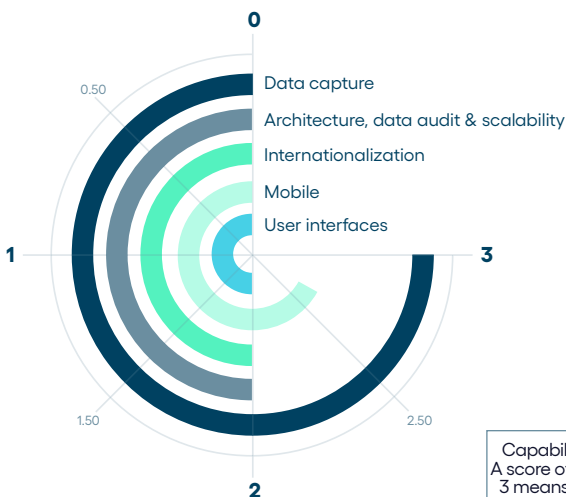
### % Customer base



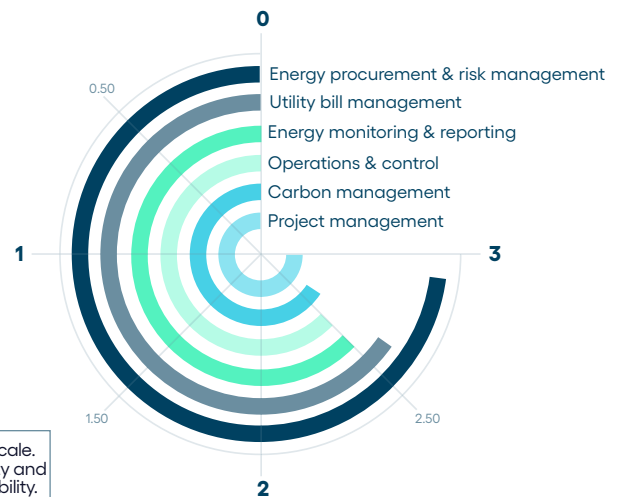
## Schneider Electric's highest industry penetration



## Technical capability scores



## Functional capability scores



Capability scores on a 0 to 3 scale. A score of 0 means no capability and 3 means market-leading capability.



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Risk Management

Smart Buildings

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