

Smart Innovators: Corporate ESG & Sustainability Software

APRIL 2021

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Over the past few years, investor interest in ESG metrics and financially material sustainability information has dramatically shifted the landscape for business disclosures, risk and performance management. This report provides buyers of software for environment, social and governance (ESG) and sustainability management with a high-level benchmark of the capabilities of 44 software solutions. The rise of ESG investment and lending trends has established new business requirements for corporate ESG and sustainability data management, analytics and workflows. Verdantix analysis finds that seven vendor categories form the building blocks of an ESG information architecture. Superior data access and visibility drive digital technology innovations across four categories: 1) real-time risk analytics, 2) operational ESG programme management, 3) product stewardship, and 4) disclosures and reporting management. Heads of ESG and Sustainability should use this report to inform their future technology adoption roadmaps in 2021 and beyond.

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ORGANIZATIONS MENTIONED

AB InBev, Accenture, AccountAbility (AA), Accuvio, Adidas, AkzoNobel, Alcumus, alva, Amazon, APlanet, Arcadis Gen, ArcelorMittal, ArcGIS, Ashcroft, ASM, Assent Compliance, Avetta, Benchmark Digital, Bill Identity, Bloomberg, BloombergNEF (BNEF), Bremer Energy Consulting Services, CDP, Central Arizona Project, CFA Institute, Chevron, ClearTrace, Cognite, Colgate-Palmolive, Cority, Cox Enterprises, CSRware, CVC Growth Partners, Datamaran, Deutsche Börse, Diginex Solutions, Diligent Corporation, DNV, Dollarama, Dow Jones Sustainability Index (DJSI), Ecocion, Ecodesk, Ecometrica, EcoVadis, Enablon, Enel, Energy Star, EnHelix Environmental Defense Fund, Envizi, EQT, EU, EY, FigBytes, Fitch, FTSE4Good, GE Digital, Gensuite, GHGSat, Global Real Estate Sustainability Benchmark (GRESB), Global Reporting Initiative (GRI), GMI Ratings, Goby, Goodera, Greenstone, Guardhat, Hong Kong Stock Exchange, InteleX, International Capital Market Association (ICMA), International Financial Reporting Standard (IFRS), iPoint, IsoMetrix, ISS, JPMorgan Chase, Librestream, Lloyds Banking Group, Measurabl, Metrio, Microsoft, Moody's, Morgan Stanley Institute For Sustainable Investing, Morningstar, MSCI, Nasdaq OneReport, National Grid, NAVEX Global, Neuberger Berman, Novisto, NYSE, Oekom, Parley for the Oceans, Persefoni, PG&E, PIMCO, Plexus, Power Corporation of Canada, ProcessMAP, Project Canary, Quentic, Refinitiv, Rio ESG, S&P Global, Salesforce, Santander, Schneider Electric, Scope 5, Scottish Widows, Shell, Siemens, SINAI Technologies, Source Intelligence, Sphera, State Street Global Advisors, Sustainability Accounting Standards Board (SASB), Task Force on Climate-related Financial Disclosures (TCFD), Temasek, Teva Pharmaceuticals, thinkstep, UK Financial Conduct Authority (FCA), **UL**, UN, Urjanet, US Securities and Exchange Commission (SEC), US SIF, Vale, VelocityEHS, Workiva, XBRL International, Y Combinator.

ESG And Sustainability Data Management Ushers In New Phase Of Growth

This report provides buyers of software for environment, social and governance (ESG) and sustainability management with a high-level benchmark of the capabilities of 44 software solutions. Over the past few years, investor interest in ESG metrics and financially material sustainability information has dramatically shifted the landscape for disclosures, risk and performance management. This report analyses the evolving landscape of technology solutions for ESG and sustainability data and pinpoints the areas for greatest innovation and development. Heads of ESG and Sustainability should use this report to inform their future technology adoption roadmaps in 2021 and beyond.

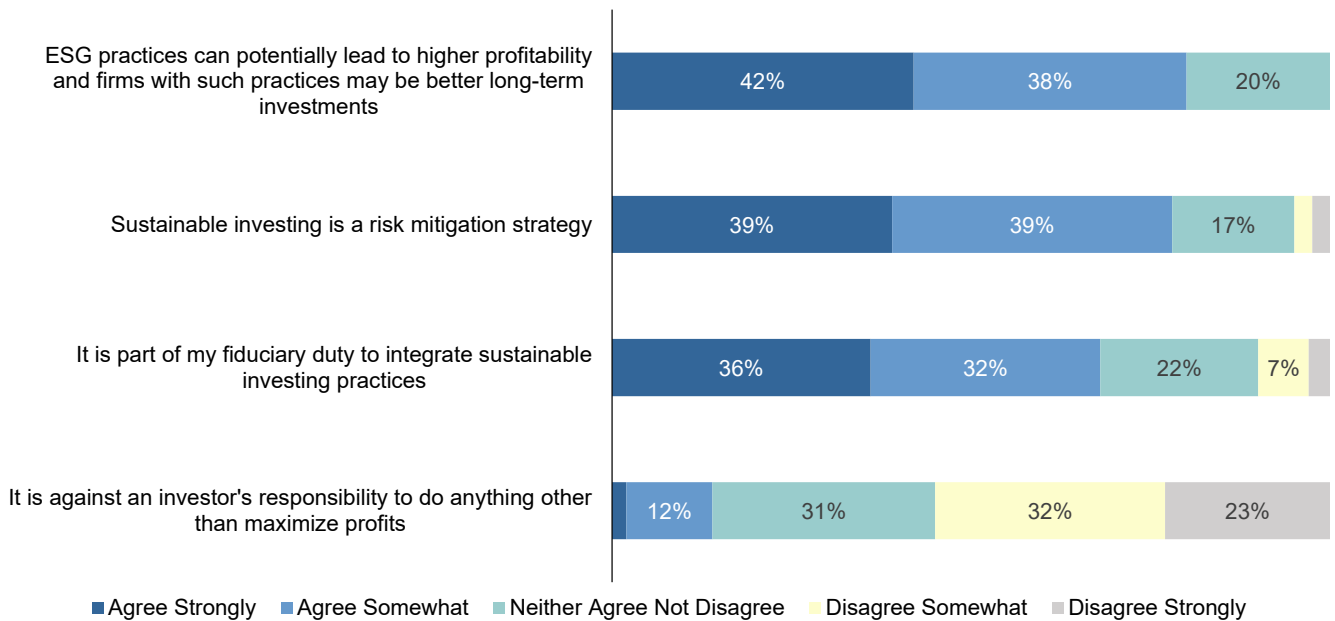
In 2019 Financial Markets Exhibited A Growing Appetite For More And Better ESG Data

Investor and lender interest in ESG information has increased dramatically in recent years. Financial market participants – asset managers, commercial banks, private equity funds, information providers, stock exchanges and regulators – look to ESG data to enhance assessments of the risk and return profiles of investment activities (see [Verdantix Market Overview: Investor Focus On ESG Will Transform Sustainability Strategies](#)). Prior to the COVID-19 pandemic, demand for investment-grade ESG data was on the increase as:

- **Asset owners expanded investment mandates with ESG and sustainability clauses.**
Verdantix research has found that shifting market forces and growing investor integration of ESG risk and opportunity assessments will increasingly pressure CFOs to invest in improved ESG information management. This pressure originates directly from asset owners themselves – the providers of financial capital – who are significantly increasing their allocation towards and investment mandates for ESG investing strategies. In a 2020 survey of more than 90 public and corporate pensions, endowments, foundations, sovereign wealth entities, insurance firms and other large asset owners worldwide – 92% of which had total assets over \$1 billion – the Morgan Stanley Institute For Sustainable Investing found that 78% agreed that ESG investing was a risk mitigation strategy and that 80% were actively embracing ESG investments (see **Figure 1**).
- **Asset managers integrated ESG considerations into investment decisions.**
As a result of asset owner demand and increasing awareness of ESG risk exposures, asset managers are responding to the shifting norms and expectations for portfolio management. Integration of ESG considerations in the investment due diligence process has evolved significantly from the divestment strategies commonly used over the past several decades. Beyond exclusionary screening, asset managers now employ an arsenal of strategies, such as embedding climate risk analysis, assessing ESG-adjusted equity valuations, and engaging issuers on ESG topics such as plastic waste or gender diversity. Singapore-based investment firm Temasek uses metrics such as total carbon emissions, carbon intensity and carbon efficiency to assess a potential investee firm's contribution to climate change and risk from physical and climate transition perspectives. In contrast, Neuberger Berman takes a two-pillar approach to assess financially material 'E' and 'S' issues against governance issues. One of the world's largest financial asset managers, State Street Global Advisors, has developed a proprietary 'R-Factor' scoring system with the Sustainability Accounting Standards Board (SASB).
- **Financial regulators developed rules to improve the quality and comparability of ESG disclosures.**
For more than two decades, a wide range of NGOs, such as the CDP, the Global Reporting Initiative (GRI) and the SASB, pressured and supported firms to collect and disclose ESG information in a structured

FIGURE 1

Asset Owners Desire ESG Integration For Financial Risk And Opportunity Benefits



Note: Data labels are rounded to zero decimal places; percentages less than 5% are not shown

Source: Morgan Stanley Institute For Sustainable Investing

n=93

manner. To date, more than 90% of S&P 500 listed firms publish a standalone annual sustainability report. Nevertheless, sustainability data are far from being investment-grade and thousands of firms make no disclosures. A steady influx of financial regulations is expected to significantly alter the data landscape over the next decade. Recently introduced EU regulations include the Sustainable Finance Disclosure Regulation (SFDR), effective from March 10, 2021, which mandates financial market participants to follow harmonized rules on how they integrate sustainability risks in their investment processes and how they disclose those risks to investors. Other existing or anticipated ESG regulations include the EU Taxonomy Regulation for ESG data; the International Financial Reporting Standard (IFRS) upcoming standard on sustainability disclosures; and New Zealand’s 2023 deadline for asset managers to implement disclosures under the Task Force on Climate-related Financial Disclosures (TCFD). Under the Biden administration, the US Securities and Exchange Commission (SEC) has established an ESG disclosure enforcement division. The Hong Kong Stock Exchange has a listing requirement for ESG reporting with independent assurance.

- Issuers accessed new debt finance instruments with sustainability credentials.**

According to BloombergNEF (BNEF), the global sustainable bond issuance market grew from less than \$50 billion in 2014 to over \$500 billion by the end of 2020. This market consists of fixed income products covering four types of bonds: green, social, sustainability, and sustainability-linked bonds (see **Figure 2**). In addition to sustainable bonds, other forms of ESG debt structures have emerged, including over \$200 billion in green or sustainability-linked loans globally during 2020. Enel, an Italian energy firm, issued €2.5 billion (\$3 billion) of bonds linked to two of the UN Sustainable Development Goals (SDGs). The bond was four times oversubscribed and provided the issuer with a 0.25% interest rate reduction should Enel meet its disclosed targets for clean energy and climate action. Sustainability-related debt instruments require the issuers of the debt to aggregate data – for example, on energy transition progress – that support the conditions of the funding.

FIGURE 2

Understanding Green, Social, Sustainability, And Sustainability-Linked Bonds

	Green	Social	Sustainability	Sustainability-Linked
Use Of Proceeds	Bonds devoted to financing new and existing projects or activities with positive environmental impacts	Bonds that finance or refinance projects or activities that achieve positive social outcomes and/or address a social issue	Bonds that finance or refinance a combination of green and social projects or activities	Bonds that are structurally linked to the issuer's achievement of ESG or SDG goals, such as through a covenant linking the coupon of a bond. Progress, or lack thereof, towards the pre-agreed KPIs then results in a decrease or increase in the instrument's coupon
Example Projects	Renewable energy, energy efficiency, clean transportation, green buildings, wastewater management and climate change adaptation	Food security and sustainability, socioeconomic advancement, affordable housing and basic infrastructure, and prison recidivism and incarceration	Any combination of projects listed under green bonds and social bonds	Not project-specific; linked to the issuer's corporate ESG or SDG targets
Voluntary Guidelines	Green Bond Principles, first published by the International Capital Market Association (ICMA) in 2017	Social Bond Principles, first published by ICMA in 2017	Sustainability Bond Guidelines, first published by ICMA in 2017	Sustainability-Linked Bond Principles, first published by ICMA in 2020
Percentage Of Sustainable Bond Issuance Market (2020)	>50%	~30%	~10%	<5%

Source: PIMCO, BloombergNEF (BNEF)

During 2020 Financial Market Participants Accelerated Their Push For ESG Disclosures

By 2019, investors were increasingly seeking ESG data as an additional input into their assessment of the financial risk and return profiles of investment activities and lending decisions. As the COVID-19 pandemic roiled markets in March 2020, it seemed likely that sustainability would once again be pushed to the side as firms and investors focused on core business. In fact, the opposite occurred. The COVID-19 crisis increased investor attention on:

- **Value at risk from strategic threats to business operations.**

COVID-19 has shown how devastating global risks can be to financial performance if they materialize. After all, the risk of a global pandemic had been on the cards for two decades, following on from SARS (2002), swine flu (2009) and MERS (2012). Whilst there is no physical connection between an infectious disease pandemic and sustainability generally, investors have responded on the basis that there is a link

from a financial risk perspective. If global risks materialize, they can lose billions of dollars. Rather than the global recession undermining efforts to raise up sustainability awareness, it has accelerated the focus of investors on value at risk from a firm's inability to manage ESG and climate risks.

- **Occupational health and safety management capabilities that ensure business continuity.**
To continue performing successfully through the COVID-19 pandemic, firms such as Colgate-Palmolive needed robust health and safety controls to keep toothpaste and soap manufacturing plants open. Workers sickened by the virus needed to be quickly identified and at-risk co-workers traced and, if necessary, put in self-isolation. The pandemic has turned daily worker health and safety metrics into a material financial issue in a way that only fatalities or exposure of large employee groups to dangerous substances like asbestos have done in the past. The need to strengthen health and safety programmes has translated into growth in spending on digital solutions (see [Verdantix Market Size And Forecast: EHS Software 2020-2026 \(Global\)](#)).
- **Societal demand for firms and investors to resolve global problems.**
Beyond institutional recognition and acceptance of ESG factors, societal norms and demands are also establishing long-term drivers for impact investment and thematic issue-based investment considerations. The US SIF Forum estimates that the size of the US sustainable investment universe has increased more than 25-fold, at a CAGR of 14%, since 1995, to reach more than \$16 trillion in US-domiciled assets in 2020. Top societal concerns among wealth managers cover climate change and carbon mitigation, anti-corruption, employee and board diversity, natural resources and agriculture management. Accelerating this trend, 2020 saw record inflows of more than \$19 billion into ESG funds.
- **Digitization strategies to cope with unpredictable operational risks.**
COVID-19 has accelerated the digitization of society and business operations. Old-school executives who opposed working from home on the grounds that it reduced productivity have been mollified by the ease of use of video meetings. Governments invested billions in mobile apps and digital bracelets to implement 'track and trace' systems. Digital passports to prove COVID-19 vaccination validity look set to be launched around the world. COVID-19 has also boosted investment in a wide range of technologies that enable the remote operation of physical assets. Augmented reality (AR) vendors such as Guardhat and Librestream offer the technology to deliver over-the-shoulder remote engineering support to remote sites (see [Verdantix Guardhat Offers A Holistic IIoT Platform For A Multitude Of Connected Worker Usage Scenarios](#)). Both firms raised significant new funding rounds due to the boom in demand for their technology – previously regarded as too sophisticated. Digital twin simulations and asset monitoring solutions from vendors such as Arcadis Gen, Cognite and GE Digital facilitate remote collaboration that enhances business continuity (see [Verdantix Smart Innovators: Digital Twins For Industrial Facilities](#)).

From 2021 Onwards Firms Will Need To Enhance Their ESG Governance And IT Systems

The COVID-19 pandemic accelerated rather than discouraged investor engagement with sustainability factors. The result? Firms that have hunkered down through the worst recession in a century immediately need to get on top of a wide range of ESG demands from investors, lenders and regulators. Specifically, corporates need to:

- **Ensure they understand how ESG ratings work and enhance ESG data strategies.**
Historically, CEOs could get away with a low rating from the CDP, the Dow Jones Sustainability Index (DJSI) or niche ESG research boutiques like Oekom (now part of Institutional Shareholder Services – ISS) or GMI Ratings (now part of MSCI). Investors did not base decisions on these information providers. However, in

the last four years the world of financial ESG data has been transformed by a string of acquisitions. Now, the world's leading financial information providers – Bloomberg, Deutsche Börse, Morningstar, MSCI and Refinitiv – and credit rating agencies – Fitch, Moody's and S&P Global – deliver share-price-moving ESG scores. There are direct negative consequences of a low ESG rating from these major financial information providers. For example, informed by third-party ESG data, in late 2020 Scottish Widows – the insurer owned by the UK's largest retail bank, Lloyds Banking Group – announced its plans to divest £440 million (\$580 million) from firms that did not fit with its new ESG policy and evaluation criteria. The challenge for issuers? Financial information providers use different data sources and ratings.

- **Develop a climate change strategy that aligns with TCFD standards.**

Numerous financial regulators, lenders and stock exchanges are shaping new requirements for firms to disclose climate change risks across physical assets and operations, low carbon economy transition and stranded assets. In late 2020 the UK Financial Conduct Authority (FCA) announced that from January 1, 2021, premium-listed firms would need to make disclosures aligned with TCFD principles. Similarly, New Zealand has introduced TCFD regulation effective from 2023 onwards for asset managers, and both the EU and the US SEC are likely to follow soon, with teams established for ESG disclosures and enforcement. With many firms announcing 2025 or 2030 net-zero carbon goals, they will need data on energy consumption, decarbonization plans and GHG emissions controls to disclose their ability to meet these targets. Press releases and good intentions are no longer enough to satisfy investors, as transparency and data become the order of the day. BloombergNEF offers a Corporate Net Zero Assessment Tool that monitors and scores 400 of the world's largest firms in heavy emission sectors on their net-zero commitments, their progress thus far, and scenario-based projected emission reductions, to aid investors in distinguishing greenwash from reality.

- **Embed ESG risk and opportunity analysis into governance for operational decisions.**

Fundamentally, investor interest in ESG factors is not driven by mission or ethics, but rather by the growing evidence that ESG provides an additional lens to assess and evaluate financial risks and opportunities for better investment decision-making. Firms need to rapidly shift away from traditional corporate social responsibility (CSR) mindsets and establish strong, transparent, accountable governance structures and teams that embed ESG risks and opportunities into all operational decisions. The energy transition is one example of ESG opportunity that has led to the growth of clean technology investment funds and teams at Amazon, Chevron, Cox Enterprises, National Grid and Shell. Supply chain risk assessments, on the other hand, are an example of ESG risks for which vendors such as Alcumus, Avetta, EcoVadis and Source Intelligence are actively seeking to provide support.

- **Invest in an ESG information architecture for enterprise-wide investment-grade data.**

Regulations such as the EU Non-Financial Reporting Directive (NFRD), the French government's Article 225 on mandatory CSR reporting, and India's Environment Protection Act have existed for many years, mandating sustainability reporting among large firms. These reports can often exceed 250 pages in length, whilst increasing ESG data requests only further burden in-house teams with additional time and resource obligations. Responding appropriately to the CDP questionnaire, for example, can take a team of 30 employees more than 40 workdays' effort. To enhance ESG data management and ensure sufficient resource bandwidth towards operational risk and performance management activities – as opposed to reporting and disclosures – industry leaders should invest in building an enterprise-wide ESG information architecture with strong investment-grade data and auditability foundations.

A New Era For The ESG And Sustainability Software Market

As firms emerge from the ravages of the COVID-19 pandemic, they will be confronted with the need to develop and implement a comprehensive ESG strategy. The good news? There is a wide range of software providers that offer functionality to accelerate ESG strategies with digitized processes, controls and systems. We define ESG and sustainability software as:

“Software applications that aggregate environmental, social and governance data and provide functionality for risk management, performance improvement, voluntary reporting and regulated disclosures.”

This definition encompasses specialist sustainability management software providers as well as a wide range of other software categories that map to different aspects of the ESG agenda.

New Corporate ESG Business Requirements Map To Four Software Capabilities

As firms emerge from the COVID-19 pandemic, they will need to satisfy a wide range of new requirements relating to the ESG agenda. Whilst many firms have already invested in digital solutions to tackle specific aspects of the ESG agenda – for instance, third-party risk tools from governance, risk and compliance (GRC) vendors or environmental management applications from EHS software suppliers – very few have a joined-up ESG information architecture. Faced with by new demands from investors, lenders and regulators, issuers of debt and equity now need to develop four ESG digital capabilities (see **Figure 3**):

- **Manage diverse ESG disclosure frameworks, approaches and processes.**
New efforts, such as by the IFRS Foundation and the CFA Institute, continue to emerge on ESG and sustainability disclosures. Due to the diversity of issues, metrics and audiences, full harmonization of sustainability standards is unlikely to happen soon. Verdantix estimates that an effective date for an IFRS sustainability standard is unlikely to be before January 1, 2025. Firms must learn to grapple with managing the many voluntary and regulated sustainability disclosure requirements, guidances and approaches. Core capabilities for corporate ESG and sustainability software include simplifying and managing the diverse voluntary frameworks, such as CDP and GRI, as well as the regulated mandates such as the EU SFDR and TCFD. In addition, innovative corporate ESG software includes the ability to use software-enhanced approaches to automate ESG materiality assessments, enable user configuration of data collection workflows, and ensure auditability of data records.
- **Assess ESG risks with respect to physical operations and their business models.**
High-profile examples of ESG risks with respect to physical operations and business models include Vale’s Brumadinho dam collapse – caused by intense rainfall and persistently high water levels, leading to a \$7 billion settlement – and PG&E’s bankruptcy due to its multi-billion liabilities from forest fires caused by its aging infrastructure lines. Innovative corporate ESG software to help firms manage operational sustainability risks includes the ability to conduct climate risk analysis and scenario-based forecasting, as well as the application of tools such as geographic information system (GIS) mapping for visual risk analytics, and real-time natural language processing to track social media stakeholder sentiments. While some vendors such as alva offer real-time stakeholder social media sentiment monitoring, other vendors apply management system solutions for stakeholder engagement tracking – such as in accordance with the AccountAbility (AA)1000 standard for stakeholder engagement – and for supplier management.

FIGURE 3

ESG & Sustainability Software Capabilities & Definitions

Category	Criteria	Definition
Risk Management	Climate Change Physical & Transition Risks	Ability to conduct climate risk analysis, such as using geographic information system (GIS) mapping and visualizations, as well as scenario analysis
	Public Sentiment Monitoring	Ability to monitor public stakeholder sentiments in real time, such as using natural language processing and social media monitoring
	Stakeholder Management	Ability to manage stakeholder engagement efforts, such as stakeholder action plans, dialogue tracking and social licence to operate risks
	Supply Chain & Suppliers Management	Ability to manage risks throughout the value chain, such as supply chain transparency and traceability, GIS mapping and supplier risk assessments
Operational Improvement	Energy & Carbon Management	Functionality to enable carbon emission calculations, energy management and associated energy efficiency initiatives
	Environmental Resource Management	Functionality to implement programmes and manage environmental resource use and impacts, such as across water, waste, soil, habitats and biodiversity
	Social Issues Management	Functionality to implement programmes and manage social issues, such as across employee diversity, equity and inclusion, charity and philanthropic activities, and labour and human rights management
	Governance Issues Management	Functionality to implement programmes and manage governance issues, such as across anti-corruption practices, board diversity, ESG governance structure and ESG KPIs linked to executive remuneration
Product Stewardship	Product Compliance	Functionality to ensure product compliance across chemicals, ingredients, materials, parts and components
	Lifecycle Assessment & Circular Economy	Functionality to conduct LCA analysis and implement programmes to progress product sustainability, green chemistry, and material substitutions
	Product Eco-Design	Functionality to conduct product R&D that integrates environmental considerations of suppliers and materials at the design phase
	Responsible Sourcing	Functionality to trace materials to the source for ethical or ESG screening purposes, such as conflict minerals due diligence
Disclosures and Reporting	Voluntary Frameworks	Functionality to simplify and manage the process for reporting to voluntary frameworks such as the CDP, DJSI, GRESB, GRI and UN SDGs
	Regulated & Mandated Frameworks	Functionality to simplify and manage the process for reporting to regulated frameworks such as the EU SFDR, SASB and TCFD
	Materiality Assessment	Functionality to simplify and automate the identification of financially material sustainability and ESG issues
	Workflows & Auditability	Functionality to enable configuration of data collection workflows and ensure auditability of records, such as time-stamping and tracking historical input

Source: Verdantix

- **Improve operational performance against ESG KPIs.**

With increasing mainstream market acceptance of the concept of ‘double materiality’, and high-profile – costly – incidents such as Vale’s Brumadinho dam collapse, large multinational firms are well advised to scrutinize their ESG risk exposures and identify top priority areas for operational performance improvement against specific ESG KPIs. Innovative corporate ESG software functionality identified by Verdantix in this category offers the ability to conduct multiple automated emission factor approaches for carbon and CO₂e footprint calculations; a best practices library containing over 100,000 energy efficiency initiatives sorted by estimated return on investment (ROI); project-specific marginal abatement cost curves; and scenario-based forecasting. Operational ESG software dashboards and functionality typically comprise four types of solutions: energy and carbon management, environmental resource management, social issues management, and corporate governance management.

- **Manage product stewardship and product supply chain efforts.**

Operationalizing ESG also requires investments in product footprint analysis and new product R&D and design. Verdantix research expects the product stewardship market to grow at a CAGR of 9% to reach \$1.2 billion in 2025 (see [Verdantix Market Size and Forecast: Product Stewardship Software 2020-2025](#)). Solutions available for product stewardship and product supply chain efforts include product lifecycle assessment (LCA) analysis; raw material traceability by supplier and geography; end-of-life treatment and recycling; and product eco-design and circular economy initiatives. AB InBev, for example, sells nearly half of its drinks in returnable glass bottles and seeks to hit 100% by 2025. Similarly, AkzoNobel has developed new coating products using 25% recycled content; Adidas has developed a 100% recyclable shoe called FUTURECRAFT.LOOP with Parley for the Oceans; and the Central Arizona Project’s environmental team uses Cority for oversight of end-to-end waste tracking and disposal processes, including waste diverted from landfill (see [Verdantix Buyer’s Guide For Product Stewardship Solutions](#)).

A Diverse Ecosystem Of Vendors Form The Building Blocks For An Enterprise ESG IT Architecture

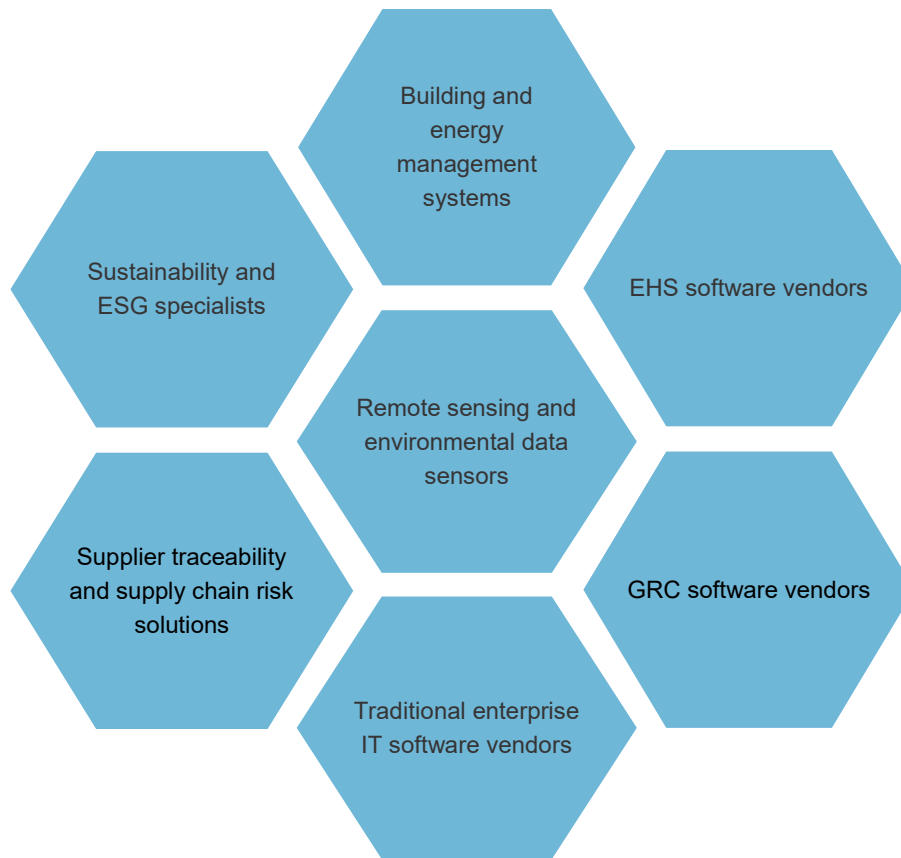
The rise of ESG investment and lending trends have created new business requirements for ESG and sustainability data management, analytics and workflows. A combination of longstanding vendors and new entrants meet these technical and functional requirements. Vendor categories that form the building blocks of an ESG information architecture consist of (see **Figure 4**):

- **Building and energy management system providers.**

For many decades, firms have invested in IT systems that collect and manage data on physical infrastructure energy consumption and energy efficiency, as well as related carbon emissions. Building and energy management system vendors include utility bill validation and consumption data providers such as Bill Identity and Urjanet, as well as enterprise-scale building energy management (BEM) software providers such as Envizi and Schneider Electric (see [Verdantix Facility Building Energy Management Software Benchmark](#)). Envizi, for example, serves over 150 clients, including global banks, telecommunications firms and real estate firms and tracks ESG data covering employee demographics, community investments and resource consumption. Similarly, Schneider Electric centralizes energy feeds such as utility metering data with data on waste consumption (generated, diverted from landfill and recycled), water consumption, community investments and board gender-diversity tracking. Other example providers include ClearTrace, which uses technology to validate data records such as the renewable energy claims of JPMorgan Chase; Goby, a US-headquartered energy and sustainability management platform founded in 2008; and Measurabl, an ESG data management solution used by more than 53,000 commercial buildings in 78 countries.

FIGURE 4

Seven Categories Of Vendor Backgrounds In ESG Software



Source: Verdantix

- **EHS vendors.**

EHS software vendors have grown rapidly over the past decade to establish enterprise-scale platforms for both health and safety and environment and sustainability (see [Verdantix EHS Software Market Heading For A Big Realignment In 2020](#)). Witness Intellex, which acquired Ecocion, a US-based environmental management information system provider, and Sphera, which acquired thinkstep, a Germany-based sustainability vendor offering software, databases and consulting services, used by more than 8,000 clients globally (see [Verdantix EHS Software Benchmark: Environment & Sustainability Management](#)). While thousands of firms have invested in health and safety software, only a handful of vendors have established end-to-end platforms covering the 'E', 'S' and 'G' of sustainability data management (see [Verdantix Green Quadrant: EHS Software 2021](#)). Other example EHS software platform vendors include Benchmark Digital, Cority, DNV, Enablon, IsoMetrix, ProcessMAP, Quentic, **UL** and VelocityEHS, to name a few (see [Verdantix **UL** Offers Advanced Sustainability Data Management With UL 360 Platform](#)).

- **ESG and corporate sustainability information management specialists.**

Since 2008, numerous firms have invested in point solutions from vendors such as Accuvio, Ecodesk,

Ecometrica, FigBytes, Goodera, Greenstone, Metrio and Scope 5. These tools typically provide corporate sustainability reporting functionalities that streamline data collection processes and centralize record-keeping for reporting against frameworks and questionnaires such as the CDP, the DJSI, the FTSE4Good, the Global Real Estate Sustainability Benchmark (GRESB), the GRI, the UN Global Compact and the UN SDGs. In some instances, these vendors may also offer investor ESG solutions for fund-level sustainability reporting and portfolio firm engagement. New entrants include Novisto, founded in 2019, and Persefoni, established in early 2020; the former boasts clients such as Dollarama and Power Corporation of Canada, whilst the latter recently welcomed Tim Mohin, former CEO of GRI, as Executive VP. Similarly, SINAI Technologies was founded in 2017 and is a Y Combinator-backed vendor used by clients such as ArcelorMittal and Siemens to operationalize decarbonization strategies.

- **GRC software vendors.**

As evidenced by the October 2020 acquisition of CSRware by NAVEX Global, sustainability reporting tools can also form part of a broader ESG information management system. GRC vendors face increasing pressure from boards, finance and operations teams for better ESG data management. The NAVEX Global offering comprises NAVEX ESG (formerly CSRware) for reporting; NAVEX One for third-party due diligence, policy and procedures, and governance ethics management; and NAVEX Lockpath for risk and business continuity planning. Similarly, Nasdaq acquired ESG specialist OneReport in February 2020, to accelerate its delivery of ESG reporting and workflow management solutions. Nasdaq OneReport caters to public and private firms and consultants, as well as government entities and NGOs, by publishing, responding, collecting and engaging stakeholders on ESG data requirements. Other prominent examples include DiginexESG by Diginex Solutions, a Singapore-headquartered vendor with a strong track record in the mid-market and emerging markets segments, and Diligent Corporation, a board management software vendor serving nearly one million users across 23,000 client organizations globally.

- **Supplier traceability and supply chain risk management solution providers.**

Due to regulations such as the US SEC conflict minerals rule and the EU Waste Electrical and Electronic Equipment (WEEE) regulations, procurement and supply chain professionals have also faced pressure on ESG information management. A range of digital providers has focused on supplier traceability and supply chain risk management solutions targeting the needs of procurement functions. EcoVadis, founded in France in 2007, has raised more than \$200 million from CVC Growth Partners and is used by more than 600 multinational firms to assess over 75,000 suppliers in 160 countries on ESG-related risks (see [Verdantix EcoVadis Cracks The Code For Supply Chain Stewardship](#)). Similarly, Assent Compliance is used by firms such as Ashcroft, ASM and Plexus to manage and avoid supply chain risks such as child labour, unsafe work conditions and environmental degradation (see [Verdantix Smart Innovators: Supply Chain Transparency Data Solutions](#)).

- **Cloud data aggregation and enterprise software platforms.**

Traditional business enterprise software vendors and cloud data aggregation providers have also dipped their toes into ESG information management. For some IT vendors, ESG information management remains too early and nascent a market opportunity and has been viewed as a social responsibility initiative to which they can contribute technical expertise where possible. Witness Microsoft's AI For Earth initiative, which has been used for a variety of applications, such as ocean plastic waste clean-up, animal conservation and identification of the best places to improve groundwater and surface water quantity and quality. In early 2021 Accenture's Sustainability Services and Salesforce Sustainability Cloud announced a strategic partnership to jointly bring ESG data management solutions to C-Suite executives. The Salesforce Sustainability Cloud is built on Salesforce Customer 360 and seeks to centralize investor-grade climate data as well as broader ESG metrics such as water and waste management. Workiva, an NYSE-listed financial reporting software vendor, has also leveraged its XBRL mapping and tagging technologies for investor-grade ESG data management.

- **Remote sensing hardware and environmental data-tracking vendors.**

Beyond software, Verdantix global survey data find that digital sensors for environmental data collection are the leading Internet of Things (IoT) technology being adopted or considered for use in 2021 among EHS executives (see [Verdantix Global Corporate Survey 2020: EHS Budgets, Priorities & Tech Preferences](#)). Roughly three-quarters of the 301 respondents to our global survey cited plans to adopt environmental data-tracking sensors in 2021, whilst 39% noted plans to increase spending on these in that year. Verdantix anticipates that investor demand for high-fidelity ESG data will continue to fuel growth in remote sensing hardware and environmental data-tracking solutions. Witness GHGSat, a Canada-headquartered vendor that has raised more than \$40 million in funding and seeks to become the global reference for remote sensing of GHGs using low-orbit satellites. EQT, meanwhile, a \$4 billion revenue US-headquartered natural gas producer, has engaged environmental tech provider Project Canary to measure methane emissions every second and communicate the results to a cloud database every minute.

Superior Data Access And Visibility Drive Technology Innovations In The ESG And Sustainability Market

Technology innovation is evolving at a brisk pace in the ESG and sustainability market. Investor demand for more real-time access to high-fidelity ESG and sustainability data is driving technology innovators to develop new tools and solutions to enable better visibility, risk evaluation and performance management. Verdantix analysis finds that the evolving vendor landscape of innovative solutions for ESG and sustainability information management centres around (see **Figure 5**, **Figure 6** and **Figure 7**):

- **Risk management software that facilitates climate and stakeholder sentiment analytics.**

Investor ESG scores reflect data on a firm's operations that are disclosed in the public domain – annual sustainability reports and regulatory filings – as well as information gathered by third parties directly or assessed based on social media and stakeholder sentiment analysis. To ensure firms remain ahead of their ESG risks, industry leaders should look to four categories of innovations in ESG software: climate change physical and transition risk analytics; public sentiment monitoring; stakeholder management; and supply chain risk management. The Datamaran solution for external risk monitoring, for example, includes a core set of ESG risk analytics and is used by Santander and Teva Pharmaceuticals. IsoMetrix offers a comprehensive stakeholder engagement module that includes social sentiment tracking, social licence to operate management systems, and ArcGIS integrations for climate analytics (see [Verdantix IsoMetrix Takes On Enterprise Risk Management For Large Capital Projects And Firms](#)). Beyond OneReport, Nasdaq also offers media monitoring capabilities for any qualified new issuer on Nasdaq, as well as additional ESG advisory services.

- **ESG programme management that enables project management and performance tracking.**

CEOs and CFOs are rapidly discovering that their existing IT solutions are not fit for purpose when it comes to portfolio optimization, capital allocation towards ESG-aligned operations and associated project management. Innovative functionality for operational ESG software not only includes manual tracking of select ESG metrics, but also real-time access to metering data, the ability to facilitate CO₂e calculations using pre-loaded emission factor databases, and comprehensive project management across 'E', 'S' and 'G' issues, covering initiation and approval workflows, status tracking, review and ROI analysis. Benchmark ESG™, powered by Gensuite (now Benchmark Digital), for example, is used by Bremer Energy Consulting Services, Energy Star and the Environmental Defense Fund for software-enhanced approaches to behavioural, operational and maintenance opportunities for energy reduction efforts. Firms that already

FIGURE 5

ESG & Sustainability Software Capabilities Assessment (Aggregate)

	Risk Management				Operational Improvement				Product Stewardship				Disclosures And Reporting			
	Climate Change Physical & Transition Risks	Public Sentiment Monitoring	Stakeholder Management	Supply Chain & Suppliers Management	Energy & Carbon Management	Environmental Resource Management	Social Issues Management	Governance Issues Management	Product Compliance	LCA & Circular Economy	Product Eco-Design	Responsible Sourcing	Voluntary Frameworks	Regulated & Mandated Frameworks	Materiality Assessment	Workflows & Auditability
Accuvio	○	○	◐	◐	◐	◐	◐	○	○	○	◐	◐	◐	○	○	◐
alva	○	●	◐	○	○	○	○	○	○	○	○	○	○	○	○	○
APlanet	○	○	◐	○	○	○	○	○	○	○	○	○	○	○	○	○
Assent Compliance	○	◐	◐	◐	○	○	○	○	○	○	○	○	○	○	○	○
Benchmark Digital	○	○	◐	◐	◐	●	◐	○	○	○	○	○	○	○	○	○
ClearTrace	◐	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○
Cority	◐	○	◐	◐	●	●	◐	○	○	○	○	○	○	○	○	○
Datamaran	○	○	○	◐	○	◐	◐	○	○	○	○	○	○	○	○	○
Diginex Solutions	○	○	◐	◐	○	○	○	○	○	○	○	○	○	○	○	○
Diligent Corporation	○	○	◐	◐	○	○	○	○	○	○	○	○	○	○	○	○
DNV	◐	○	◐	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
Ecodesk	○	○	○	◐	◐	◐	○	○	○	○	○	○	○	○	○	○
Ecometrica	◐	○	○	◐	◐	◐	○	○	○	○	○	○	○	○	○	○
EcoVadis	○	○	○	●	◐	●	●	○	○	○	○	○	○	○	○	○
Emex	○	○	○	○	◐	◐	◐	○	○	○	○	○	○	○	○	○
Enablon	○	○	○	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
EnHelix	○	○	◐	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
Envizi	◐	○	○	○	●	◐	◐	○	○	○	○	○	○	○	○	○
FigBytes	◐	◐	◐	◐	◐	●	◐	○	○	○	○	○	○	○	○	○
Goby	○	○	○	○	◐	◐	◐	○	○	○	○	○	○	○	○	○
Goodera	○	○	○	○	◐	◐	◐	○	○	○	○	○	○	○	○	○
Greenstone	○	○	○	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
Intellex	○	○	○	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
iPoint	○	○	○	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
IsoMetrix	◐	○	○	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
Measurabl	◐	○	○	○	●	◐	◐	○	○	○	○	○	○	○	○	○
Metrio	○	○	○	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
Nasdaq	○	◐	◐	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
NAVEX Global	○	○	○	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
Novisto	○	○	○	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
Persefoni	○	○	○	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
ProcessMAP	○	○	○	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
Project Canary	○	○	○	○	○	◐	◐	○	○	○	○	○	○	○	○	○
Quentic	○	○	○	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
Rio ESG	○	○	○	○	◐	◐	◐	○	○	○	○	○	○	○	○	○
Salesforce	◐	○	○	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
Schneider Electric	◐	○	○	◐	◐	◐	◐	○	○	○	○	○	○	○	○	○
Scope 5	○	○	○	○	◐	◐	◐	○	○	○	○	○	○	○	○	○
SINAI Technologies	○	○	○	○	●	◐	◐	○	○	○	○	○	○	○	○	○
Sphera	◐	○	○	◐	●	●	◐	○	○	○	○	○	○	○	○	○
UL	◐	○	○	◐	●	●	◐	○	○	○	○	○	○	○	○	○
VelocityEHS	○	○	○	○	●	◐	◐	○	○	○	○	○	○	○	○	○
Watershed	○	○	○	○	◐	○	○	○	○	○	○	○	○	○	○	○
Workiva	○	○	○	○	◐	◐	◐	○	○	○	○	○	○	○	○	○

- No demonstrated evidence
- ◐ Some product marketing
- ◑ Some evidence of functionality (e.g. product demo, video, named case study)
- ◒ Out-of-the-box targeted solution and multiple named customers
- Comprehensive coverage of all issues and functionalities with multiple named case studies

Source: Verdantix

use environmental management software for air emissions, water and waste from providers such as Cority, Enablon, Intalex, Quentic and **UL** should look to leverage existing systems of record to strengthen ESG management systems. New entrant Project Canary has also innovated by offering continuous emissions monitoring capabilities.

- **Product stewardship systems that allow LCA analysis and new product development.**

Many firms looking to operationalize ESG efforts will inevitably need to look beyond facility energy management practices and examine product-level footprint and R&D efforts. iPoint, Sphera and **UL** are three example vendors that have developed innovative software products to help manufacturers, retailers and consumer product firms scale product sustainability efforts. In addition to its GaBi LCA software, Sphera integrates with Siemens PLM to enable materials management at the product R&D and design phase (see [Verdantix Sphera Delivers Sustainability And Product Stewardship Excellence](#)). **UL's** SPOT database provides eco-data for over 130,00 product families, whilst iPoint works with over 50,000 customers globally to deliver capabilities including LCA analysis, Design for the Environment (DfE) and circular economy project management (see [Verdantix iPoint Guides Firms On The Journey From Product Compliance To Sustainability](#)).

- **Workflow management systems that strengthen auditability and data quality.**

Point solutions for voluntary corporate sustainability reporting frameworks are no longer sufficient; industry-leading firms require enterprise-grade ESG information management systems that allow executives to manage risks and govern operations in a decision-useful manner. With increasing regulations, such as the EU SFDR and mandatory TCFD reporting in select countries around the world, firms must look to software systems with strong workflow foundations and auditability. Example vendors with strong workflows and auditability of records, such as time-stamping changes and tracking of historical inputs, include ClearTrace, EcoMetrica, Enablon, Measurabl, Novisto, **UL** and Workiva. ClearTrace, for example, loads energy data into a blockchain ledger to create an auditable trail across the energy supply chain, whilst Enablon offers time-tested audit and workflow management capabilities in tandem with an EY partnership to enhance ESG data quality, collection and disclosure content.

FIGURE 6

ESG & Sustainability Software Capabilities Assessment (Vendors With <100 Employees)

	Risk Management				Operational Improvement				Product Stewardship				Disclosures And Reporting			
	Climate Change Physical & Transition Risks	Public Sentiment Monitoring	Stakeholder Management	Supply Chain & Suppliers Management	Energy & Carbon Management	Environmental Resource Management	Social Issues Management	Governance Issues Management	Product Compliance	LCA & Circular Economy	Product Eco-Design	Responsible Sourcing	Voluntary Frameworks	Regulated & Mandated Frameworks	Materiality Assessment	Workflows & Auditability
Accuvio	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
alva	○	●	○	○	○	○	○	○	○	○	○	○	○	○	○	○
APlanet	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
ClearTrace	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Datamaran	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Ecodesk	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Ecometrica	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Emex	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
EnHelix	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Envizi	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
FigBytes	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Goby	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Greenstone	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Measurabl	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Metrio	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Novisto	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Persefoni	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Project Canary	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Rio ESG	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Scope 5	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
SINAL Technologies	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Watershed	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

- No demonstrated evidence
- ◐ Some product marketing
- ◑ Some evidence of functionality (e.g. product demo, video, named case study)
- ◒ Out-of-the-box targeted solution and multiple named customers
- Comprehensive coverage of all issues and functionalities with multiple named case studies

Source: Verdantix

FIGURE 7

ESG & Sustainability Software Capabilities Assessment (Vendors With >100 Employees)

	Risk Management				Operational Improvement				Product Stewardship				Disclosures And Reporting			
	Climate Change Physical & Transition Risks	Public Sentiment Monitoring	Stakeholder Management	Supply Chain & Suppliers Management	Energy & Carbon Management	Environmental Resource Management	Social Issues Management	Governance Issues Management	Product Compliance	LCA & Circular Economy	Product Eco-Design	Responsible Sourcing	Voluntary Frameworks	Regulated & Mandated Frameworks	Materiality Assessment	Workflows & Auditability
Assent Compliance	○	◐	◐	◐	○	○	◐	○	◐	○	○	◐	◐	○	○	◐
Benchmark Digital	○	○	◐	◐	○	○	◐	○	◐	○	○	◐	◐	○	○	◐
Cority	◐	○	◐	◐	◐	●	◐	○	◐	○	○	◐	◐	○	○	◐
Diginex Solutions	○	○	◐	◐	○	○	◐	○	○	○	○	○	◐	○	○	◐
Diligent Corporation	○	○	◐	◐	○	○	◐	○	○	○	○	○	○	○	○	◐
DNV	◐	○	◐	◐	◐	◐	◐	◐	○	○	○	◐	◐	○	○	◐
EcoVadis	○	○	○	◐	◐	◐	◐	◐	○	○	○	◐	◐	○	○	◐
Enablon	◐	○	●	◐	◐	●	◐	○	○	○	○	◐	●	○	◐	◐
Goodera	○	○	◐	○	◐	◐	◐	◐	○	○	○	○	◐	○	○	◐
Intelex	○	○	●	◐	◐	●	◐	○	○	○	○	◐	◐	○	○	◐
iPoint	◐	○	○	◐	◐	◐	◐	○	●	○	◐	◐	◐	○	○	◐
IsoMetrix	◐	○	●	◐	◐	◐	◐	◐	○	○	○	○	◐	○	○	◐
Nasdaq	○	◐	◐	○	◐	◐	◐	○	○	○	○	◐	◐	○	○	◐
NAVEX Global	○	○	◐	◐	◐	◐	◐	○	○	○	○	◐	◐	○	○	◐
ProcessMAP	◐	○	◐	◐	◐	◐	◐	○	○	○	○	◐	◐	○	○	◐
Quentic	○	○	◐	◐	◐	●	◐	◐	○	○	○	○	◐	◐	○	◐
Salesforce	◐	○	◐	◐	◐	◐	◐	○	○	○	○	◐	◐	○	○	◐
Schneider Electric	◐	○	◐	◐	●	◐	◐	○	○	○	○	◐	◐	○	○	◐
Sphera	◐	○	●	◐	●	●	◐	○	●	○	◐	◐	●	○	○	◐
UL	◐	○	◐	◐	●	●	◐	○	○	○	○	◐	◐	○	○	◐
VelocityEHS	○	○	○	○	●	◐	○	○	●	○	○	◐	◐	○	○	◐
Workiva	○	○	○	○	◐	◐	◐	○	○	○	○	○	◐	○	○	◐

- No demonstrated evidence
- ◐ Some product marketing
- ◑ Some evidence of functionality (e.g. product demo, video, named case study)
- ◒ Out-of-the-box targeted solution and multiple named customers
- Comprehensive coverage of all issues and functionalities with multiple named case studies

Source: Verdantix



VERDANTIX CAPABILITIES

RESEARCH, ADVISORY, INSIGHTS & EVENTS

Through our research activities and independent brand positioning we provide clients with:

- Research relationships based on an annual research subscription
- Confidential advisory services such as commercial due diligence
- Thought leadership studies for brand building and lead generation
- Executive summits, roundtables and webinars
- Advisory workshops to rapidly increase your sector knowledge
- Multi-country and complex customer survey projects
- Marketing campaign support with analysts and content

VERDANTIX MARKET COVERAGE

Environment, Health & Safety

Focuses on the software and services markets that enable corporations to improve their performance across environment, health and safety including compliance, risk and performance.

Operational Excellence

Focuses on helping managers in operations, asset reliability, process safety and maintenance roles to leverage technologies which enhance production reliability, asset health and operational safety.

Smart Building Technologies

Focuses on software, intelligent building technologies and consulting services that enable real estate and facilities executives to optimize the value and performance of their building portfolios.

Industrial Wearables

Focuses on wearable devices for vital signs monitoring, location tracking and musculoskeletal enhancement. Includes analysis of virtual reality and augmented reality deployed on HMDs and smartphones.

WHY VERDANTIX?

Verdantix is an independent research and consulting firm with a focus on innovative technologies that optimize business operations. We have expertise in environment, health, safety, quality, operational risk, as well as smart building technologies.

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UL Appendix - Data Conversion Chart

	Risk Management					Operational Improvement					Product Stewardship					Disclosure and Reporting					Grand Total
	Climate Change Physical & Transition Risks	Public Sentiment Monitoring	Stakeholder Management	Supply Chain & Suppliers Management	Total	Energy & Carbon Management	Environmental Resource Management	Social Issues Management	Governance Issues Management	Total	Product Compliance	LCA & Circularity	Product Eco-Design	Responsible Sourcing	Total	Voluntary Frameworks	Regulated & Mandated Frameworks	Materiality Assessment	Workflows & Auditability	Total	
1 Sphera	2	0	4	2	8	4	4	3	2	13	4	4	3	3	14	4	4	2	4	14	49
2 UL	2	0	3	2	7	4	4	3	2	13	4	4	1	4	13	4	4	2	4	14	47
3 Enablon	2	0	4	3	9	4	4	3	3	14	4	0	0	2	6	4	4	3	4	15	44
4 IsoMetrix	2	0	4	3	9	3	3	4	3	13	2	0	0	0	2	4	3	2	4	13	37
5 Novisto	2	1	2	3	8	2	2	2	2	8	1	1	0	2	4	4	4	3	4	15	35
6 FigBytes	2	1	2	3	8	3	4	3	2	12	1	0	0	2	3	4	2	3	3	12	35
7 iPoint	2	0	0	3	5	3	3	2	0	8	4	4	3	4	15	2	2	0	2	6	34
8 Benchmark Digital	0	0	2	3	5	3	4	2	0	9	3	1	1	3	8	3	2	2	4	11	33
9 Cority	1	0	2	2	5	4	4	2	2	12	3	1	0	2	6	3	2	0	4	9	32
10 DNV	2	0	2	2	6	3	3	2	2	10	2	0	0	2	4	3	2	2	4	11	31
11 NAVEX Global	0	0	0	2	2	3	3	2	4	12	0	0	0	3	3	4	3	2	3	12	29
12 Quentic	0	0	2	2	4	4	4	2	1	11	2	0	0	0	2	3	3	2	4	12	29
13 Schneider Electric	3	0	2	3	8	4	2	2	2	10	0	1	0	0	1	3	2	2	3	10	29
14 Nasdaq	0	2	2	0	4	2	2	2	2	8	0	0	0	2	2	4	3	3	4	14	28
15 Intelx	0	0	4	3	7	3	4	2	0	9	3	0	0	0	3	3	2	0	3	8	27
16 ProcessMAP	1	0	2	2	5	3	3	2	0	8	3	0	0	0	3	3	3	0	4	10	26
17 Envizi	2	0	0	0	2	4	3	3	2	12	0	0	0	0	0	4	3	0	4	11	25
18 EcoVadis	0	0	0	4	4	1	4	4	0	9	2	0	0	3	5	4	0	1	2	7	25
19 Datamaran	0	0	0	1	1	2	2	2	2	8	1	0	0	0	1	3	3	4	3	13	23
20 Ecometrica	2	0	0	2	4	3	3	0	0	6	0	0	0	0	0	4	4	0	4	12	22
21 VelocityEHS	0	0	0	0	0	4	3	2	0	9	4	2	0	0	6	2	2	0	3	7	22
22 Metrio	0	0	0	1	1	2	2	2	2	8	1	0	0	1	2	4	2	2	2	10	21
23 Measurabl	2	0	0	0	2	4	2	0	0	6	0	0	0	0	0	4	4	0	4	12	20
24 Greenstone	0	0	0	3	3	3	2	0	0	5	0	0	0	0	0	4	4	1	3	12	20
25 Emex	0	0	0	0	0	2	3	1	1	7	1	0	0	1	2	3	2	3	3	11	20
26 Accuvio	0	0	1	2	3	3	3	1	0	7	0	0	0	1	1	3	2	0	3	8	19
27 APlanet	0	0	3	0	3	0	0	2	0	2	0	0	0	0	0	4	1	3	3	11	16
28 Assent Compliance	0	1	1	3	5	0	0	1	1	2	4	0	0	2	6	1	0	0	2	3	16
29 Rio ESG	0	0	0	0	0	1	1	1	1	4	0	0	0	0	0	3	1	3	3	10	14
30 Diginex Solutions	0	0	1	1	2	0	0	3	0	3	0	0	0	0	0	2	2	2	2	8	13
31 Persefoni	2	0	0	2	4	4	0	0	0	4	0	0	0	0	0	2	1	0	2	5	13
32 Workiva	0	0	0	0	0	1	1	1	1	4	0	0	1	0	1	2	1	0	4	7	12
33 Goby	0	0	0	0	0	2	1	1	1	5	0	0	0	0	0	4	0	1	2	7	12
34 Goodera	0	0	1	0	1	2	2	2	1	7	0	0	0	0	0	1	0	0	3	4	12
35 Salesforce	1	0	1	1	3	3	1	1	0	5	0	0	0	0	0	2	1	0	1	4	12
36 Alva	0	4	2	0	6	0	0	0	2	2	0	0	0	2	2	0	0	2	0	2	12
37 EnHelix	0	0	1	1	2	1	1	1	1	4	0	0	0	0	0	2	1	1	1	5	11
38 ClearTrace	1	0	0	0	1	4	0	0	0	4	0	0	0	2	2	0	0	0	4	4	11
39 SINAI Technologies	2	0	0	1	3	4	0	0	0	4	0	0	0	0	0	1	1	0	2	4	11
40 Watershed	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	2	2	0	3	7	10
41 Scope 5	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	3	1	0	2	6	10
42 Project Canary	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	2	2	0	2	6	10
43 Ecodesk	0	0	0	1	1	2	2	0	0	4	1	0	0	1	2	1	0	0	2	3	10
44 Diligent Corporation	0	0	1	1	2	0	0	0	3	3	0	0	0	0	0	0	0	0	3	3	8

*This chart was created by UL as a data representation of the Verdantix comparison graphic