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Net Zero & Climate Risk

Green Quadrant: Climate Change Consulting 2023

By Connor Taylor and Alastair Foyn With Ryan Skinner

June 2023





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This report provides a detailed, fact-based benchmark of 15 of the most prominent climate change consulting providers in the market. Based on the proprietary Verdantix Green Quadrant methodology, our analysis included two-hour live briefings, customer interviews and vendor responses to a detailed 94-point questionnaire, covering 15 capability and three momentum categories. The market for climate change consulting has grown significantly in recent years, driven by corporate investment in climate change initiatives to prepare for climate change transition; providers are concurrently investing to improve their capabilities across strategy, technical and implementation services. Amongst the providers featured in the Leaders' Quadrant, six firms – Deloitte, ERM, EY, KPMG, PwC and WSP – demonstrated the most comprehensive climate change consulting capabilities.

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PwC's global network provides net zero strategy and emissions data assurance expertise

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Organizations mentioned

3Degrees, Accenture, AECOM, Aesop, AFARA, Airport Authority Hong Kong, Amazon Web Services (AWS), Amgen, Anthesis, Apollo Global Management, Arcadis, Attalea, Avon, Bain, Barclays, BCG, Body Shop, Brazil's National Council for Scientific and Technological Development (CNPq), Brazil's Securities and Exchange Commission (CVM), Bristol Myers Squibb, BTG, Bureau Veritas, Carbon Care Asia, (CDP) Carbon Disclosure Project, Carbon Intelligence, CBA (Companhia Brasileira de Alumínio), Cervest, ClearBlue Markets, Climate Action 100+, Climate Neutral Group, CLIMsystems, Coho, Committee of Sponsoring Organizations of the Treadway Commission (COSO), CoolPlanet, Corporate Knights, Deloitte, Disney World, Electric Power Research Institute (EPRI), Enablon, ENGIE Impact, ERM, Esri, Euronext, EV Connect, ExxonMobil, EY, Faurecia, Federal University of Paraiba (UFPB), ForFuturing, Fortune, Fujitsu, G20 Financial Stability Board, GHG Protocol, Giftge Consult, Glasgow Financial Alliance for Net Zero (GFANZ), Global Logistics Emissions Council (GLEC), Global Reporting Initiative (GRI), Golder, Google, Green Domus, GUESS, Hawaii Department of Transportation, IBI Group, IBM, IFRS Foundation, Initiative Climat International (iCI), Intelex, Intergovernmental Panel on Climate Change (IPCC), International Carbon Reduction and Offset Alliance (ICROA), International Energy Agency (IEA), JBS Global, Johnson Controls International (JCI), John Wood Group, JPMorgan Chase & Co., KKR, KPMG, LevelTen Energy, LGIM, MarineSpace, Mastercard, McDonald's, McKinsev & Company, Microsoft, Minerya Foods, Mondelez International, Moody's Analytics, Natura & Co. Natural Climate Solutions Alliance, Network for Greening the Financial System (NGFS), NINT, OCT Emissions Solutions, Origin Climate, Ørsted, PACER, Padd Energy, Partnership for Carbon Accounting Financials (PCAF), Patch, Persefoni, Planet Labs, Point Advisory, pulsESG, PwC, Quantis, Ramboll, Refinitiv, Resultante, Salesforce, Santander, SAP, Scandiaconsult, Schneider Electric, Science Based Targets initiative (SBTi), Science Based Targets Network (SBTN), ServiceNow, Siemens, SLR, South Pole, Sphera, State of Texas, Station A, Sweep, Task Force on Climate-related Financial Disclosures (TCFD), Task Force on Nature-related Financial Disclosures (TNFD), TechnipFMC, Transition Plan Taskforce (TPT), Trinity AgTech, UK Department for Environment, Food & Rural Affairs (Defra), UK Green Building Council (UKGBC), UK National Highways, UNESCO, UN Global Compact, UN Net-Zero Banking Alliance (NZBA), UN Principles For Responsible Investment (UN PRI), US Environmental Protection Agency (EPA), US National Basketball Association (NBA), US Securities and Exchange Commission (SEC), Vale, Verisk, Walmart, Watershed, WayCarbon, Workday, Workiva, World Business Council for Sustainable Development (WBCSD), World Resources Institute (WRI), WSP, WTW, Zeigo.

The state of the climate change consulting market

The landscape for climate change consulting has expanded significantly in recent years. A shifting global climate regulatory landscape, growing stakeholder interest, and increasing awareness of the threat climate change poses to business are forcing firms to develop climate change transition strategies. Managing the climate change transition requires firms to invest in internal management, governance and implementation structures, and consider how to demonstrate performance to external markets. These requirements have led global services firms from diverse backgrounds to develop climate change consulting offerings, combining previously distinct net zero and climate-risk-related services. The climate change consulting market is therefore in a rapid evolutionary phase.

To aid climate change decision-makers in selecting best-fit service provider partners, this report provides an in-depth assessment of 15 prominent climate change consulting providers. The report seeks to answer the following questions for buyers of these services:

- What is the current state of the climate change consulting market?
- Which providers lead the market?
- Which service providers can best meet the requirements of my firm?
- How will the market develop in the near future?

To answer these questions, Verdantix assessed 15 climate change consulting providers through a 94-point questionnaire, a two-hour briefing with participants, and interviews with more than 30 customers across a range of industries. The analysis is based on the Verdantix proprietary Green Quadrant methodology, which provides an evidence-based, objective assessment of providers offering comparable products or services.

The climate change consulting market is growing

Organizations are under increasing pressure to demonstrate their impact on and resilience to climate change. This is expressed through voluntary commitments, such as setting public net zero and decarbonization targets, and – increasingly – through regulatory expectations, which ultimately impact operational strategies. Concurrently, businesses are growing more aware of climate change risks, stemming both from the physical events around them that potentially impact their operations, and from the associated impacts of climate change on the economy, policy and capital markets. In response to this demand, the climate change consulting market has seen high levels of investment and activity, both from specialist and more diverse global services firms.

Policy and stakeholder requirements drive growth in the climate change consulting market

Growing pressure on organizations to demonstrate resilience towards climate change has resulted in a surge of demand for relevant consulting across strategy, technical and implementation projects. In 2022 the net zero consulting market alone reached \$3.5 billion (see **Figure 1**) and is forecast to hit \$15.8 billion by 2028. Related markets, including digital solutions for carbon management and climate risk, are forecast to grow by CAGRs of 28% and 30%, respectively, in 2022-28. This market growth is caused by:

• Increasing financial risk stemming from poor climate transition planning.

Firms across sectors are more exposed than ever to material financial risks relating to climate change practices, and stakeholders increasingly demand that organizations create viable climate change transition plans. In April 2023 LGIM and a US investor announced that they were challenging ExxonMobil's climate change plans, noting concerns based on the cost of decommissioning current downstream assets and a lack of alignment with the Paris Agreement; just two years previously, Exxon's board had been restructured, following activist investor pressure. Firms across sectors are therefore developing strategies to demonstrate that they are transitioning activities to align with a low-carbon economy.

• Growing regulatory pressure based on the 'double materiality' concept.

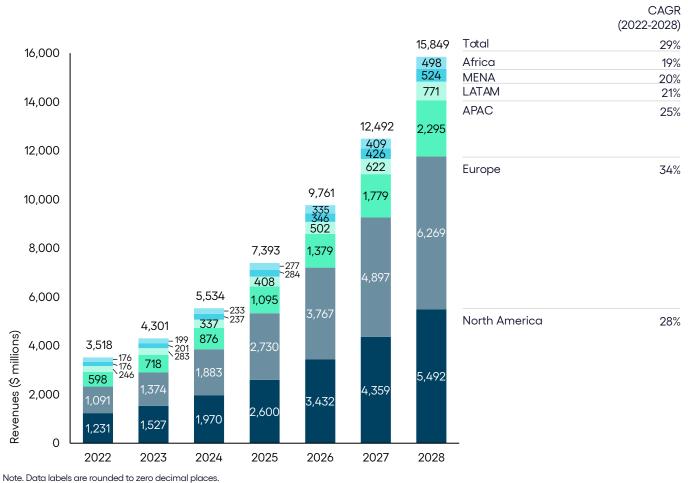
The national decarbonization targets of the 2015 Paris Agreement, along with the desire of regulators to reduce climate risk exposure for financial investors, are driving new climate legislation. The critical concept underpinning new laws is 'double materiality', which recognizes that a firm's impacts – beyond finance – can be material both to the firm itself and to the world at large. The principle is implicit in the Task Force on Climate-related Financial Disclosures (TCFD), which is the basis of both existing and upcoming climate change disclosure regulation in the UK, US, Canada, Brazil and New Zealand. The EU's Corporate Sustainability Reporting Directive (CSRD) is one of the most comprehensive double-materiality-aligned regulations passed to date (see Verdantix Strategic Focus: The Most Challenging Climate Reporting Requirements Of The EU's CSRD).

• Development of climate change funding incentives.

In August 2022 the Federal Inflation Reduction Act was passed in the US. It represents the most significant global funding policy for climate change to date (see <u>Verdantix Strategic Focus: The Impact Of The Inflation</u> <u>Reduction Act In The US</u>). Of the \$394 billion aimed at energy transition, some \$270 billion comprises incentives for private investment in the form of tax credits, alongside grants and loan guarantees. These incentives will drive significant private investment in areas such as renewable energy, electrified transport and manufacturing. Firms require services to help them navigate the incentive landscape and design strategy and implementation plans to develop these new assets.

Figure 1

The net zero consulting market is set to hit \$15.8bn by 2028



The climate change consulting market is taking shape

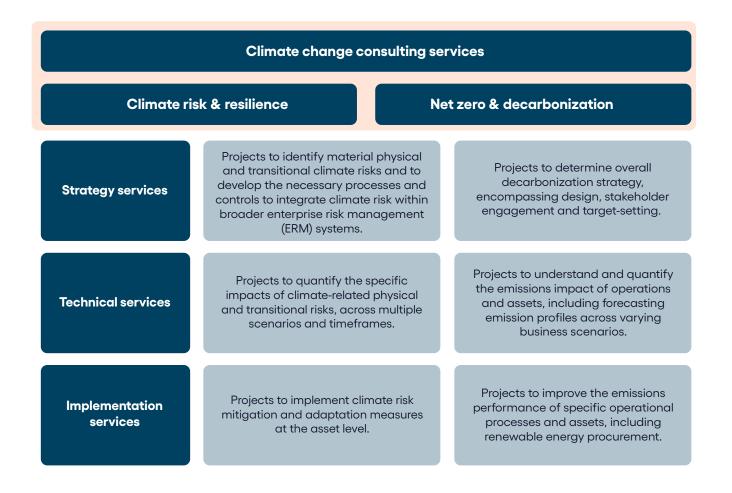
The dramatic upsurge of investment and demand for climate change consulting is driving rapid change across the market. Consequently, providers are revamping offerings to address demand and remain competitive – a strategy that involves using both pre-existing consulting specialities and building out new dedicated service areas for climate change consulting.

Climate change consulting clients need strategy, technical and implementation help

Creating and implementing climate transition plans requires corporate action to define overall ambition and direction, collect and understand critical climate-related data, and improve operational processes to support progress towards predefined projects. Consequently, three dominant forms of climate change consulting project have emerged: strategy services, technical services and implementation services projects (see **Figure 2**). These three categories of consulting project help firms:

Figure 2

The three categories of climate change consulting



• Refine and develop climate change strategies.

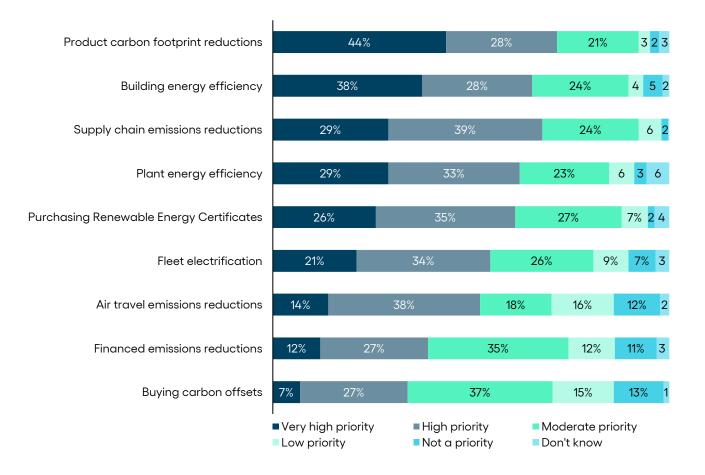
Climate change strategies reflect a business's climate transition plan. To achieve their goals, firms seek help from consultants for overarching strategy support. One executive director of corporate sustainability strategy at a Fortune 100 pharmaceuticals firm described her experience of strategy-oriented climate change consulting as "an ongoing partnership, focused on high-level target-setting, strategic objectives planning, and board engagement. We typically engage in these projects alongside more operationally oriented decarbonization initiatives."

• Address the technical aspects of impact quantification and climate exposure.

Disclosures form an integral part of overall climate change strategy: they are the vehicle through which strategic ambitions, such as decarbonization targets or climate risk mitigation initiatives, are communicated. Technical climate change service projects help firms quantify information relating to climate change, boosting the accuracy and applicability of disclosures, and ultimately improving performance. The sustainability director of a global cosmetics group stated: "We selected a consulting partner to help us implement data management structures to support TCFD implementation; we felt we lacked the technical skill to do this in-house...the core elements of this project were focused on emissions management and climate risk quantification."

Figure 3

Firms will prioritize operational decarbonization over the next three years In the next three years, to what extent will your firm prioritize the following decarbonization initiatives?



Note: Data labels are rounded to zero decimal places; percentages less than 7% are written as numbers. Source: Verdantix Net Zero And Climate Risk Global Corporate Survey 2023

N=350

• Implement operational decarbonization and climate risk mitigation at the asset level.

To improve climate change performance, firms must implement strategies at the operational level; operational decarbonization is therefore a very high priority for a significant proportion of firms (see **Figure 3**). Implementation services cover projects designed to improve the carbon performance or climate risk resilience of particular assets or groups of assets, encompassing energy efficiency, direct climate risk mitigation infrastructure, and on-site carbon capture. The Head of Net Zero at a Fortune 100 technology business said: "We are past the strategy-setting phase. Our consulting partner helps us both define and implement a range of initiatives, such as hydrogen, biofuels... they tell us what specific sources to use, in great technical detail."

Climate change consulting offerings are nascent and heterogenous

Climate change consulting providers have mature offerings across certain services relating to climate transition, such as emissions reporting. Nonetheless, providers are grappling with how best to integrate these offerings within an overarching service delivery strategy to gain traction within the market as a whole. As part of this goal, climate change consulting providers have:

• Entered the market with very different types of expertise.

The climate change consulting market consists of dedicated climate change specialists – who frequently have strong legacies in broader sustainability and environmental consulting – and global consulting providers from engineering, design expertise, tax and management consulting backgrounds, who are redefining offerings to compete in the climate change consulting market. EY, for example, has developed a cross-functional team of disclosure specialists combining sustainability professionals from the EY Climate Change and Sustainability Services practice with financial reporting specialists from the EY Financial Accounting Advisory Services practice.

Identified climate change services as pivotal to their own commercial strategies.

Although providers have been offering climate-change-related services for decades, they now consider such offerings as core to the future of their business. Engineering and professional services firm WSP announced its business-wide 'Future Ready' strategy in 2022, highlighting climate change as central to its overall business innovation planning. PwC has defined energy transition as one of its few 'future bets' – a candidate to become one of its core market priorities. Consulting providers are also developing their own climate change strategies; Deloitte, as part of its 'WorldClimate' strategy, has committed to achieve net zero by 2030.

• Ramped up investment in climate-change-related capabilities.

To develop market-leading offerings, providers have stepped up levels of internal investment in climate change consulting capabilities, manifested in dedicated climate-change-related centres of expertise, such as KPMG's Global Decarbonization Hub and PwC's Centre for Nature Positive Business. Providers are also investing in new dedicated practice areas, such as WTW's launch of Climate Risk Solutions for Corporate Risk and Broking in May 2023, and Deloitte's GreenSpace Tech, designed to help clients deploy technology to decarbonize.

• Partnered with complementary service providers to fill gaps in their offerings.

In recognition that no one provider is currently able to deliver the full range of services across industries to help firms manage climate change, providers are seeking out partners from varying service backgrounds. Typically, this has occurred between providers with backgrounds in strategy development and delivery, and those with asset-level and technical implementation experience. Dedicated sustainability services provider Anthesis partnered with Fujitsu in April 2023; earlier that year, Schneider Electric announced a partnership with Bain.

• Invested in internal training to lift their climate change capacity.

Global professional service providers are training employees, to prevent the availability of unique climate-change-related specializations becoming a bottleneck to project delivery in key areas such as climate risk. Since 2022, Bain, BCG and Deloitte have announced employee training initiatives for climate-change-related skills. These developments indicate that service firms are not only increasing their capabilities for delivering dedicated climate change consulting projects, but are seeking to embed sustainability expertise across business units.

Market movements demonstrate provider ambition to deliver end-to-end services

The climate change consulting market has experienced a surge in activity in the last 12 months, as global providers aim to develop capabilities through acquisitions of dedicated specialists, and partnerships with providers of complementary offerings. This underpins the growing ambition of providers to offer broad capabilities across the life cycle of climate-change-related services. Key trends that have shaped the market are the:

• Race to acquire dedicated specialists.

In a bid to rapidly increase capability across climate change consulting, global providers have prioritized tactical acquisitions of specialist firms (see **Figure 4**). These acquisitions have the dual benefit of building capabilities in specific areas of climate change consulting delivery – such as ERM's acquisition of renewable energy advisory firm Coho in February 2023 – and increasing geographic penetration: witness EY's acquisition of Spanish ESG consulting firm Attalea in February 2023. Such acquisitions signal a desire from service providers to not only increase the depth of their service delivery, but also the breadth – becoming a kind of 'one-stop shop'. Illustrating this, in December 2022 Deloitte acquired infrastructure-focused consultant PACER.

Figure 4 Climate change consulting market transactions 2022-23

Date	Transaction	Desciption
May -23	Acquisition	Accenture acquires dedicated sustainability consultancy Green Domus
Mar-23	Acquisition	ERM acquires sustainable finance advisory firm NINT
Feb-23	Acquisition	ERM acquires climate and renewable energy advisory firm Coho
Feb-23	Acquisition	EY acquires ESG consulting provider Attalea
Dec-22	Acquisition	Deloitte acquires infrastructure consultant PACER
Dec-22	Acquisition	BCG acquires sustainability consultancy Quantis
Sep-22	Acquisition	EY acquires ESG consulting provider AFARA
Sep-22	Acquisition	Accenture acquires climate change consultancy Carbon Intelligence
Jul-22	Acquisition	ERM acquires marine environment consultancy MarineSpace

• Expansion of digital capabilities to support climate change project delivery.

Managing diverse decarbonization, climate risk and transition planning initiatives requires digital investment to support data aggregation and reporting efforts. Climate change consulting providers are seeking to differentiate by developing robust digital tools – whether through partnerships with existing technology vendors or by proprietary technology development (see **Figure 5**). Many providers have partnerships with global technology firms such as Amazon Web Services (AWS), Google, Microsoft and SAP, or specialized software for carbon or climate risk management. ERM, EY and KPMG have created their own platforms for climate risk quantification and scenario analysis; for emissions management, consulting providers such as BCG and ENGIE Impact – with its digital solution, ENGIE Ellipse – offer proprietary digital tools.

Figure 5

Climate change consulting digital partnerships and product launches 2022-23

Date	Transaction	Desciption
May -23	Partnership	KPMG partners with decarbonization solution provider CoolPlanet
May -23	Partnership	KPMG partners with carbon management platform Watershed
May -23	Partnership	ERM partners with satellite data provider Planet Labs
May -23	Product launch	EY launches blockchain-based emissions tracking solution, EY OpsChain ESG
May -23	Partnership	Accenture partners with climate risk platform Cervest
Apr-23	Product launch	Deloitte launches Scope 3 emissions calculator on the Workiva platform
Apr-23	Partnership	ERM partners with carbon management solution provider Persefoni
Apr-23	Product launch	Schneider Electric launches decarbonization platform Zeigo
Mar-23	Product launch	Deloitte launches decarbonization platform GreenLight Tech
Mar-23	Partnership	EY partners with IBM to offer sustainability strategy solutions
Feb-23	Partnership	ERM partners with Salesforce to offer decarbonization solutions
Feb-23	Partnership	KPMG partners with Workiva to provide ESG solutions and services
Dec-22	Partnership	PwC partners with SAP to provide ESG strategy and reporting solutions
Nov-22	Partnership	Deloitte partners with Persefoni to provide carbon management solutions for banks and insurers
Oct-22	Partnership	EY partners with Microsoft to develop decarbonization solution
Sep-22	Partnership	McKinsey partners with Microsoft to develop decarbonization solutions
Aug-22	Product launch	Deloitte launches sustainability solutions suite with SAP
Jul-22	Investment	Accenture invests in ESG measurement platform pulsESG
May-22	Partnership	PwC partners with ESG and sustainability platform Sphera

Green Quadrant for climate change consulting

Clients of climate change consulting providers seek firms that demonstrate strong subject-matter expertise, experience within relevant industries, and the ability to engage with senior executives and management. Depending on which service is required – and the maturity of the client – relative strengths across strategy, technical and implementation capabilities are strong determining factors for selection.

Clients engage with climate change consulting to help them reduce their contributions towards climate change, and to create a robust transition plan to ensure the ongoing resiliency of the business against the impacts of climate change. Verdantix defines climate change consulting as:

"Services – comprising skilled professionals, methodologies and data resources – that support organizations on their journeys towards decarbonization and climate resilience, encompassing strategy, operations, opportunities and risk."

This Green Quadrant study benchmarks climate change consulting offerings against four meta categories: climate resilience strategy and implementation; net zero carbon strategy and implementation; climate data management and disclosures; and asset-level decarbonization.

Green Quadrant methodology

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

• Transparent inclusion criteria.

We work to analyse all providers that would qualify for inclusion in the research. For those providers that decline our invitation or fail to respond, we work to include them based on publicly available information that would provide an impression of those firms' market positioning if such information was deemed complete and sufficiently accurate to form a basis for benchmarking.

• Analysis from a buyer's perspective.

For this Green Quadrant, we spoke with 30 climate change consulting buyers to understand the relevant buying requirements and weight the evaluation criteria in the model that drives the Green Quadrant analysis graphic. Additionally, we utilized data from Verdantix corporate surveys of net zero and climate change decision-makers.

• Scores based on available evidence.

As it would be unfeasible to check all data and claims that providers make, we emphasize the need for professional integrity. Correspondingly, competitors and existing customers can check each provider's assertions, as they are placed in the public domain through this report.

• Reliance on professional integrity.

To assess the expertise, resources, business results and strategies of individual providers, we collected evidence from public sources and conducted interviews with multiple representatives of each services provider, as well as industry experts. When providers claimed to be 'best in class', we challenged them to present related evidence.

• Comparison based on relative capabilities.

We constructed measurement scales ranging from 'worst in class' to 'best in class' performance at a certain point in time for each assessment category. A provider's position in the market can change over time depending on how its offering and success evolve compared with its competitors. This means that even if a provider adds new capabilities, makes a strategic acquisition or receives new investment, its Quadrant positioning may not improve relative to other consultants, if its competitors also enhance their offerings. Verdantix repeats a Green Quadrant analysis for a product or service market annually or every two years, to capture these transitions over time.

Evaluated firms and selection criteria

Verdantix defines vendor inclusion criteria to ensure that the Green Quadrant analysis only compares firms with the potential to support implementations of comparable scale and complexity. The 15 climate change consulting providers included in this study were selected because they had:

• Coverage of over half the Green Quadrant capability categories.

To ensure that participants can deliver a wide range of climate change consulting projects – and thereby ensure a competitive analytical playing field – vendors were only included in this Green Quadrant if they demonstrated capabilities across at least 50% of the following capability categories: climate resilience strategy and implementation; net zero carbon strategy and implementation; climate data management and disclosures; and asset-level decarbonization.

• At least 200 dedicated climate change consultants, or employees.

Firms only qualified for participation within this Green Quadrant if they employed 200 dedicated climate change consultants. Although firms with a smaller consulting and advisory capacity may be able to provide similar capabilities to those of their larger counterparts, our research finds that they cannot deliver a suitable breadth of project delivery across categories to meet the needs of all buyers. For firms whose commercial offerings are focused on climate-change-related services, a minimum of 200 employees was required for inclusion within the Green Quadrant.

• A global presence, with at least two offices in separate countries.

To qualify for this benchmark study, participants had to operate out of at least two distinct offices in separate countries.

Based on the inclusion criteria above, this report evaluated 15 climate change consulting providers: 3Degrees, AECOM, Anthesis, Arcadis, Deloitte, ENGIE Impact, ERM, EY, KPMG, PwC, Ramboll, Schneider Electric, SLR, WayCarbon and WSP. All implementation service firms in this study actively participated through interviews and provided responses to a 94-point questionnaire. Verdantix also invited Accenture, Bain, BCG, McKinsey & Company, Siemens and South Pole to participate, but these firms chose not to do so.

Evaluation criteria for climate change consulting providers

Verdantix defined the evaluation criteria for the Green Quadrant climate change consulting study through a combination of interviews with senior executives, desk research, discussions with multiple customers and staff expertise. In full, this year's Green Quadrant analysis compares offerings from 15 consulting firms, using a 94-point questionnaire covering 15 categories of capabilities and three categories of market momentum. Individual metrics were classified as follows:

• Capabilities metrics.

The capabilities dimension, plotted on the vertical axis of the Green Quadrant graphic, was used to measure each consulting firm's climate change consulting based on the breadth and depth of that firm's service approach, its differentiators against other providers, and its proven experience in each area. In specific categories, where applicable, additional questions covering technical expertise, digital offerings and volumes of renewable energy and offset procurement were used to measure performance. In total, we assessed the providers across 72 capability criteria, representing 15 distinct capability categories.

• Momentum metrics.

The momentum dimension of the analysis, captured on the horizontal axis of the Green Quadrant graphic, was used to measure each consulting firm based on its vision and strategy, climate change consulting revenue size, and partnerships. Additional information was collected concerning customer bases, but was not scored in a distinct category. In total, we assessed the providers across 22 momentum criteria, representing three distinct momentum categories.

The combination of high-level criteria scores in the Capabilities and Momentum sections generate the Green Quadrant graphic and rankings. **Figure 6** and **Figure 7** provide details of the study criteria; **Figure 8** and **Figure 9** show the scoring for all participants against the criteria. **Figure 6** also presents the weighting of each primary criterion, shown inside the parentheses. **Figure 10** provides the Green Quadrant graphic summarizing the positioning of all consulting firms in this benchmark study.

Figure 6

Capabilities criteria for climate change consulting services

Meta service line	Capabilities	Questions
	Climate risk, strategy and governance (8%)	What are your capabilities for delivering climate risk strategy and governance engagements for clients? How does your firm differentiate its approach to climate risk strategy and governance engagements? How many projects have you completed in the last 12 months?
Climate resilience strategy and implementation	Climate mitigation, adaptation and implementation (7%)	What are your capabilities for delivering climate mitigation and adaptation engagements for clients? How does your firm differentiate its approach to climate mitigation, adaption strategy and implementation engagements? How many projects have you completed in the last 12 months?
	Climate risk quantification and scenario analysis (9%)	What are your capabilities for delivering climate risk quantification and scenario analysis engagements for clients? How does your firm differentiate its approach to climate risk quantification and scenario analysis engagements? How does your firm support digital requirements relating to climate risk quantification and scenario analysis? How many projects have you completed in the last 12 months?
	Net zero strategy, governance and target-setting (5%)	What are your capabilities for delivering net zero strategy, governance and target-setting engagements for clients? How does your firm differentiate its approach to net zero strategy, governance and target-setting engagements? How does your firm support digital requirements relating to net zero strategy, governance and target-setting? How many projects have you completed in the last 12 months?
Net zero carbon strategy and	Carbon credit support and sourcing (4%)	What are your capabilities for delivering carbon credit support and sourcing engagements for clients? How does your firm differentiate its approach to carbon credit support and sourcing engagements? What volume of credits has your firm sourced or developed for clients? How many projects have you completed in the last 12 months?
implementation	Net zero programme management (8%)	What are your capabilities for delivering net zero progamme management engagements for clients? How does your firm differentiate its approach to net zero progamme management engagements? How many projects have you completed in the last 12 months?
	Financed emissions management (5%)	What are your capabilities for delivering financed emissions management engagements for clients? How does your firm differentiate its approach to financed emissions management engagements? How does your firm support digital requirements relating to financed emissions management? How many projects have you completed in the last 12 months?

Figure 6 (continued) \downarrow

Figure 6 (continued)

	Climate risk, opportunity and adaptation disclosures (8%)	What are your capabilities for delivering climate risk, opportunity and adaptation disclosure engagements for clients? How does your firm differentiate its approach to climate risk, opportunity and adaptation disclosure engagements? How many projects have you completed in the last 12 months?
Climate data	Net zero disclosures (8%)	What are your capabilities for supporting net zero disclosure engagements for clients? How does your firm differentiate its approach to net zero disclosure engagements? How many projects have you completed in the last 12 months?
management and disclosures	Carbon data management and accounting (4%)	What are your capabilities for delivering carbon data management and accounting engagements for clients? How does your firm differentiate its approach to carbon data management and accounting engagements? How does your firm support digital requirements relating to carbon data management and accounting? How many projects have you completed in the last 12 months?
	Emissions data assurance (7%)	What are your capabilities for delivering emissions data assurance for clients? How does your firm differentiate its approach to emissions data assurance engagements? How many projects have you completed in the last 12 months?
	Built environment decarbonization (8%)	What are your capabilities for delivering built environment decarbonization engagements for clients? How does your firm differentiate its approach to built environment decarbonization engagements? What specific technical capabilities (e.g. engineering expertise) does your firm offer for built environment decarbonization projects? How does your firm support digital requirements relating to built environment decarbonization? How many projects have you completed in the last 12 months?
Asset-level	Industrial plant decarbonization (7%)	What are your capabilities for supporting industrial plant decarbonization engagements for clients? How does your firm differentiate its approach to industrial plant decarbonization engagements? What specific technical capabilities (e.g. engineering expertise) does your firm offer for industrial plant decarbonization projects? How does your firm support digital requirements relating to industrial plant decarbonization? How many projects have you completed in the last 12 months?
decarbonization	Fleet decarbonization (7%)	What are your capabilities for delivering fleet decarbonization engagements for clients? How does your firm differentiate its approach to fleet decarbonization engagements? What specific technical capabilities (e.g. engineering expertise) does your firm offer for fleet decarbonization projects? How does your firm support digital requirements relating to fleet decarbonization? How many projects have you completed in the last 12 months?
	Renewable energy supply and energy decarbonization (7%)	What are your capabilities for delivering renewable energy supply and energy decarbonization engagements for clients? How does your firm differentiate its approach to renewable energy supply and energy decarbonization engagements? What is the volume of renewable energy sourced for clients over the last 12 months, including both PPAs and unbundled RECs? How many projects have you completed in the last 12 months?
Figures in brackets repres	sent the weighting given to each criterion	including both PPAs and unbundled RECs? How many projects have you completed

Figure 7

Momentum criteria for climate change consulting services

Momentum	Questions
Vision & strategy	How do you see market demand for climate change consulting services engagements evolving over the next two to three years? What is your firm's strategy for competitive positioning, differentiation and growth in the climate change consulting services market? What is your innovation and R&D strategy to remain at the forefront of climate change consulting services expertise? Which acquisitions relating to climate change consulting services have you made in the past 12 months?
Climate change consulting services revenue size (2022/23)	Which acquisitions relating to climate change consulting services have you made in the past 12 months? How many climate change consulting services clients have you delivered engagements for since March 2022? How much revenue have you generated from climate change consulting services engagements since March 2022? What is the average cost per climate change consulting services engagement signed or delivered since March 2022?
Partnerships	With which technical and engineering services firms do you have a formal alliance? With which software firms do you have a formal alliance? With which industry associations (e.g. power utility, food and beverage) have you partnered? Which climate and carbon organizations (e.g. CDP, IFRS) are you a member of?

Figure 8 Vendor criteria scores (Capabilities)

		3Degrees	AECOM	Anthesis	Arcadis	Deloitte	ENGIE Impact	ERM	EY	KPMG	PwC	Ramboll	Schneider Electric	SLR	WayCarbon	WSP
Climate resilience	Climate risk, strategy and governance	1.2	1.7	1.6	1.7	2.4	1.4	2.0	2.5	2.5	2.2	1.5	1.2	2.0	1.5	2.0
strategy and	Climate mitigation, adaptation and implementation	0.6	2.3	1.8	2.1	1.5	1.1	1.8	1.8	1.8	1.6	2.3	0.9	1.6	1.1	2.4
implementation	Climate risk quantification and scenario analysis	0.6	1.9	1.8	1.7	2.0	1.3	2.3	2.4	2.0	2.0	1.5	0.7	2.2	1.4	1.8
	Net zero strategy, governance and target-setting	1.3	1.7	1.8	1.3	2.2	1.7	2.3	2.3	1.8	2.3	2.1	1.9	1.7	1.7	2.2
Net zero carbon	Carbon credit support and sourcing	2.0	1.4	2.8	1.2	1.8	1.7	1.7	2.2	1.7	1.7	1.8	1.8	0.9	1.9	2.0
strategy and implementation	Net zero programme management	0.7	2.4	1.2	1.7	1.5	1.4	1.5	1.8	1.4	2.0	2.2	1.7	1.7	1.0	2.8
	Financed emissions management	0.8	0.8	1.9	1.0	1.9	0.8	2.4	2.6	2.0	2.8	1.0	1.5	1.2	1.2	1.6
	Climate risk, opportunity and adaptation disclosures	0.7	1.2	2.0	1.2	2.4	1.4	2.3	2.4	2.5	2.2	1.2	1.8	1.7	1.3	1.7
Climate data	Net zero disclosures	1.0	1.8	2.2	2.0	2.2	1.4	2.0	2.3	2.0	2.0	1.2	2.0	1.8	1.3	1.5
management and disclosures	Carbon data management and accounting	1.3	1.9	2.3	1.9	2.5	2.4	2.4	2.4	2.3	1.8	2.1	2.4	1.8	1.8	2.2
	Emissions data assurance	0.0	1.1	0.7	0.0	2.4	0.7	2.0	2.4	2.7	2.4	2.0	0.4	1.5	0.8	1.7
	Built environment decarbonization	1.1	2.9	2.3	2.6	2.0	2.3	2.1	2.4	1.7	1.7	2.6	2.7	1.3	0.0	2.9
Asset-level decarbonization	Industrial plant decarbonization	0.7	1.9	1.7	1.4	1.6	1.9	1.8	1.4	1.6	1.7	2.4	1.6	1.3	1.4	2.6
	Fleet decarbonization	1.0	2.4	1.1	2.1	1.6	1.7	1.8	1.6	1.6	1.4	2.3	2.4	1.7	0.3	2.6
	Renewable energy supply and energy decarbonization	2.3	0.9	1.6	2.0	2.0	2.1	2.1	2.1	2.2	1.9	1.4	3.0	2.5	1.0	2.3
		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

Vendor provides evidence of moderate capability, with limited references to customer examples

No response provided or publicly available, or supplier has a weak offering

Source: Verdantix analysis

2

1

0

	3Degrees	AECOM	Anthesis	Arcadis	Deloitte	ENGIE Impact	ERM	FY	KPMG	PwC	Ramboll	Schneider Electric	SLR	WayCarbon	WSP
Vision & strategy	0.7	1.1	1.7	1.2	2.3	1.4	2.0	2.3	1.7	1.7	1.2	1.7	2.0	1.4	2.3
Climate change consulting services revenue size (2022/23)	1.4	2.4	1.4	1.6	2.4	1.6	1.8	2.6	2.0	2.6	1.8	1.2	1.2	1.4	2.0
Partnerships	1.5	1.8	1.8	2.5	2.5	1.5	2.5	2.5	2.5	2.3	1.0	1.5	2.3	1.5	2.5

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



Capabilities

This dimension measures each climate change consulting provider on the breadth and depth of its offerings across 15 capability areas, as outlined in **Figure 6**.

Momentum

This dimension measures each climate change consulting provider on three strategic success factors, as outlined in **Figure 7**.

PwC's global network provides net zero strategy and emissions data assurance expertise

PwC was founded in 1998, when Coopers & Lybrand merged with Price Waterhouse; both constituent firms have histories dating to the 18th century. PwC is an international professional services brand of firms, which operate as partnerships under the PwC brand. In total, PwC has 328,000 employees, across 742 locations in 157 countries. More than 10,000 PwC employees work in the sustainability space. The majority of the firm's climate change clients are based in Europe, the Middle East and Africa (EMEA), with significant client bases in Asia-Pacific (APAC) and the Americas as well. PwC has been a member of the World Business Council for Sustainable Development (WBCSD) since 2001 and was also a member of the Real Economy and Managed Phase Out of Stranded Asset workstreams for the Glasgow Financial Alliance for Net Zero (GFANZ).

Strengths and differentiators

Based on the Verdantix Green Quadrant analysis, Verdantix finds that PwC has strengths in:

• Emissions data assurance.

With 2.4/3.0, PwC is a top scorer in emissions data assurance. The firm provides both public assurance opinions and private assurance to audit committees, as well as limited and reasonable assurance. Additionally, PwC can provide assurance across Scopes 1, 2 and 3 emissions, as well as on specific disclosures, such as avoided emissions. PwC also offers accompanying assurance services, such as advising on upcoming assurance requirements for specific regulations and disclosure frameworks, data quality assessments, and boundary identification for financial reporting. In addition, the firm conducts tests on assurance procedures to verify the existence of appropriate audit trails.

• Net zero strategy, governance and target-setting.

PwC achieved a score of 2.3/3.0 for the net zero strategy, governance and target-setting capability criteria – one of the highest scores across the Green Quadrant. PwC's offerings encompass maturity assessment and baselining, decarbonization lever identification and pathway analysis, and transformation implementation of operating models, operations, supply chains and assets. Furthermore, PwC offers a digital tool – the Green Taxes and Incentive Tracker – which covers more than 800 taxes and 600 incentives globally, to help clients factor these policy instruments into strategic decision-making. Additional digital offerings are its TCFD Readiness Assessment Diagnostic tool, and ESG Pulse, a web-based solution that helps firms determine the maturity of their ESG strategy.

• Financed emissions management.

PwC scored 2.8/3.0 for the financed emissions management capability category – the top score for this capability in the Green Quadrant. The firm helps financial institutions measure, monitor and mitigate financed emissions, through services such as decarbonization strategy and transition planning against established frameworks, such as that developed by the Transition Plan Taskforce (TPT). Notably, PwC has the capability to support clients as part of an end-to-end managed service offering, encompassing data collection, carbon accounting and reporting. PwC has developed a suite of dedicated tools for financial institutions, such as Carbon Explorer, to assist with data estimations, and Portfolio Emissions Manager, a financed emissions calculation and scenario analysis engine.

Improvement opportunities

Based on the Green Quadrant analysis, Verdantix finds that PwC could improve its capabilities by:

to enable customers to bridge the strategy and asset-level hazard mitigation gap.

- Developing climate mitigation and adaptation services by partnering with engineering specialists. PwC scored 1.6/3.0 for the climate mitigation, adaptation and implementation capability category. Despite strong capabilities relating to executive engagement, capital sourcing and insurance – alongside policy advisory – the firm does not possess comprehensive mitigation and adaptation capabilities at the asset level. To improve its offering in this area, PwC should consider partnering with infrastructure and engineering firms
- Bringing together climate risk digital solutions on one platform.

With a score of 2.0/3.0, PwC ranks above average in the climate risk quantification and scenario analysis capability category. Nevertheless, the firm could further improve by bringing together its technology-enabled solutions – such as its Climate Excellence tool (covering transition risk), its Climate Risk Modelling solution and its Geospatial Climate Intelligence offering – into one dedicated digital solution for climate risk management.

Selection advice for buyers

Considering all of the vendors assessed in the Green Quadrant analysis, Verdantix believes that PwC should be shortlisted by:

• Firms looking to prepare for upcoming regulated climate disclosures.

PwC provides end-to-end services for climate change disclosures, with particular strengths in the financial industry. From a digital perspective, solutions such as PwC's Climate Excellence tool for scenario analysis support investors in assessing portfolios for climate change risks and opportunities, across scenarios, regions and sectors. When combined with its capabilities in data assurance, executive engagement and disclosure strategy, PwC is an attractive proposition for firms coming under regulatory scrutiny globally.

• Organizations seeking a digital upgrade of their emissions management strategies.

PwC has developed a cohesive set of digital offerings, both through internally built platforms and through partnerships in its PwC Alliance ecosystem. Partners include technology firms Amazon Web Services (AWS), Google, Microsoft, Refinitiv, Salesforce, SAP and Workiva. In December 2022 PwC and SAP announced a co-innovation strategy to create ESG solutions incorporating carbon measuring and reporting. Furthermore, PwC has a dedicated offering that helps firms use AI to determine mitigation and adaptation opportunities, with simulation models to forecast the impact of economic market trends on climate transition risk.

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Contact

Verdantix Ltd, 18 Hatfields, London SE1 8DJ, United Kingdom

contact@verdantix.com @Verdantix

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