



Four Twenty Seven  
Climate Solutions



# 2015 CORPORATE ADAPTATION SURVEY

May 2015

*Four Twenty Seven and Notre Dame Global Adaptation Index  
with support from BSR*

## About this report

### Editors:

Emilie Mazzacurati, Four Twenty Seven  
 Joyce Coffee, ND-GAIN  
 Cammie Erickson, BSR

### Authors:

Aleka Seville, Four Twenty Seven  
 Colin Gannon, Four Twenty Seven

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## About the Survey Sponsors

**The Notre Dame Global Adaptation Index** (<http://www.nd-gain.org>) is a practical solution to the world's climate problem. It promotes adaptation by identifying the places most vulnerable to extreme weather and changing climate and identifying real-world solutions that can prevent these changes from becoming disasters. Its mission is to enhance the world's understanding of the importance of adaptation and inform private and public investments in vulnerable communities. ND-GAIN is part of the Climate Change Adaptation Program of the University of Notre Dame's Environmental Change Initiative (ND-ECI), a Strategic Research Initiative focused on "science serving society," and draws resources from across the campus.

**Four Twenty Seven** (<http://www.427mt.com>) is an award-winning climate risk and adaptation consultancy dedicated to helping organizations understand and mitigate risks posed by climate change impacts. Its innovative tools and services blend economic modeling and climate science to deliver actionable intelligence and effective adaptation strategies. Four Twenty Seven's supply chain application, developed in partnership with Climate Earth, is the first enterprise-quality application that enables large corporations to quickly map and quantify global supply chain risks due to climate change. It was awarded the 2014 Environmental Business Journal Award for Technology Merit in Climate Change Risk Management.

**BSR (Business for Social Responsibility)** – <http://www.bsr.org> BSR is a global nonprofit organization that works with its network of more than 250 member companies to build a just and sustainable world. From its offices in Asia, Europe, and North America, BSR develops sustainable business strategies and solutions through consulting, research, and cross-sector collaboration.

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## Highlights from the 2015 Corporate Adaptation Survey

Four Twenty Seven and the University of Notre Dame Global Adaptation Index (ND-GAIN), with support from BSR (Business for Social Responsibility), present the *2015 Corporate Adaptation Survey*. Key findings from the survey are organized around eight key questions.

### 1. What Are the Climate Risk Drivers of Greatest Concern?

- Water scarcity and political instability driven by climate change are cited as the top two anticipated risks across sectors. Water scarcity emerged as the climate hazard of greatest concern for corporations, with 16 percent of respondents citing it as a risk, followed by social and political instability driven by climate change, at slightly above 14 percent.

### 2. How Will Climate Change Affect Businesses?

- Thirty percent of surveyed companies have faced or are experiencing impacts from climate change that negatively impact their bottom line.
- More than 70 percent of respondents say they are “somewhat concerned” that climate change will have a material impact on their value chain, in particular their supply chain, distribution and customers and markets. Nearly 20 percent say they are “very concerned” about the material impact on each of these major segments.
- Two-thirds of the respondents expressed concern over increased operational and capital costs and reported they had already experienced cost increases or considered them a likely outcome.

### 3. How Do Companies Assess Climate Risk?

- Thirty percent of respondents said they haven’t developed a plan to adapt their business to climate change impacts. The remaining were most likely to have monitored climate risk in some capacity as part of their enterprise risk management (43 percent) or by looking at a specific driver of concern (29 percent).
- Respondents rely on publicly available data, reports and websites to inform their climate adaptation work, as well as on industry associations and/or non-profit led initiatives. Internal sustainability teams were also cited as a key resource for climate change risk information.

### 4. Who Within an Organization Should Be in Charge of Climate Adaptation?

- Respondents were divided over who should be managing climate risk and adaptation planning: the sustainability team (28 percent), risk management team (26 percent) and operations team (24 percent) were all cited as possible choices.
- The sustainability team was seen as the most knowledgeable about climate change by far, while respondents were least confident in the level of understanding of climate change held by their investor relations team, their supply chain team, and their Board of Directors.

### 5. Have Companies Already Implemented Adaptation Measures?

- The most common adaptation measures already implemented are energy and water efficiency measures, closely followed by business continuity plan development and staff trainings on risk management.
- Retrofitting or relocation of company assets are actions that are under consideration but few respondents reported having already implemented retrofitting and no respondents reported relocation of assets as a current measure.

### **6. What Are the Main Barriers to Corporate Adaptation?**

- The main barrier to action cited was the challenge of getting climate-related risks recognized as an immediate priority, followed by lack of leadership on climate change.
- While 30 percent of respondents reported that climate change has already had a material impact on their company, a third of respondents expected impacts in the 5-20 year timeframe only, and over 20 percent did not expect impacts for at least another 20 years. Very few respondents expected short-term material impacts from climate change (1-5 years).

### **7. What Are the Next Steps in Assessing Climate Risks?**

- Respondents noted a wide range of planned next steps, though the most common was engaging with key industry groups to build consensus on sector-wide initiatives. The need for additional research and data was also frequently cited as a priority.

### **8. What Opportunities Might Climate Change Bring for Your Company?**

- A quarter of respondents anticipated opportunities for both new product creation and efficiency improvements.
- Opportunities typically associated with sustainability programs, such as brand development and cost reduction, ranked far lower when considering opportunities associated with climate change.



## Introduction

Climate change presents a multitude of new risks, challenges and opportunities for corporations and communities around the globe. Successfully preparing for and adapting to the climate impacts that are already set in motion – such as sea level rise, increases in extreme heat and more frequent and intense storms – will require strategic planning and action in the near term as well as ongoing monitoring and assessment.

As our understanding of global climate risks continues to grow, private sector stakeholders are struggling to efficiently measure, monitor and prepare for climate induced shocks and stressors that threaten global economic stability. The public sector has made great strides in developing conceptual frameworks, practical guidance and actionable tools to help practitioners advance adaptation planning and initiatives. However, there is much less transparency regarding the current state of climate change risk management and adaptation planning in the private sector, which could discourage the development of best practices and stymie much needed collaboration between public and private stakeholders.

To help address this knowledge gap, Four Twenty Seven and the University of Notre Dame Global Adaptation Index (ND-GAIN), with support from BSR (Business for Social Responsibility), present the *2015 Corporate Adaptation Survey*. The goals of this survey are:

- Further our collective understanding of the challenges corporations face when addressing climate change impacts
- Highlight gaps in private sector knowledge of, and capacity to address, these impacts
- Raise awareness about best practices and potential strategies that advance resilience building across sectors and communities

The *2015 Corporate Adaptation Survey* results provide a platform to advance climate risk discussions within corporations and industry groups as well as between public and private stakeholders. These findings will be built upon in future years to improve and expand our corporate adaptation knowledge base and to encourage best practices sharing and innovation in adaptation approaches and strategies.

We hope you find this survey useful and welcome feedback, additional insights, and suggestions to continue this effort towards more transparency and knowledge sharing about corporate climate adaptation.



## Methodology

The questionnaire for the *2015 Corporate Adaptation Survey* was released on March 16, 2015 and anonymous responses were collected electronically through April 12, 2015<sup>1</sup>. Four Twenty Seven, ND GAIN, and BSR encouraged their diverse networks of companies and climate change professionals to participate, resulting in over 230 responses. The survey consisted of 18 multiple choice questions and offered respondents an opportunity to include individual comments for each question. We have incorporated some of these responses, along with the multiple choice answers, in our results and analysis below.

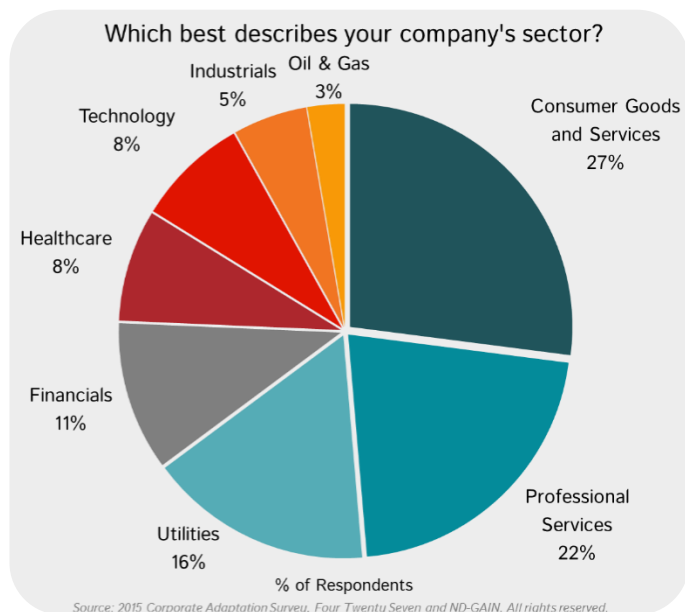
All answers were anonymous, but we gathered generic information about respondents' company size, sector and country of origin to support our analysis. To ensure that the survey results reflected input from the private sector only - the survey's stated purpose - we set aside responses from non-profit organizations, government officials, and academics, as well as small consulting firms (less than 5000 employees), so as to avoid an over-representation from "professional services" in the sample.

In the end, we distilled the data into a small but robust sample of 37 companies, spread across eight different sectors ranging from consumer goods and services to financials, industrials, utilities and healthcare (Figure 1). Removing the large number of responses from small firms in the professional services sector enabled us to have a sample with a more balanced sector representation and avoid survey results skewed towards a certain type of value chain or corporate culture. All references to "respondents" and the "sample" in this report henceforth refer to this smaller, final subset of answers.

Two thirds of the respondents reported their corporation was headquartered in

the U.S., 20 percent in Mexico, and the remainder evenly split between Europe and Asia. Most respondents held titles in sustainability / environmental fields, and other respondents covered a wide span of corporate functions, ranging from legal and risk management to IT and operations.

Figure 1. Breakdown of respondents by sector in final sample



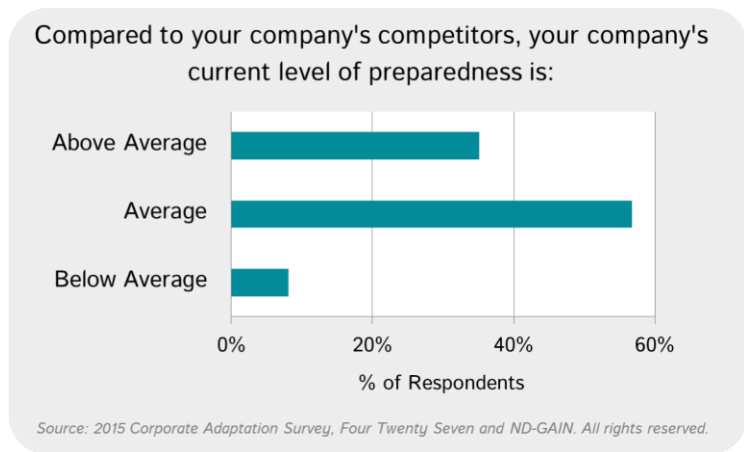
<sup>1</sup> The full set of questions can be viewed through the online survey platform: [http://nd.qualtrics.com/SE/?SID=SV\\_bBqLb2eTbSNTfBX&Q\\_JFE=0](http://nd.qualtrics.com/SE/?SID=SV_bBqLb2eTbSNTfBX&Q_JFE=0)

Due to the method used to disseminate the survey and gather answers, and the uneven representation of certain sectors in our sample, we acknowledge that this survey is not deemed representative of all corporations in the economy. Respondents, by the simple fact that they received the survey through our or our partners' networks, and judging from the fact that they took the time to answer our questions, are likely to be more educated and more concerned about climate change than their peers at large.

Therefore, our survey should be read as a snapshot of how companies most invested in the space – early adopters and early movers – think about and act on climate change risk, not as an economy-wide assessment of preparedness in the private sector.

This likely self-selection bias is most vividly illustrated by the fact that 35 percent respondents reported that their companies are better prepared than their competitors, and only eight percent considered their company's preparedness as below average (Figure 2).

*Figure 2. Relative preparedness*



We invite the reader to keep in mind the composition of this sample as they peruse this report and further disseminate these findings.





## Survey Results

The goal of this survey was to better understand the state of corporate adaptation in the private sector. To this end, we asked respondents to consider questions about how their companies approach, manage and plan for the risks posed by various climate impacts. The diversity of answers is reflective not only of the variety of sectors included in our participant sample but also the wide range of “readiness” or familiarity with incorporating climate risks into overall risk management processes.

We structured the survey results around eight key overarching questions, highlighting responses to one or several related questions from the survey, organized as follows:

1. What Are the Climate Risk Drivers of Greatest Concern?
2. How Will Climate Change Affect Businesses?
3. How Do Companies Assess Climate Risk?
4. Who Within an Organization Should Be in Charge of Climate Adaptation?
5. Have Companies Already Implemented Adaptation Measures?
6. What Are the Main Barriers to Corporate Adaptation?
7. What Are the Next Steps in Assessing Climate Risks?
8. What Opportunities Might Climate Change Bring for Your Company?

Following the survey results description, we offer our thoughts on the lessons learned and most interesting findings from the survey.



### 1. What Are the Climate Risk Drivers of Greatest Concern?

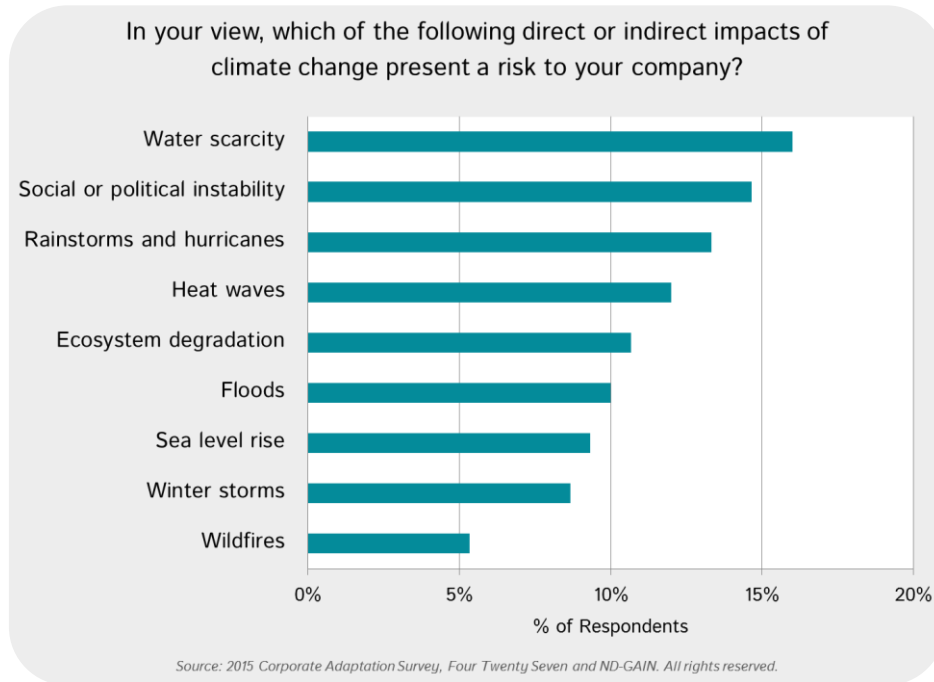
Climate change impacts are diverse, innumerable and vary by location and over time. The opening question of our survey aimed to understand, at a high level, what risk drivers were of greatest concern to corporations (Figure 3). We asked respondents to indicate which climate impact(s) presented a risk to their company amongst a list of the most common climate hazards, including shocks (rainstorm and hurricanes, heat waves, floods, wildfires, winter storms) and stressors (water scarcity, sea level rise), as well as indirect impacts such as “ecosystem degradation” and “social or political instability driven by climate change (including migrations, public health impacts, etc.)”

Water scarcity was the impact most commonly cited by respondents as a risk to their companies. This finding is consistent with the World Economic Forum’s 2015 Global Risks report where “water crises” was ranked as the top global risk in terms of impact,<sup>2</sup> and confirms that water has become a high priority agenda item for a number of large corporations. It also shows that respondents understand the connection between current water stress and how forecasted impacts of climate change will worsen existing water resource challenges.

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<sup>2</sup> *Global Risks 2015*, 10th edition, World Economic Forum Insight Report [http://www3.weforum.org/docs/WEF\\_Global\\_Risks\\_2015\\_Report15.pdf](http://www3.weforum.org/docs/WEF_Global_Risks_2015_Report15.pdf)

Figure 3. Climate risk drivers



The second most common risk called out by respondents was an indirect impact: social or political instability driven by climate change. This result shows that respondents are aware of the many potential implications of climate change on human systems, which can include civil unrest, public health crises, political upheaval, and displaced populations where weak systems and resource constraints prevail. Such events are intrinsically more difficult to quantify, model, forecast or plan for – possibly making some respondents and their companies uneasy about the sociopolitical risks of associated with increasingly variable and extreme climates.

Rainstorms and hurricanes and heat waves came next, with heatwaves identified as a risk in particular by respondents from the Utilities and Healthcare sectors, likely for the increase in energy demand and health impacts associated with heatwaves. Financial corporations also noted heatwaves as a key risk, possibly for their impact on data centers and operational costs.

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*“As a healthcare company, our greatest impact will be to human health and the increased usage of healthcare services to deal with impacts [such as] asthma, heart and lung issues, etc.”*

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Ecosystem degradation ranked in fifth position. The benefits that ecosystems provide for businesses are complex and not always fully understood, which makes the connection to impacts to the corporate value chain more challenging than direct impacts like storms or heatwaves.

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*“Typhoons and subsequent flooding can have an impact on our supply chain in Asia.”*

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Floods and winter storms were identified as a risk by ten and nine percent of respondents respectively, a relatively lower score considering these are some of the most prevalent, visible effects of climate change. However, these are risks that are generally more easily predicted and controlled through traditional risk management techniques, and therefore may not be perceived as a significant business risk.

Sea level rise was cited by over nine percent of respondents as a risk, in particular for respondents from the Oil & Gas and Utilities sectors, which are more likely to own long-lived coastal infrastructure.

Wildfires were ranked last among the risks we listed. These last four risks – floods, winter storms, sea level rise and wildfires – all have a relatively smaller geographic footprint in comparison to some of the other impacts listed. This commonality likely explains their relatively lower ranking as all of these risks are less likely to have a ‘material’ impact on a large corporation with diverse facility locations.

All in all, responses to this question were fairly evenly distributed, which shows the variety and extend of risks companies have to consider when looking for climate risk.



## 2. How Will Climate Change Affect Businesses?

We then turned to understanding how climate hazards might affect corporations’ bottom line, and asked two questions: first, which part of a company’s value chain was most likely to see these impacts, and second, what kind of business consequences they expected amongst outcomes most commonly cited in public reports (CDP<sup>3</sup> and SEC 10-K filings<sup>4</sup>), which include an inability to do business, increased operational or capital costs, reduced demand for goods and services, and reduction in production capacity.

On the first question (Figure 4), all four segments of the value chain were cited as a source of concern for a majority of respondents.

Supply chain and Operations each saw 19 percent of “very concerned” respondents, with supply chain coming in as the part of value chain of highest concern overall with 75 percent of respondents when aggregating “somewhat concerned” and “concerned” responses. The concern over supply chain and operations is more directly related to the direct impacts (i.e., costs and timing disruptions) arising from climate change.

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*“We have 100,000 plus employees working in offices around the world on more than 80,000 projects. Alterations in climate put our projects, employees and their families at risk.”*

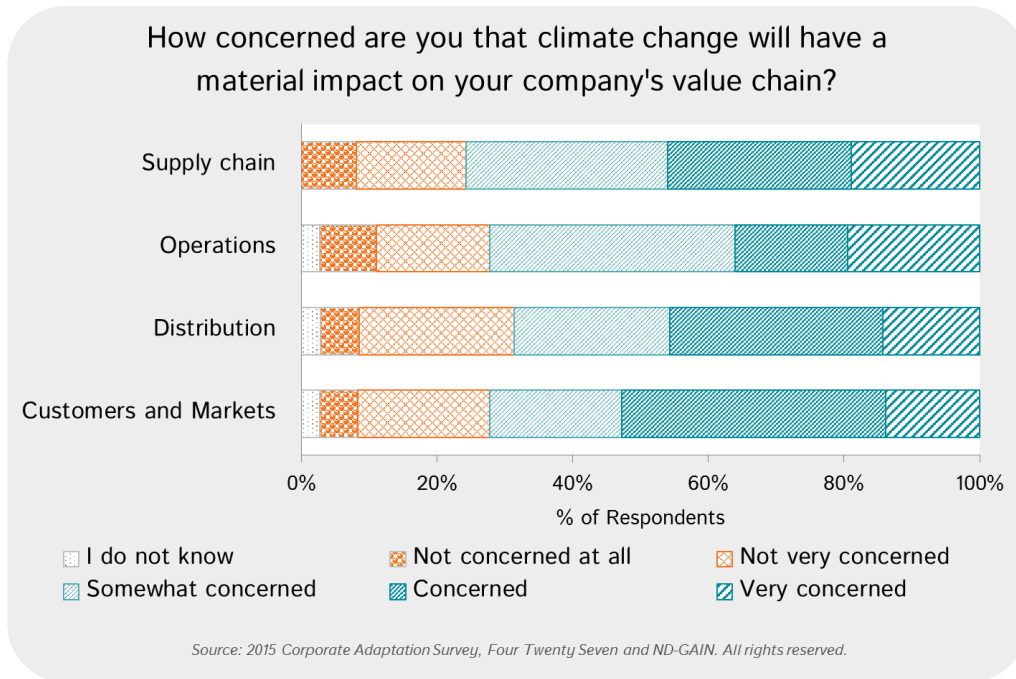
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<sup>3</sup> Global 500 Climate Change 2013, CDP (Carbon Disclosure Project), September 2013

<sup>4</sup> Cool Response: the SEC & Corporate Climate Change Reporting, Ceres, February 2014

In contrast, impacts on the downstream value chain can be more difficult to predict and manage. Distribution and Customers and Markets were also cited as a risk with 14 percent “very concerned” and 31 and 39 percent respectively expressing concern.

Figure 4. Impacts of climate change on the value chain



When broken down by sector, concerns about material impact reflect differences in how each of these sectors are approaching management of climate risk. For Consumer Goods and Services and Industrials, concern about impacts to supply chains outweighs the rest of the value chain, reflecting these sectors’ dependence on complex global supply chains. Utilities, Financials and Professional Services, on the other hand, put more emphasis on potential impacts on customers and markets. Operations (capital and human resources) was cited consistently across all sectors as an area of concern, but rarely as the top priority.

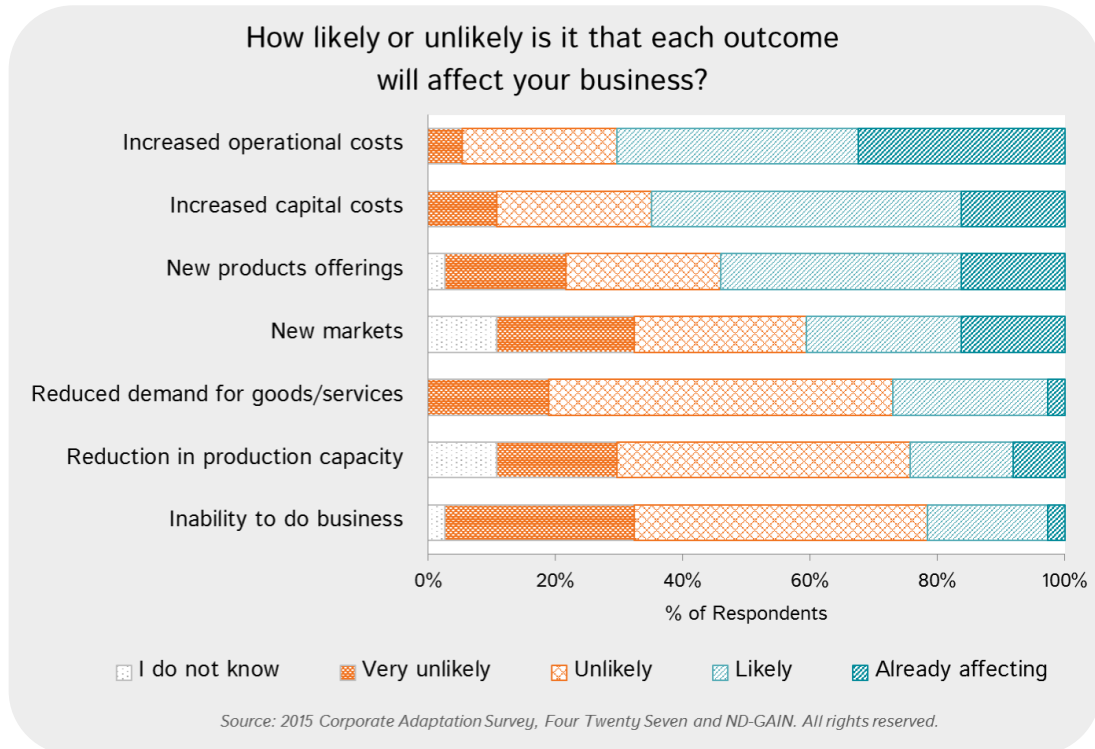
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*“Any crisis that affects countries where we source our products from affects us as well. Any crisis that changes the market situation and influences the exchange rates influences us as well.”*

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On the question of expected business outcomes, costs came across as the top concern (Figure 5).

Figure 5. Expected business outcomes



Respondents overwhelmingly stated that increases in both capital and operational costs were either likely or already affecting their bottom line. Over 30 percent of respondents noted that they are already experiencing increased operational costs as a result of climate change, while nearly 20 percent noted that they had seen their capital costs increase.

Seventy-five percent of respondents stated that it was either unlikely or very unlikely that climate change would prevent them from doing business, with less than five percent noting that they had already been unable to do business due to climate impacts at some point. Similarly, over 50 percent of respondents stated that it was unlikely that climate change would reduce production capacity or reduce demand for goods and services, while nearly 20 percent said both of these outcomes were very unlikely. These findings highlight that while disruptions and costs increases are anticipated, the majority of respondents are confident that these risks will be manageable and will not disrupt their company's ability to do business overall.

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*“For the financial sector there is a strong link between risk and operational costs.”*

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When asked to comment on the impact on demand for goods and services, responses were somewhat inconsistent with responses to the previous question, where Customers and Markets was identified as a material risk by most respondents. This inconsistency could be due to the fact that respondents have a better understanding of

operational risk from climate impacts whereas the consequences of potential fluctuations in demand for goods or services from customer segments or variability caused by impacts to suppliers are not as well defined.

Looking at the breakdown of answers by sector, Consumer Goods and Services, Financials, Utilities and Oil and Gas companies were more likely to cite concerns over capital cost increases, while increases in operational costs were anticipated by all sectors.

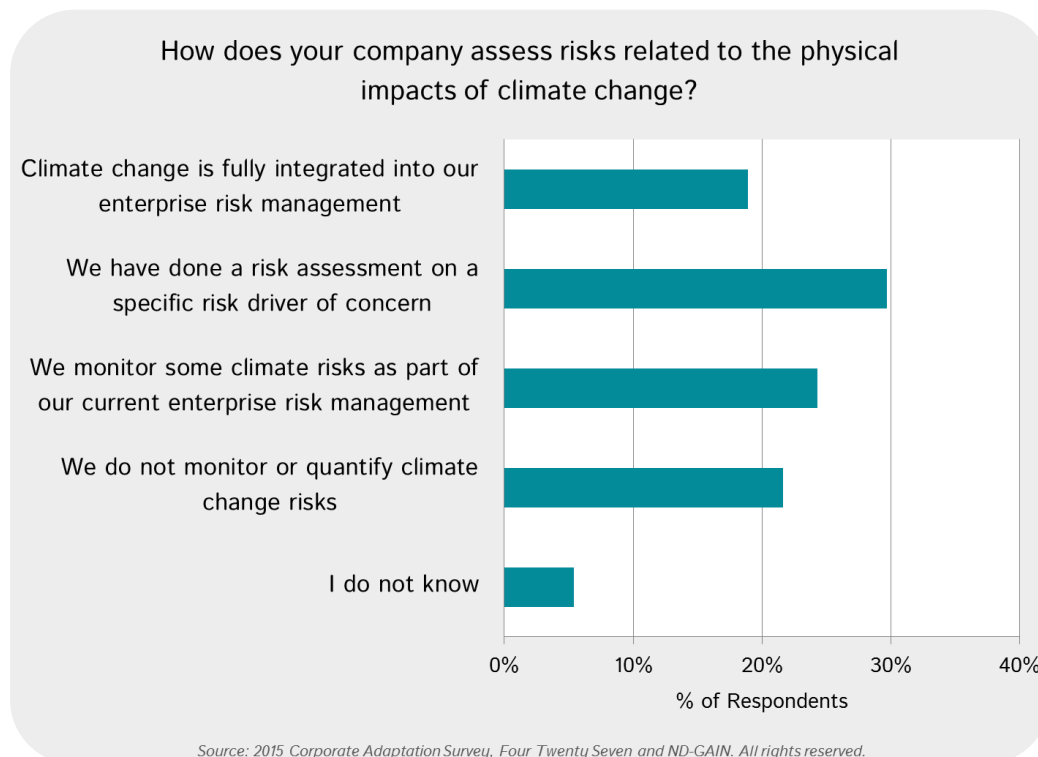


### 3. How Do Companies Assess Climate Risk?

Our survey included a section on risk assessment which focused on how respondents are currently managing and planning for the impacts of climate change throughout their operations. Questions covered both current and planned climate risk assessments and actions.

When asked whether their company assessed risks related to the physical impacts of climate change (Figure 6), we found over 20 percent of respondents did not monitor or quantify climate change risks at all.

Figure 6. Risk assessment efforts



Nearly one quarter of respondents reported having monitored some climate risks as part of their current enterprise risk management. Almost 20 percent said that climate change is fully incorporated into their risk management process - a number that seems somewhat high and may be influenced by the fact that the pool of respondents is more aware of, and therefore significantly better prepared for, climate change impacts than the average large company.

The most common type of risk assessments reported (30 percent) were those that measure for a specific risk driver of concern. Water risk assessments would be a typical example of a driver-specific assessment – and consistent with the expressed concern over water scarcity. Other companies report having performed an assessment of impacts on their customer base or stakeholders, but not on their own organization.

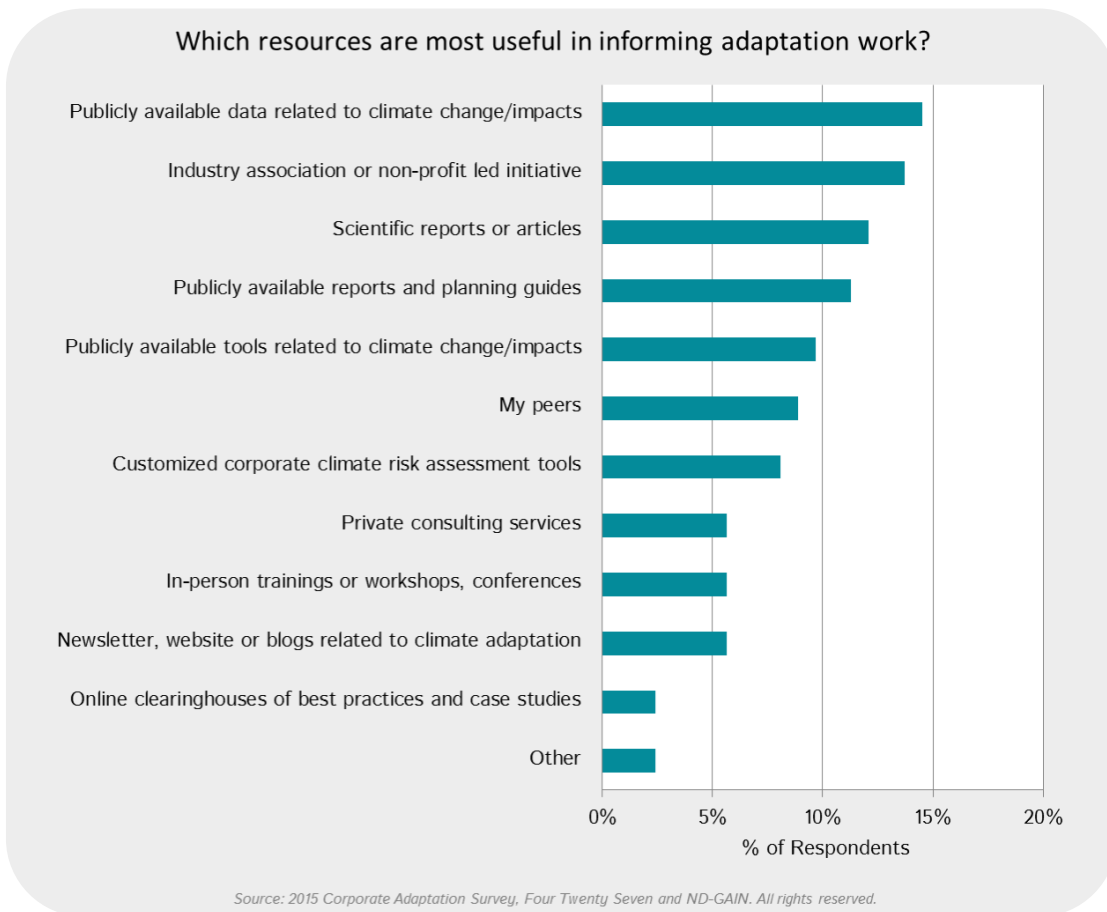
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*“We have only looked at climate change and its impact on the community, not our specific organization.”*

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We also asked respondents what resources they relied on to inform their risk assessment and adaptation work (Figure 7).

Figure 7. Resources on climate adaptation



The answers showed respondents rely on a variety of resources, with each respondent selecting 3-4 different resources on average. The most frequently cited resources were the wealth of freely available websites, data sets

*“There are so many [resources] I don't know where to begin. (...) There are hundreds of sites, many not so helpful. Others are.”*

and tools. Additional write-in comments pointed specifically to UN, IPCC and World Bank websites, along with NOAA and climate.gov from the public sector, and ND-GAIN, CDP, the Association of Climate Change Officers, and Risky Business for non-profit websites.

Industry and non-profit led initiatives were also seen as important sources of information on climate adaptation,

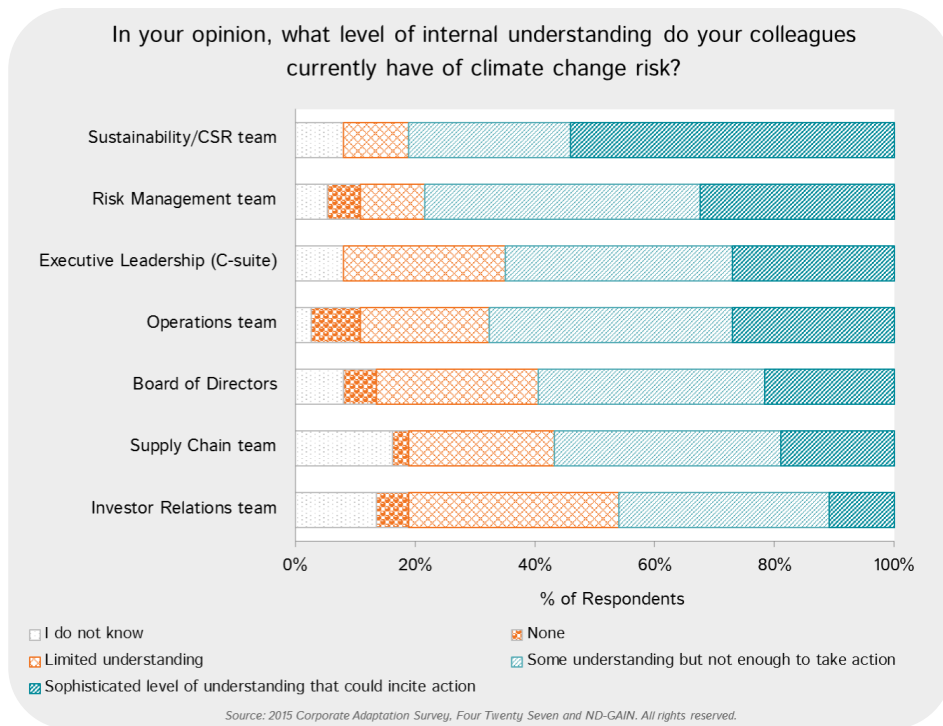
a testament to the importance of these networks within and across industry sectors. Respondents also cited their peers, with several mentioning specifically that the sustainability team in their corporations is their main resource for climate change adaptation information.



## 4. Who Within an Organization Should Be in Charge of Climate Adaptation?

Internal governance structures play a significant role in a company's ability to successfully assess, manage and monitor climate risk. Survey responses (Figure 8) highlighted a wide range of climate literacy reported by our

Figure 8. Climate literacy





respondents as well as inconsistencies around roles and responsibilities for managing climate risk.

When asked to describe what level of internal understanding their colleagues have of climate change risk, respondents overwhelmingly (54 percent) felt that their Sustainability/Corporate Social Responsibility (CSR) teams had a sophisticated understanding of climate change while approximately 32 percent of respondents reported that their Risk Management teams shared that sophisticated level of understanding.

*“[The] CFO role should have sustainability team as direct reports to collaborate with all departments and drive climate change strategy for the organization.”*

We also asked respondents to comment on the level of understanding of climate risk that they have observed at the executive level and within their Board of Directors. For these groups, the majority of respondents felt that each had some understanding with slightly over 20 percent reporting a sophisticated level that could incite action. The same sized group felt that both of these leadership teams had limited understanding highlighting the wide variance of perceptions of internal knowledge of climate risk.

Assessing risks from climate change and building adaptive capacity requires leadership as well as significant collaboration across business units. We therefore asked respondents to comment on which group or team within their company they thought should manage climate risk and adaptation (Figure 9). Respondents were evenly split amongst those that indicated they thought their Sustainability, Risk Management, or Operations teams should manage climate risk. Slightly less than 15 percent felt that their Supply Chain team would be best suited to this role.

Figure 9. Governance and leadership



In Figure 9, we contrasted these answers with the previous questions on levels of understanding to highlight a key tension in climate governance: those who are most aware and best educated on climate change (who ranked highest for the “sophisticated understanding”) are not necessarily (seen as) the ones who should lead the actual adaptation effort. This points to both a need for collaboration across teams inside the company as well as targeted efforts to improve climate literacy among the teams likely to play a leadership role in climate adaptation, in particular Risk Management and Operations.

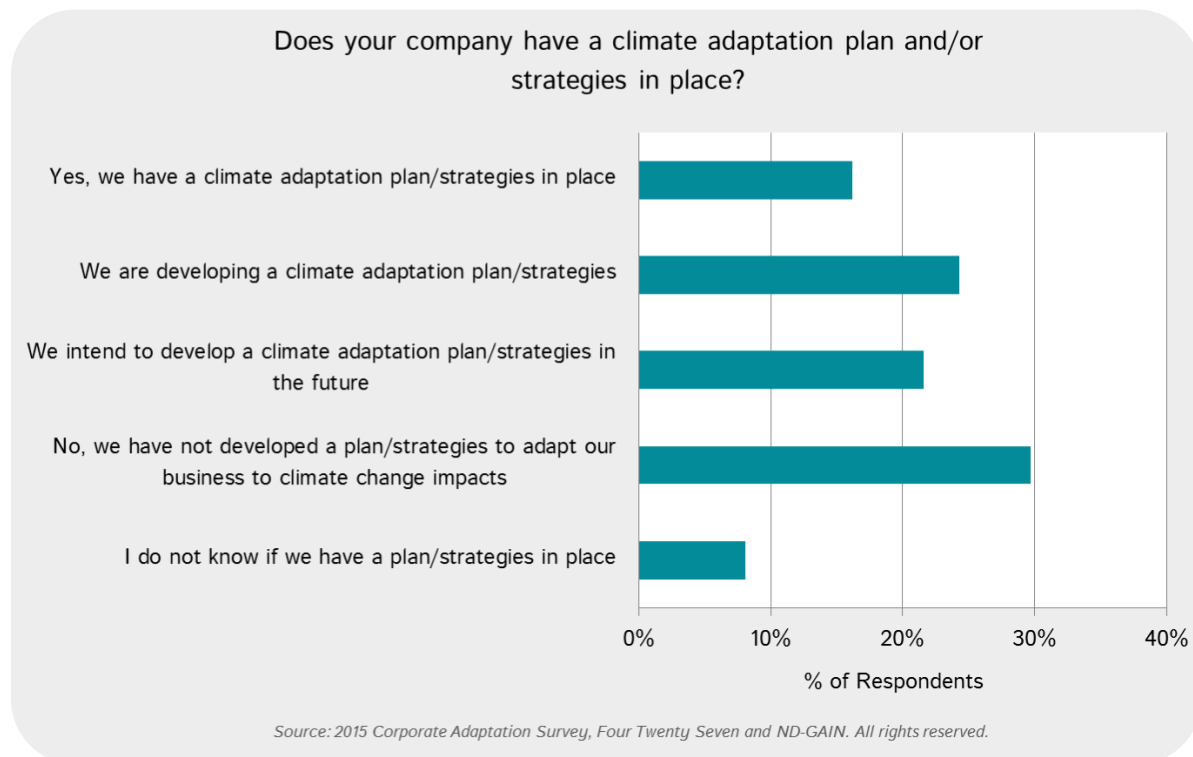


## 5. Have Companies Already Implemented Adaptation Measures?

Moving from risk assessment to adaptation planning and risk management, we asked respondents whether they had a climate adaptation plan or strategies in place. Whereas the majority of respondents had reported monitoring climate risk in some capacity (i.e. first three responses shown in Figure 6), nearly 30 percent stated that they have not yet developed a plan to adapt their business to climate change impacts (Figure 10).

Close to half of the respondents reported that a corporate adaptation plan was either in development or that they anticipated that a plan and/or adaptation strategies would be developed in the future. A smaller number, 16 percent, of respondents reported having a corporate adaptation plan and/or strategies currently in place.

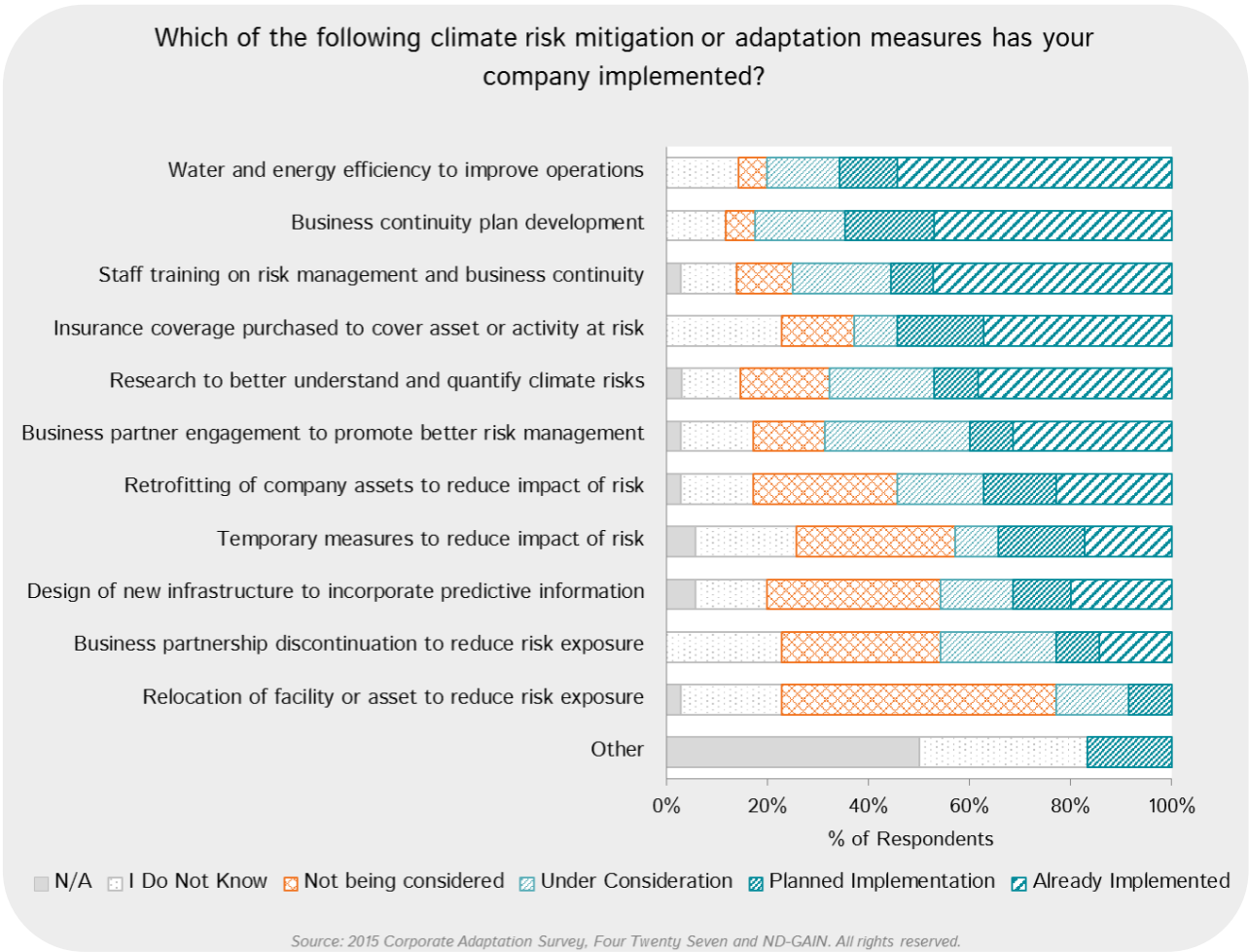
Figure 10. Climate adaptation plans



As in previous questions, respondents exhibited a wide range of preparedness. Indeed, while less than 20 percent of respondents reported having performed no climate risk assessment whatsoever, a larger share of respondents, almost 30 percent, say they don't have a plan to address climate change impacts. This shows companies are more likely to have started on their risk assessment, but are yet to draw conclusions from this risk assessment and develop a comprehensive plan to address identified risks. The number of 'early adopters' remains roughly constant throughout these responses, with 18 percent declaring climate change was fully integrated in enterprise risk management (Figure 6) and 16 percent noting that they already have a climate adaptation in place.

Building on the question of planning, we asked respondents to identify climate risk mitigation and adaptation measures that their company has already implemented or might consider in the future (Figure 11).

Figure 11. Adaptation measures



The most common measure that respondents reported they had already implemented is to improve water and energy efficiency in overall operations. This is likely due to the multiple benefits associated with increased

efficiency, such as reduction in greenhouse gas emissions, cost savings, and potential government incentives for this type of action.

Approximately 40 percent of respondents reported that they had already implemented staff training on risk management, updated business continuity plans, and conducted research to better understand and quantify climate risks. Nearly 40 percent of respondents reported that their company is considering or planning to engage suppliers and/or distributors to promote better risk management while that number drops to approximately 30 percent considering or planning to change their selection of a major supplier to reduce risk exposure. Over half of respondents reported purchasing insurance coverage to cover a specific asset or activity at risk due to climate change impacts.

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*“[We have experienced] limitations in implementing due to lease-land lord facility arrangements.”*

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Responses focused on temporary measures to reduce impacts (such as sandbags to prevent flooding of a building) were almost evenly divided with slightly over 30 percent reporting that these measures were not under consideration, but approximately 35 percent noting that these measures had been considered, planned or already implemented.

Forty-five percent of respondents reported they had implemented or considered incorporating predictive information into the design of new buildings and infrastructure on a wider scale. For this to become more widespread, companies will require better access to data to better understand the potential magnitude and urgency of specific risks and quantify the cost of inaction.

Facility relocation was reported as not currently being considered by over 50 percent of respondents. Relocation requires high capital expenditures and friction costs, compared to the costs of retrofitting a facility and abating place-based risks, which explains relocation would be a last resort measure for many companies. However, retrofitting of company assets still requires robust climate risk assessments, strong leadership, and significant expenditures. It’s therefore no surprise that only 22 percent companies reported retrofitting, but 31 percent were considering such measure.

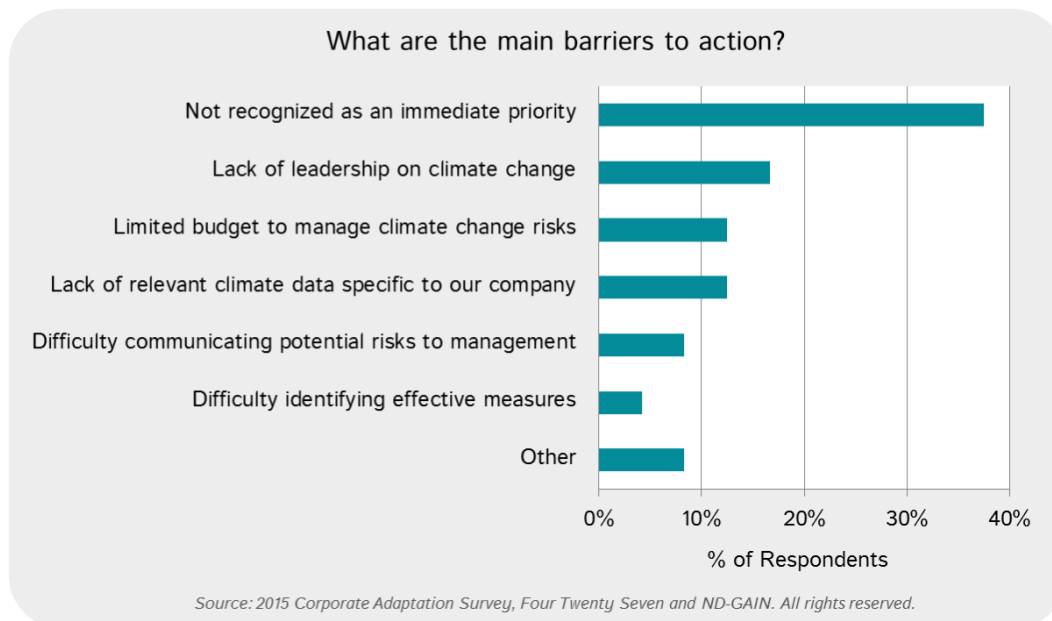
Partnership or supplier discontinuation, second to last answer, can be challenging due to contractual agreements and the direct and transaction costs associated with losing suppliers and finding new ones. This legal barrier can also make it difficult for companies to make swift changes.



## 6. What Are the Main Barriers to Corporate Adaptation?

To better understand what the barriers might be to deploying further adaptation actions, we asked respondents whether there were climate risks that they were personally concerned about that their company was not currently managing. For the third of respondents who acknowledged such concerns, we asked what the barriers to action might include (Figure 12).

Figure 12. Barriers to action



The first barrier listed was timing – for 37.5 percent of respondents, the main barrier was that the risk was not recognized as an immediate priority. Lack of leadership on climate change was listed as the second most common barrier to action (16 percent), followed in almost equal numbers (12.5 percent) by lack of relevant climate data and limited budget.

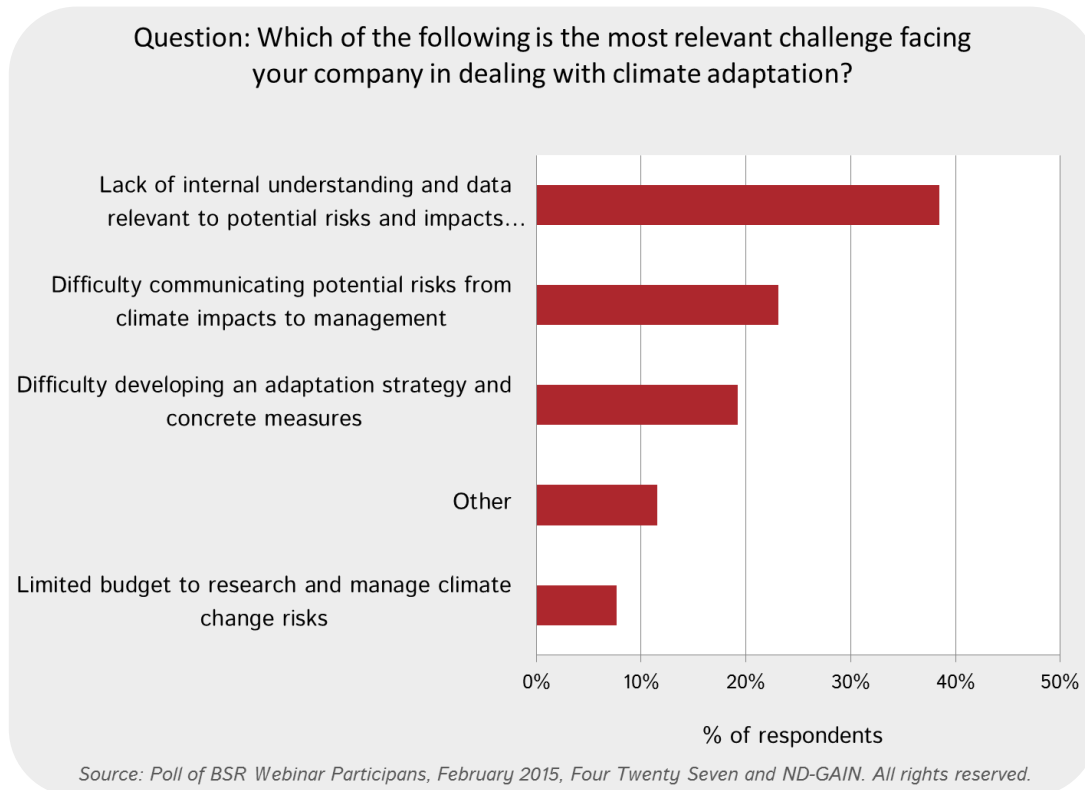
Eight percent of these respondents reported difficulty communicating potential risks to management as a barrier, and an even smaller number of respondents (less than 5 percent) saw the main challenge as a difficulty to identify effective measures to manage the risk.

While it is clear that the timescale of climate impacts is a major barrier in advancing corporate adaptation efforts, especially in contrast with the short-term focus imposed by financial markets, it is worth noting the significance of the other barriers as reported in other context, in particular access to company-specific data and communication challenges. As a noteworthy comparison, in February 2015, prior to launching the *2015 Corporate Adaptation Survey*, we asked a closely related question to participants during a webinar organized by BSR on climate adaptation. Figure 13 shows the answers to the webinar poll question on the “challenges their company faced in dealing with climate adaptation”. While the sample composition of respondents was generally similar to this survey

(large corporations, early adopters, and a mix of various sectors), the wording of the question and choice of answer was different – and the dramatically different answers provide an interesting insight into the wider set of barriers to corporate adaptation.

Among webinar participants, lack of data on company-specific insights was named as the most relevant challenge to corporate adaptation at large, followed by difficulty communicating potential risks and impacts to management.

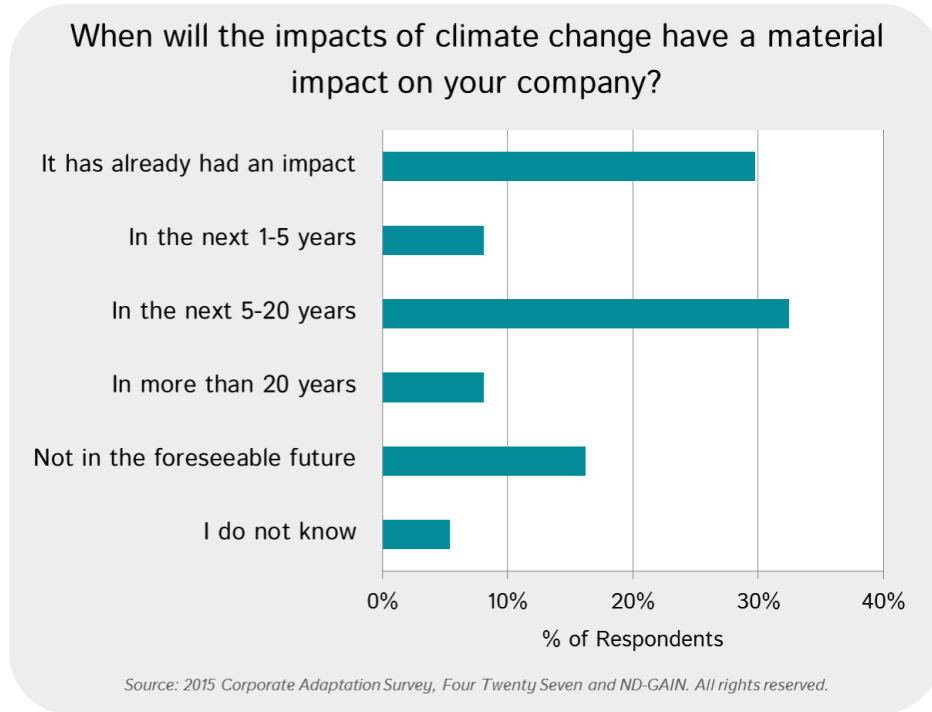
*Figure 13. Webinar poll - challenges in dealing with climate adaptation*



The common finding from these two different survey questions is that climate champions in the private sector are not (yet) struggling with developing concrete adaptation measures, but rather are focused on making the case that climate change is indeed an important and timely business consideration – for which they need better data on the magnitude and timing of impacts.

To get to the bottom of the question of expected timing of climate impacts, we asked respondents to identify the timeframe for which they expected impacts would have a material impact on their company (Figure 14).

Figure 14. Timing of impacts



Thirty percent of respondents said climate change has already had a material impact on their company – a high number, especially in contrast with the barely eight percent of respondents who expected short term impacts (1-5 years).

*“We are observing right now some effects of climate change but most of the expected impacts are likely to occur in the next 1-5 years.”*

A third of respondents did not expect impacts for at least another five years, and yet another 21 percent thought climate change would not materially impact their business for another 20 years or more.

The deep divide between those who had experienced climate change impacts in the past and those who perceive climate change as a medium to long-term problem (more than five years up to “not in the foreseeable future”), is quite striking and key to understanding companies’ motives in implementing only ‘soft’, no-regret adaptation measures (staff training, business continuity planning), as opposed to more permanent and potentially costly measures.

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## 7. What Are the Next Steps in Assessing Climate Risks?

Building on planned measures and known challenges, we asked respondents to comment on what they see as the most relevant next steps for their company to assess risks from climate change impacts.

A majority of respondents noted engaging with key industry groups on sector-wide initiatives (20 percent) and developing specific corporate adaptation actions (19 percent) as their most relevant next steps. Respondents rated the other four options - assessing and analyzing current data, engaging community and public stakeholders, making the case to management and accessing more data and research – almost equally in terms of relevant next steps (around 15 percent each).

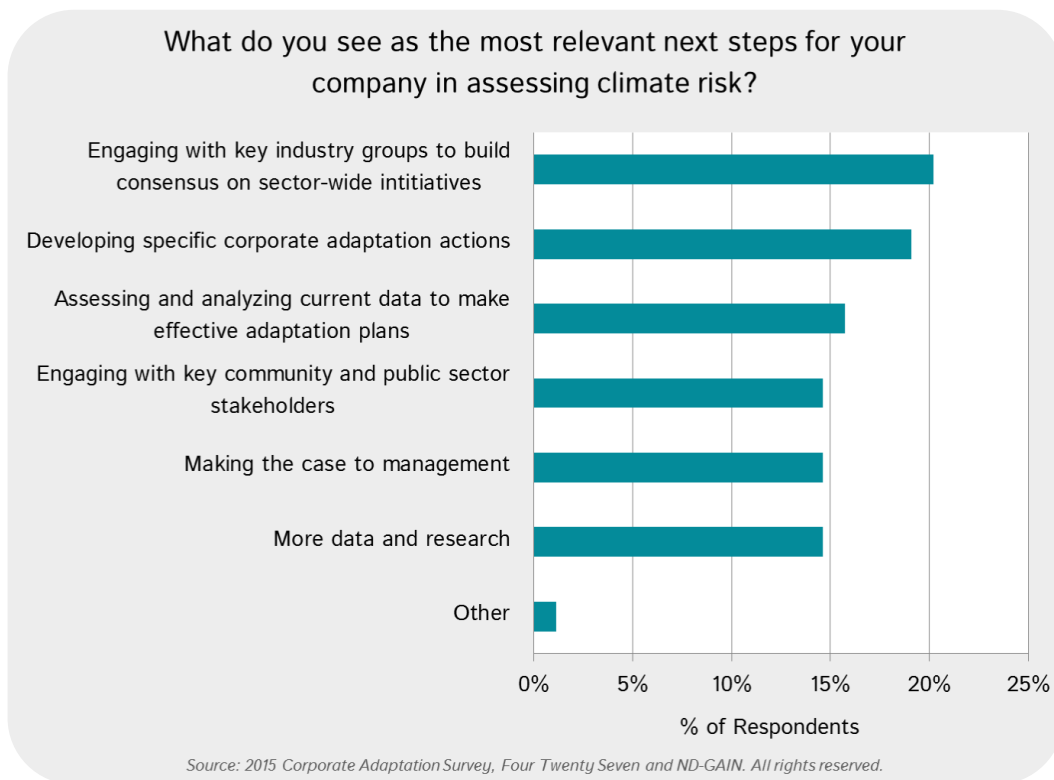
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*“[The next step is to] foster a culture of shared responsibility and empower departments to propose action plans to improve.”*

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The even partition of answers may very well represent the variance in “readiness” among respondents. It could also illustrate a larger, more systemic challenge where standards and processes are unclear and be indicative of a lack of shared vision on the most effective sequence of actions. This could point to a need for more standardized approaches to corporate adaptation planning.

Figure 15. Next steps in assessing climate risks





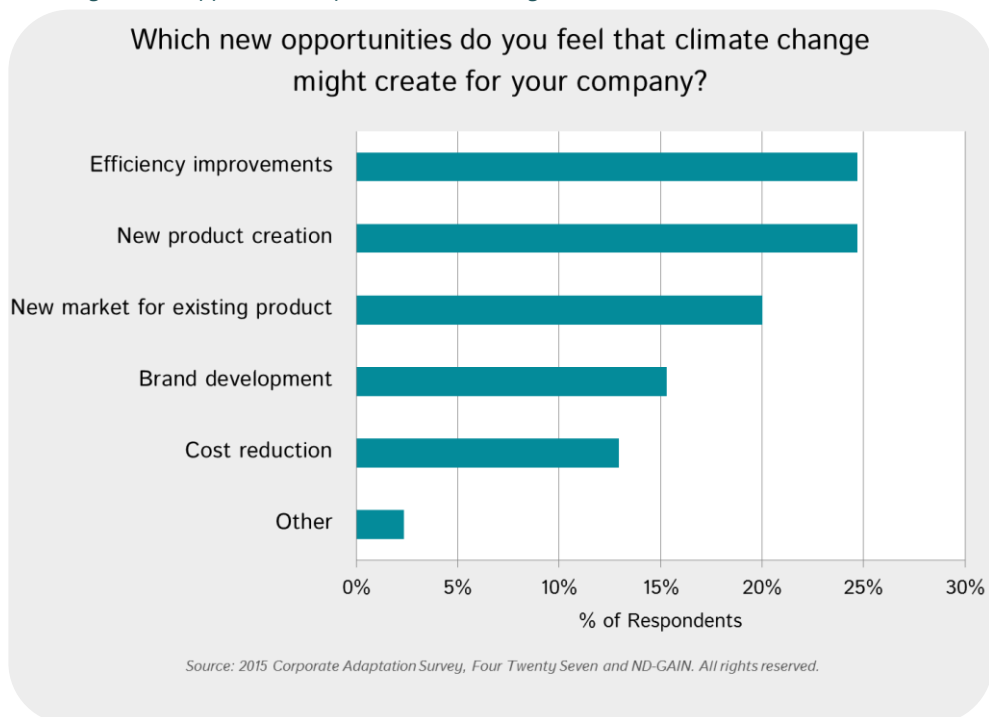
Engaging with key industry groups was cited most frequently, in line with the fact that industry groups were seen as a crucial resource on climate adaptation by respondents (Figure 7). This desire to engage with peers in other corporations may be interpreted as a need for respondents to bolster their existing efforts by seeking external support and validation for their climate adaptation efforts. Some companies may also see engaging with key industry groups as a preliminary step prior to engaging with community and public sector stakeholders.



## 8. What Opportunities Might Climate Change Bring?

Change brings risks and disruption, but also opportunities. We asked respondents which new opportunities they thought climate change might create for their company (Figure 16).

Figure 16. Opportunities from climate change



A quarter of respondents anticipated opportunities for both new product creation and efficiency improvements. Twenty percent also noted that they anticipate the development of new markets for existing products. Fifteen percent of respondents identified brand development as a likely opportunity while 12 percent felt that climate change might present opportunities for cost reductions.

In terms of opportunities for new product offerings and markets, respondents from companies in the Financial and Professional Services sectors were most optimistic, with approximately half of Professional Services respondents noting that both of these opportunities were already affecting their companies. Sixteen percent have already been able to develop new product offerings while nearly 40 percent felt that this was a likely outcome for their company. Respondents were less convinced that new markets would materialize, with 47 percent stating that this was very unlikely or unlikely and 24 percent confident that they would be able to take advantage of new markets. While 16 percent of respondents have already entered new markets as a result of climate change, 11 percent stated that they didn't know at this point whether new markets would be a likely outcome for their business.

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*“Potentially positive impacts from the creation of new business opportunities and markets [are] very relevant and immediate.”*

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## Conclusion

The *2015 Corporate Adaptation Survey* brings to light a number of interesting trends and challenges in corporate climate adaptation. First, respondents have a relatively sophisticated understanding of climate change impacts, including indirect political and socio-economic impacts, but a limited knowledge of company-specific risks. They are aware climate change could affect any part of their value chain, but they are not always able to articulate and pinpoint the pathways through which these impacts will be felt.

Second, a large number of respondents are struggling to understand and communicate the urgency or immediate relevance of climate risk management and adaptation planning within their organizations. Climate change seems to be a “now or never” occurrence, whereby impacts that have not already been felt are deemed to be medium- to long-term risks (more than five years out), and therefore outside of the range of business planning.

Third, in multiple questions, survey responses highlighted the key role played by industry groups – either sector-specific, local initiative focused or climate change-focused industry associations. Industry groups play a key role in educating and helping climate champions make their case internally, but also in providing strength in numbers and empowering climate adaptation professionals to launch industry-wide initiatives that go beyond what any single company could do. These initiatives can also provide some amount of market certainty, an incredibly valuable benefit for companies when altering processes or practices based on new or recently integrated information.

The multitude of risks and opportunities associated with climate change, along with the challenges in planning and preparing for those impacts, are only just beginning to emerge as early adopters take their first steps in corporate adaptation planning. We hope this survey, along with other existing efforts to encourage more transparency around corporate climate adaptation, will better position companies to engage internal and external stakeholders to build the necessary support for these actions.

This *2015 Corporate Adaptation Survey* provides a baseline of knowledge that we plan to build upon in future years by expanding both the number and diversity of respondents and the content of the questions based on new learnings and climate data. We hope that these insights ignite discussions and interest from both the private and public sector – within corporations but also with regard to the roles that private sector stakeholders can play in building community resilience. We believe that the impacts of climate change will only heighten the interdependences between the public and private sectors, making pro-active and coordinated climate adaptation planning across sectors that much more critical to successful community and corporate resilience.

We invite you to join us in continuing these discussions to shed light on the state of corporate adaptation – by working to identify the most significant barriers to corporate action on climate risk, we can identify new opportunities and encourage those solutions that keep our communities safe and our economies thriving.





#### **Four Twenty Seven**

Aleka Seville  
Director of Advisory Services  
Tel: 415-722-0836  
Email: [aseville@427mt.com](mailto:aseville@427mt.com)  
[www.427mt.com](http://www.427mt.com)

#### **Notre Dame Global Adaptation Index**

Joyce Coffee  
Managing director  
Tel: 312-894-9028  
Email: [jcoffee@nd.edu](mailto:jcoffee@nd.edu)  
[www.nd-gain.org](http://www.nd-gain.org)

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