TIC Council Risk Mitigation Survey

Confronting the threat of climate change

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TIC COUNCIL
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Introduction

Just as organisations get to grips with one change, they find themselves confronted by another – and each shift brings new risks. How are they coping with this constant adjustment, and how are their attitudes changing?

In April and May 2019, we surveyed 400 senior executives with strategic decision-making responsibilities to find out.[1]

Despite the pace of change, these respondents feel confident about their ability to deal with most of the risks they face. But not all.

They are confident about mitigating cyber risk, disruptive technology, and the risk that suppliers will underperform, but there is one prominent risk that stands out as a growing threat: climate change. And our respondents don't feel ready to face it. They expect it to have a profound impact on global supply chains, but they feel less ready to confront it.

In this report, we examine changing attitudes towards risk – and climate change risk in particular. We start by hearing how confident risk managers are feeling about their increasingly prominent role and how their organisations are tackling major risks. Then we will look at the threat of climate change and the challenges our respondents face in mitigating it. Finally, we investigate the way companies can obtain the data they need to form a clear picture of the climate change threat.

Section one
Risk: A shifting landscape

Risk management is taking an increasingly senior and integrated role within corporate structures – a response to increased volatility caused by globalised supply chains, expanding security threats and the evolution of digital technology. And as risk management's profile rises, so too do the demands on it: a fluctuating threat environment means risk managers have to be able to change their focus in response.

Our respondents are largely undaunted by these shifts. Overall, their confidence in their approach to managing major risks is reassuringly high, at 59%, although there are interesting geographical variations (see Figure 1).

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[1] All respondents were from organisations with more than $100m in annual global revenue; 44% were based in Europe (France, Germany, Italy, Sweden and the UK), 33% in Asia (China and India), and 25% in the US.

Figure 1. Confidence in organisations' approaches to risk management is higher in US and Asia
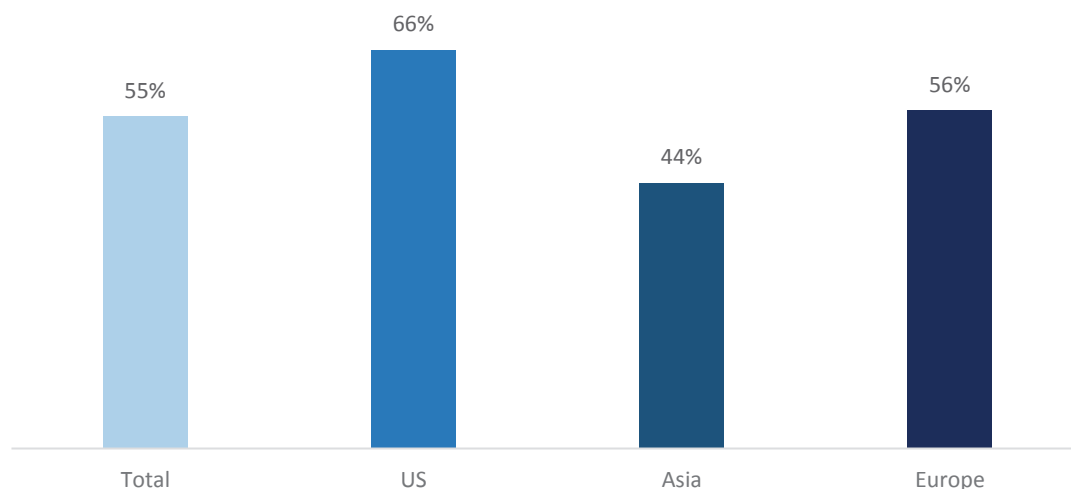

Describe your level of confidence (top two)

[Respondents selecting 9 or 10 on a 10-point scale]

This confidence is encouraging, but there is also cause for concern. The findings show that organisations are seeing the effects of the range of risks they face, with between 60% and 64% placing risk impact among the top three levels of severity (on a scale of one to ten) for each of the risks they were asked to rate.

At the same time, the perception of threat is growing. The majority of respondents feel more vulnerable today than they did 12 months ago, and US respondents are the most concerned.

Figure 2. The majority of organisations feel less risk-resilient than they did 12 months ago
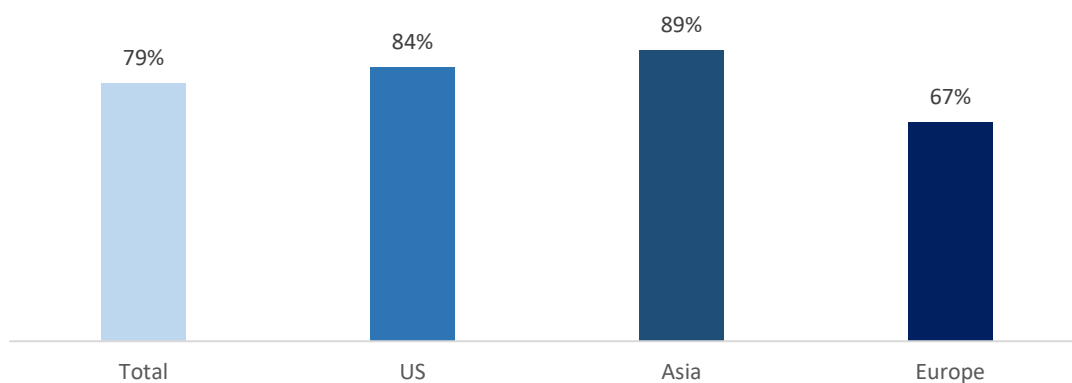

We are less risk-resilient than we were 12 months ago

When we look for the reasons for their concern, one factor stands out. Companies can take direct action to mitigate their own exposure to risk – by adapting their business models, for example, but they have less oversight and influence over the third parties they work with.

Today's supply chains are longer and more complex than ever, which makes the measures taken by suppliers and distributors harder to assess. This increases the risks faced by producers – no matter how responsible their own risk management practices are.

Reflecting this concern, many respondents are re-engineering their supply chains to mitigate third-party risk. Across the sample, 79% say they are working to toughen supply chains and only 5% say they are not (with 13% neutral). Asia leads the way here, with the vast majority (89%) taking action. In Europe, however, where intra-regional supply chains are subject to a high level of regulatory uniformity, that figure drops to 67%.

Figure 3. **Third-party risks are driving supply-chain transformation**

New risks associated with third parties (e.g. suppliers) have prompted us to re-engineer our supply chain

Cyber risk, supplier risk and technological disruption have been on managers' radars for some time, and our respondents expect these risks to continue to be high-priority. But they have taken longer to get to grips with the range of threats posed by global climate change – perhaps because these other risks have seemed more pressing and business critical.

A climate of risk

Storms, fire and floods are nothing new, but climate change is increasing their frequency and making their timing and location less predictable. This has severe implications for business.

And now there is a compound effect, because recent trends in business practices make companies even more vulnerable to climate change. Today, they rely on extended supply chains and 'just in time' delivery. There is more scope for disruption, and less tolerance for it.

It is dawning on organisations that their resilience to climate catastrophe is going to be tested more severely than ever over the coming years. But there is another imperative: protecting the environment has also risen rapidly among the concerns of their customers, and organisations' actions are under increasingly intensive scrutiny.

A year ago, our respondents placed climate risk relatively low down on their priorities, but it is now expected to become a more immediate concern over the coming year. Among all the risks presented to respondents, climate risk shows the greatest increase in severity. Business cycle risk, reputational risk and operational risk, meanwhile, have all moved in the opposite direction.
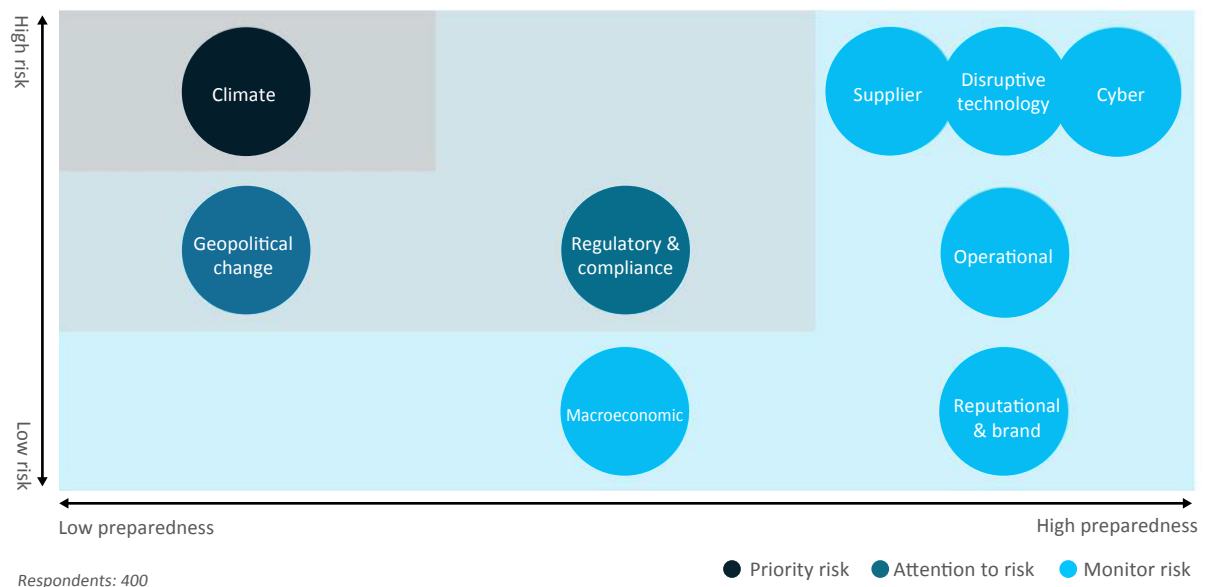
Figure 4: Climate change risk rises up the agenda

Risk impact on global value chain:

Past 12 months — Next 12 months

Cyber risk
Macroeconomic / business cycle risk
Supplier risk
Disruptive technology risk
Reputational and brand risk
Operational risk
Geopolitical change
Regulatory and compliance risk
Climate events / climate change risk

Respondents: 400

● High ● Medium ● Low

While climate risk is considered among the greatest threats that companies face, it is also one of those for which they feel least prepared. They are equally unprepared for geopolitical change – another 'external' risk that companies find hard to quantify and mitigate for – but they consider it less likely to have an impact.

Respondents feel much more prepared for other severe threats, such as supplier risk, disruptive technology risk and cyber risk.

Figure 5. Companies view climate change as high risk, but are least prepared for it

High risk — Low risk

Climate
Geopolitical change
Regulatory & compliance
Macroeconomic
Supplier
Disruptive technology
Cyber
Operational
Reputational & brand

Low preparedness — High preparedness

Respondents: 400

● Priority risk ● Attention to risk ● Monitor risk
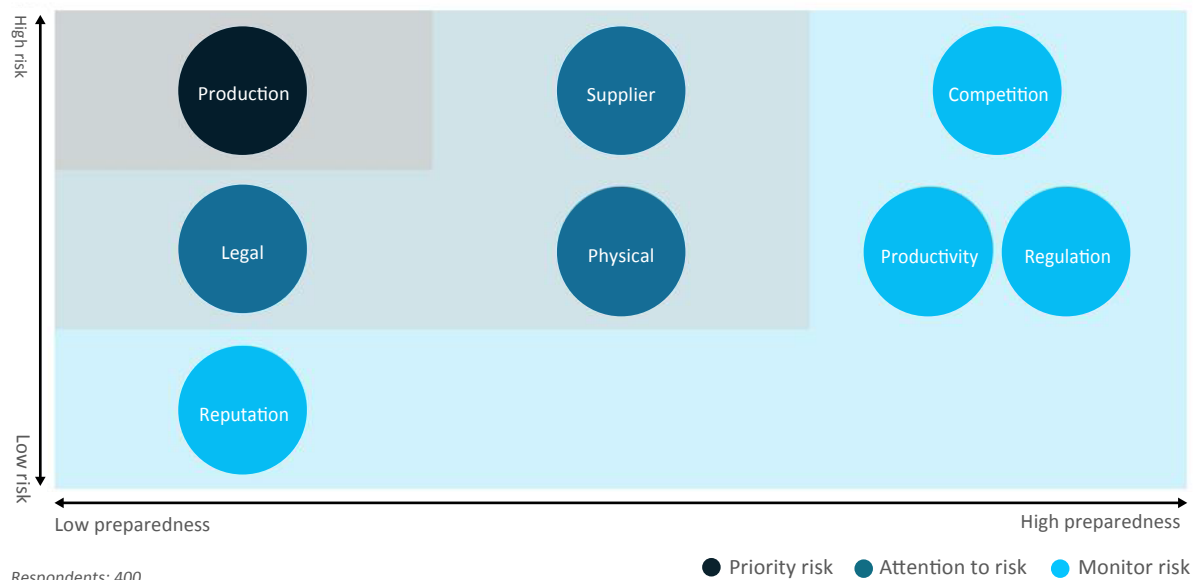
Quantifying the business impact

One of the difficulties companies face in confronting climate risk is understanding the ways in which climate events can affect them. It is vital that risk managers trace the routes through which the global symptoms of climate change have the potential to affect their own business operations.

Respondents to our survey identify three potential impacts as being of particular concern:

- Direct threats to production through the impact of weather events, such as the wildfires that swept across California in 2018, killing 106 people and causing $24bn in damage.[2]
- Failures along the value chain as suppliers are affected by such risks.
- The emergence of competitors that employ profile-raising, low-environmental-impact practices to gain market advantage – the likes of Chr. Hansen, for instance, which is a Danish bioscience business that has been named the world's most sustainable company.[3]

But while the latter two – supplier disruption and competition – are concerns for respondents, they consider themselves moderately and well prepared for them, respectively. It is the first impact of climate change – disruption to their own operations – for which they are least prepared.

Figure 6. Climate risk impact versus preparedness

Respondents: 400

Priority risk ● Attention to risk ● Monitor risk

More moderate risks include legal liability, for which respondents feel ill-prepared, and regulatory change, where their preparations are well advanced. Respondents consider reputation risk arising from climate change to be low, which may be complacent: all of the previous risks have the potential to cause reputational damage if they are not handled effectively. And again, companies feel poorly prepared to protect their reputational equity if climate risk strikes.

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[2] https://www.ncdc.noaa.gov/billions/events/US/1980-2019
[3] https://www.forbes.com/sites/karstenstrauss/2019/01/22/the-most-sustainable-companies-in-2019/#13b383af6d7d
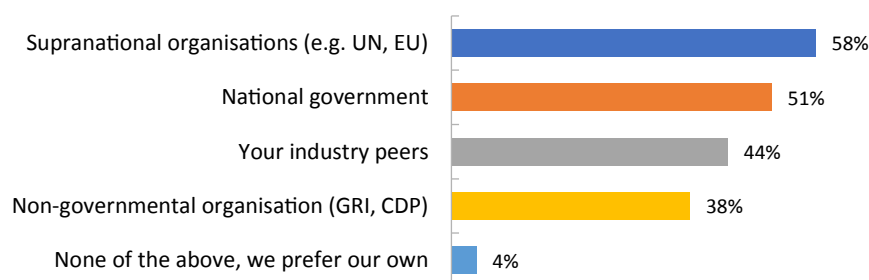
Section two
Responding to climate risks

Climate change presents businesses with a complex set of challenges. They must consider their own impact on the environment, as well as the impact of the environment on their operations and profitability.

Our survey suggests that companies are particularly focused on the former: 79% are reviewing and refreshing their climate change mitigation strategies.

And while companies recognise the long-term benefits of helping to fight climate change, public perception is also a driver. Carmaker Volkswagen is still reeling from the revelation in 2015 that it had manipulated emissions results, while companies' records are more exposed than ever through databases such as the US EPA's Enforcement and Compliance History Online (ECHO).[4] Indeed, 'protecting the brand' is cited alongside minimising the risk of incurring long-term costs as the most important factor behind investment in climate change mitigation efforts. Each of these drivers is cited by a quarter (26%) of respondents.

Regulation remains important, however, and is likely to become more so as global governance catches up with the climate threat. For now, companies are most likely to take a lead from supranational organisations such as the UN and the European Union, with 58% saying that these are their main benchmarks. National governments wield less influence, at 51%, and non-governmental organisations such as the Global Reporting Initiative and CDP (previously the Carbon Disclosure Project) even less, at 38%.

Figure 7. Organisations are most likely to align their mitigation strategies with the policies of supranational organisations [5]

Supranational organisations (e.g. UN, EU)	58%
National government	51%
Your industry peers	44%
Non-governmental organisation (GRI, CDP)	38%
None of the above, we prefer our own	4%

To which of the following would you consider aligning your internal climate risk-related compliance requirements and benchmarks?

Lowering energy consumption is a first step
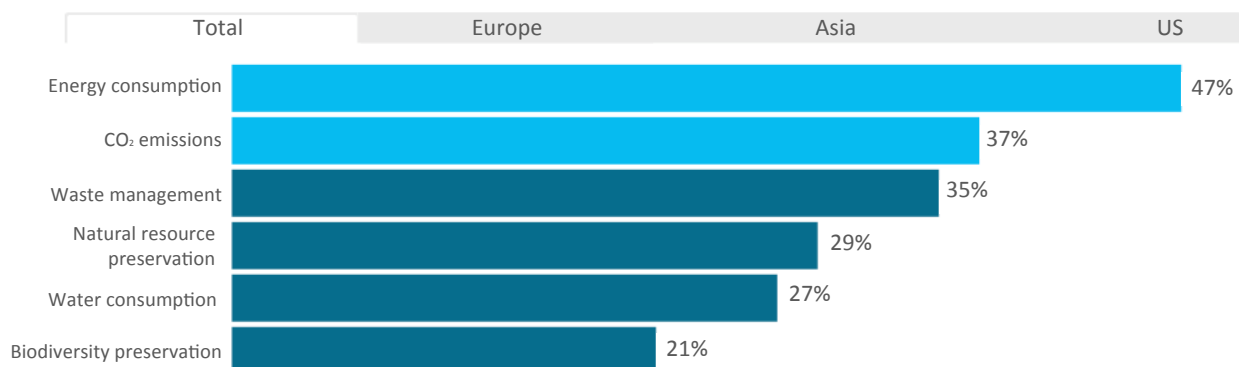
In terms of the ways in which companies are mitigating climate change, the focus is on lowering energy consumption – a double-edged measure that can save costs as well as reduce the company's carbon footprint.

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[4] https://www.forbes.com/sites/karstenstrauss/2019/01/22/the-most-sustainable-companies-in-2019/#13b383af6d7d
[5] https://infogram.com/1ppmey5nx7yg0vtrd3jxqdmkrjfzmj0k6yj

Swedish home products giant IKEA, for example, is substituting renewables for conventional energy sources and hopes in time to become nearly energy self-sufficient. This does not just make for good PR: the International Energy Agency says that energy-efficiency gains could achieve about 40% of the emissions reductions required by 2050 to limit global warming to less than 2 degrees centigrade.[6] Just under half of our respondents (47%) say they are focusing on reducing their energy consumption, and lowering CO_2 emissions is next on the list (see Figure 8).

Figure 8. Climate risk mitigation efforts focus on energy consumption

Total	Europe	Asia	US

Energy consumption	47%
CO_2 emissions	37%
Waste management	35%
Natural resource preservation	29%
Water consumption	27%
Biodiversity preservation	21%

Where climate risk mitigation efforts are currently focused, by region
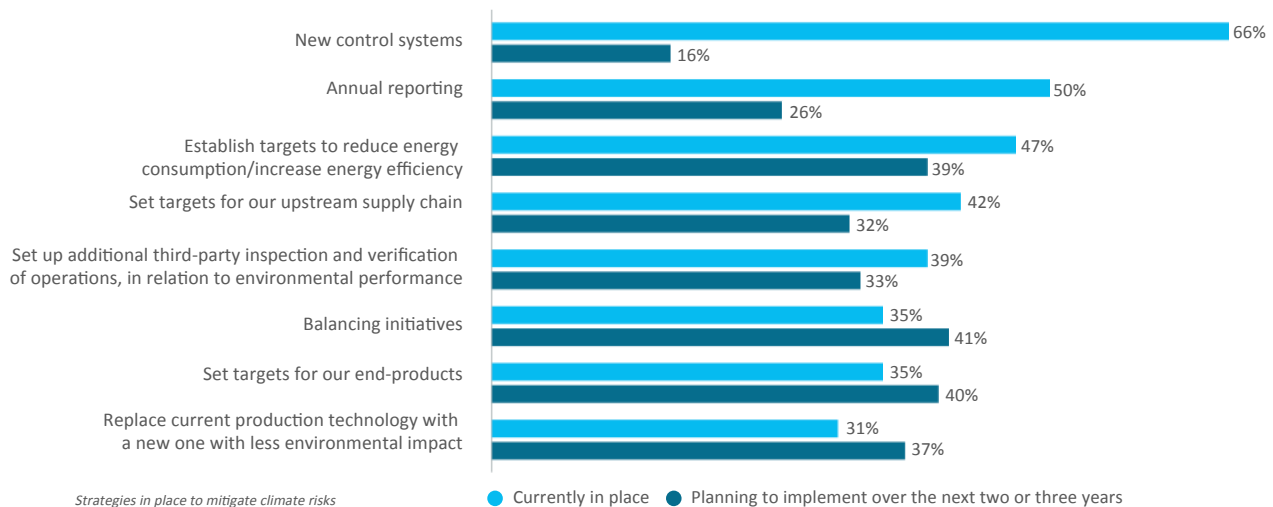
Firms have already made substantial progress in adopting climate risk strategies. Two-thirds (66%) have put in place new controls systems, and half are now issuing annual reports to external shareholders and the public on their progress in this area.

More than 4,000 organisations are reporting their environmental exposure to CDP.[7] Almost half of our respondents (47%) have set targets for reduced energy consumption and efficiency, and 42% are taking measures to ensure that targets are adopted in the upstream supply chain.

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[6] https://www.iea.org/publications/freepublications/publication/MediumTermEnergyefficiency MarketReport2015.pdf
[7] https://www.cdp.net/en/info/about-us

Figure 9. Checks and balances move to the foreground

Strategy	Currently in place	Planning to implement over the next two or three years
New control systems	66%	16%
Annual reporting	50%	26%
Establish targets to reduce energy consumption/increase energy efficiency	47%	39%
Set targets for our upstream supply chain	42%	32%
Set up additional third-party inspection and verification of operations, in relation to environmental performance	39%	33%
Balancing initiatives	35%	41%
Set targets for our end-products	35%	40%
Replace current production technology with a new one with less environmental impact	31%	37%

Strategies in place to mitigate climate risks

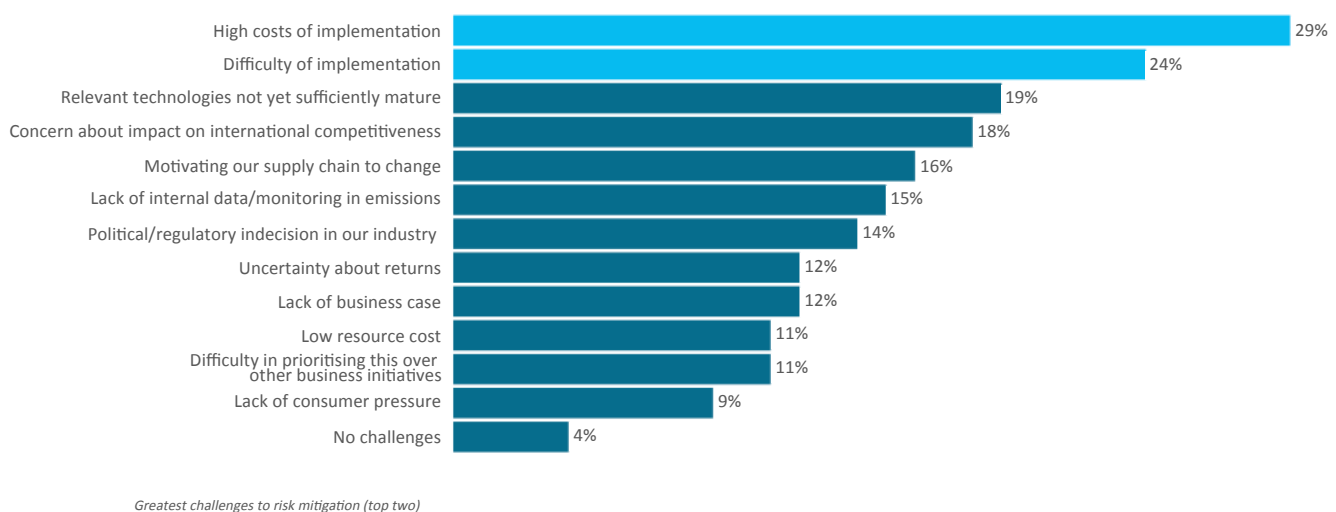● Currently in place ● Planning to implement over the next two or three years

Other measures have got off to a slower start, but are expected to become more widespread over the coming years. In particular, 41% of respondents plan balancing initiatives such as carbon neutrality and zero waste, and a similar number aim to set sustainability targets for end products, such as CO_2 emissions and recyclability.

What's stopping them?

Climate responses must compete with other pressing priorities for resources, and while companies recognise the importance of arming themselves against climate risk, it is not easy.

Meeting the expense of the wide-reaching measures needed to confront climate risk, and the sheer technical difficulties of doing so, are particularly challenging. Cost is cited as the main barrier to implementation, followed by technical difficulty. This is unsurprising: climate mitigation is a new area of technological development and innovation; indeed, 19% say that the technology is not yet sufficiently mature to warrant investment.

Figure 10. Cost and technical difficulties are key barriers

Challenge	Percentage
High costs of implementation	29%
Difficulty of implementation	24%
Relevant technologies not yet sufficiently mature	19%
Concern about impact on international competitiveness	18%
Motivating our supply chain to change	16%
Lack of internal data/monitoring in emissions	15%
Political/regulatory indecision in our industry	14%
Uncertainty about returns	12%
Lack of business case	12%
Low resource cost	11%
Difficulty in prioritising this over other business initiatives	11%
Lack of consumer pressure	9%
No challenges	4%

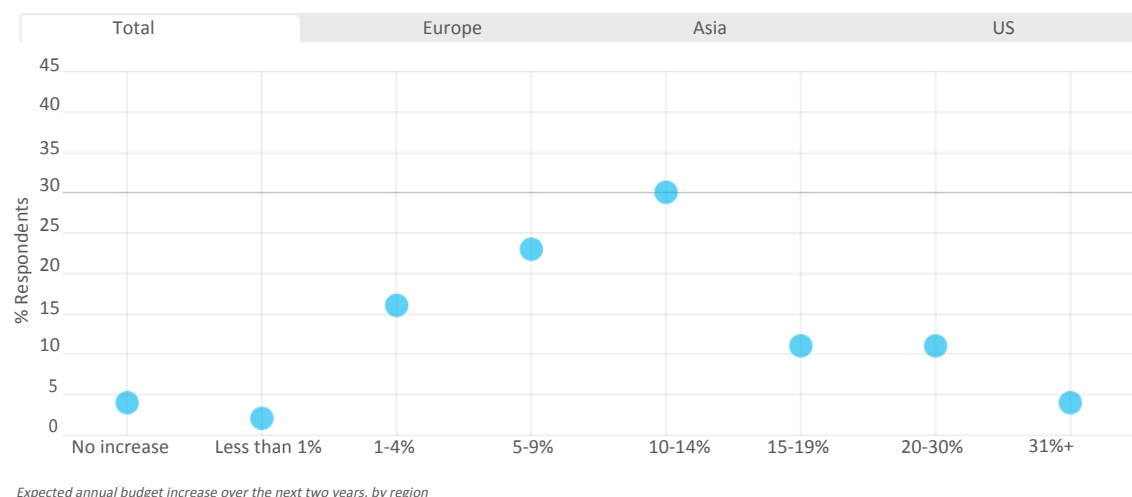*Greatest challenges to risk mitigation (top two)*

So activity is modest, but is set to accelerate. Boards appear to be convinced of the need for investment: few among our respondents say they are struggling to make the business case, or to justify the return on investment in risk-reducing strategies.

Funding for climate risk mitigation measures is on the increase, with 52% of respondents expecting an increase of between 5% and 14% in their annual budgets in this area over the next two years; 22% expect higher increases than that, and only 4% expect no increase at all.

This rising tide of investment promises to transform the picture over the coming years, with companies sharply increasing their resilience to climate effects, securing their supply chains and protecting their brands and their standing in public opinion.

[Figure 11](#). Executives are willing to increase budgets to tackle climate risks

Expected annual budget increase over the next two years, by region
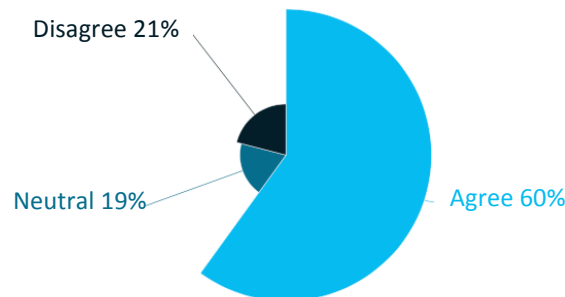
Section three
Partnering to overcome vulnerabilities

Good risk mitigation depends on good data. Without it, models of climate vulnerability are untrustworthy, and from a compliance perspective lack of reliable data makes it hard for organisations to meet their reporting responsibilities.

But climate vulnerability is an emerging field, and good data is hard to find. Among the difficulties companies face in responding to climate risk, this is one of the most severe. Our survey respondents know they have a problem here: 76% highlight the lack of reliable and readily available data for managing climate risk, and only 8% satisfied on this measure.

At the same time, 60% acknowledge that they have shortcomings when it comes to testing for vulnerabilities to new climate risks.

Figure 12. Organisations are struggling to test their vulnerability to new climate risks

Disagree 21%

Neutral 19%

Agree 60%

% agreement with the following statement: we have shortcomings in testing vulnerabilities when it comes to new climate risks

The challenge becomes tougher still when dealing with threats to companies further up the value chain, where measures implemented by the company itself need to be complemented by mitigations applied locally.

There is little value in having a sophisticated strategy to head off reputational damage if a supplier is exposed to climate risk beyond those central controls. When the Deepwater Horizon oil rig failed catastrophically in the Gulf of Mexico in 2010, it was BP's "gross negligence" judges blamed for the disaster, despite the fact that the rig was owned by a contractor, Transocean, and the faulty cement at the heart of the failure was produced by Halliburton, another contractor.[8]

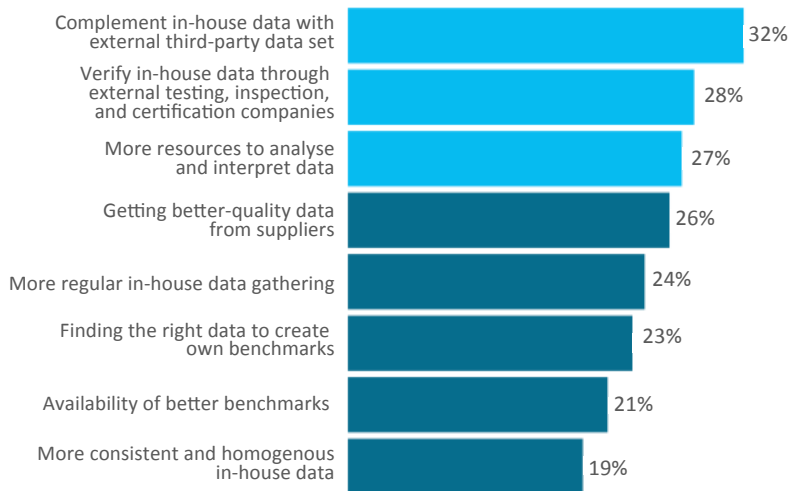## Local mitigation, specialist knowledge and third-party data

Organisations can address both of these problems – the lack of data and the difficulty of assessing how vulnerable they are – by seeking external help.

Among our respondents, 69% say that assessing the impact of potential disruption is complex and requires localised mitigation. The further an issue is from a company's direct control, the more outside help the company will need. Even when threats strike at the heart of a company's operations, assessing them and planning a response can require expertise that it does not possess.

Meanwhile companies can ease their data problems by acquiring third-party data sets. Our survey supports this, with 32% of our respondents saying they would like to secure more data from specialist third parties. And when they have put their mitigation strategies in place, companies often lack the expertise to audit them for quality and here, too, outside help can be crucial: 28% of respondents say that verification by testing, inspection and certification (TIC) companies would help them to increase the efficiency of their data use.

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[8] https://oilprice.com/Latest-Energy-News/World-News/BP-Halliburton-and-Transocean-Found-Negligent-in-Deepwater-Horizon-Spill.html

Figure 13. Organisations seek third-party data support to help mitigate risks

Complement in-house data with external third-party data set	32%
Verify in-house data through external testing, inspection, and certification companies	28%
More resources to analyse and interpret data	27%
Getting better-quality data from suppliers	26%
More regular in-house data gathering	24%
Finding the right data to create own benchmarks	23%
Availability of better benchmarks	21%
More consistent and homogenous in-house data	19%

Top 2

Q: What would make your use of data more efficient for the purpose of risk modelling and analysis?

The same is true when it comes to validating risk mitigation strategies. Respondents have a high degree of confidence in TIC member companies, with 83% saying they trust TIC companies to validate their risk mitigation efforts. Three-quarters, meanwhile, have scheduled additional inspection at their production sites as part of their climate risk mitigation strategy.

Conclusion

Public awareness of the climate threat is spurring business into action. They know that their customers are increasingly demanding a proactive response to climate change, and they are alert to the reputational penalties if they fall short. More importantly, companies are also realising the disruptive threat climate change poses to production, when complex supply chains are exposed to this risk.

The rapidly changing nature of today's business landscape has led to a shift in the role of risk management. Increasingly integrated into the organisation, its profile stands to rise even further as climate change threats loom over supply chains and public attention continues to zero in on companies that ignore the urgency of the problem. Their job is to mitigate the complex range of climate risks without taking their eye off the other threats that have preoccupied businesses this century – cyber risk, reputational risk and supplier risk, for instance.

The businesses we spoke to are confident about their resilience to most risks – but climate risks seem to have crept up on them. They now recognise this, and are focusing increasingly on mitigating the risks to their operations and curbing their own contribution to global warming.

The survey reveals the following:

- Senior executives feel well prepared to face high-impact risks such as breaches in cyber security, but there is work to do to protect companies from the harder-to-spot vulnerabilities to climate impact that are hidden within their extended supply chains.
- The most popular climate risk strategy is lowering energy consumption and becoming more efficient, and it is not hard to see why – it is a strategy that both saves them money and makes their brand look good.

- Cost and technical difficulty are slowing adoption of climate risk mitigations, and these problems are exacerbated because the technology they need is embryonic or non-existent. Budgets for climate risk mitigation are likely to rise over the coming years.
- Companies lack reliable data for climate risk mitigation and are reaching out to third parties. TIC member companies are trusted to provide third-party verification, and about three-quarters of our sample have scheduled additional inspections at their production sites to improve climate risk mitigation.