

# Climate Change: Key Trend in Capital Markets Risks and Opportunities

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# Why talk about Climate Change today?

Climate Change is **one of the four identified megatrends** that are having a significant impact on our clients and the world around us and which we should help our clients face.

## Innovation through information:

How can we harness the data around us to change the world for the better?

## Changing dynamics:

How will the emerging middle classes shape the future?

## A low emissions future:

How can we help clients in the transition?

## Populations & consumption:

How will our ever-growing population impact the world we live in?

# Now is the time to do something, not tomorrow

- Failure to mitigate and adapt to climate change is viewed as the risk with the greatest potential impact



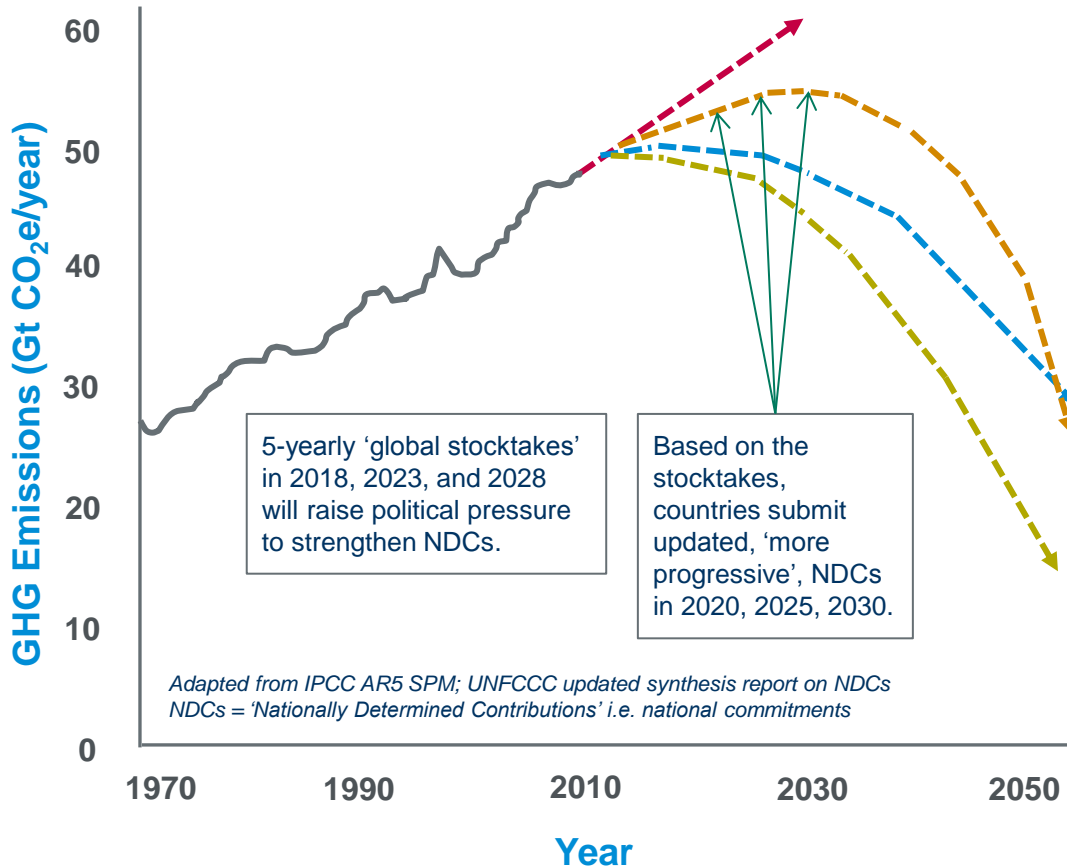
The Global Risks  
Report 2017  
12th Edition

- Climate change will impact business in many different ways and our clients will need to balance profitability with addressing these impacts



# Deep emissions cuts needed for <math><2^{\circ}\text{C}</math>

## Global GHG Emissions



1970-2010 trend shows growth in GHG emissions accelerating

Outlook for GHG emissions to 2030:

- 'Business As Usual'
- 'NDCs'
- 'Least cost 2°C' pathway
- 'Least cost 1.5°C' pathway

Outlook to 2050 and beyond:

- 'NDCs' need to strengthen significantly in early/mid-2020s to deliver 2°C
- This will require a transition in the production and use of energy
- Introduces very significant uncertainties for business planning

# Risks or Opportunities?

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**BOTH:** Climate change isn't just about removing today's risks, it's about unlocking tomorrow's opportunities.



Climate change can reduce profits and interrupt supply chains

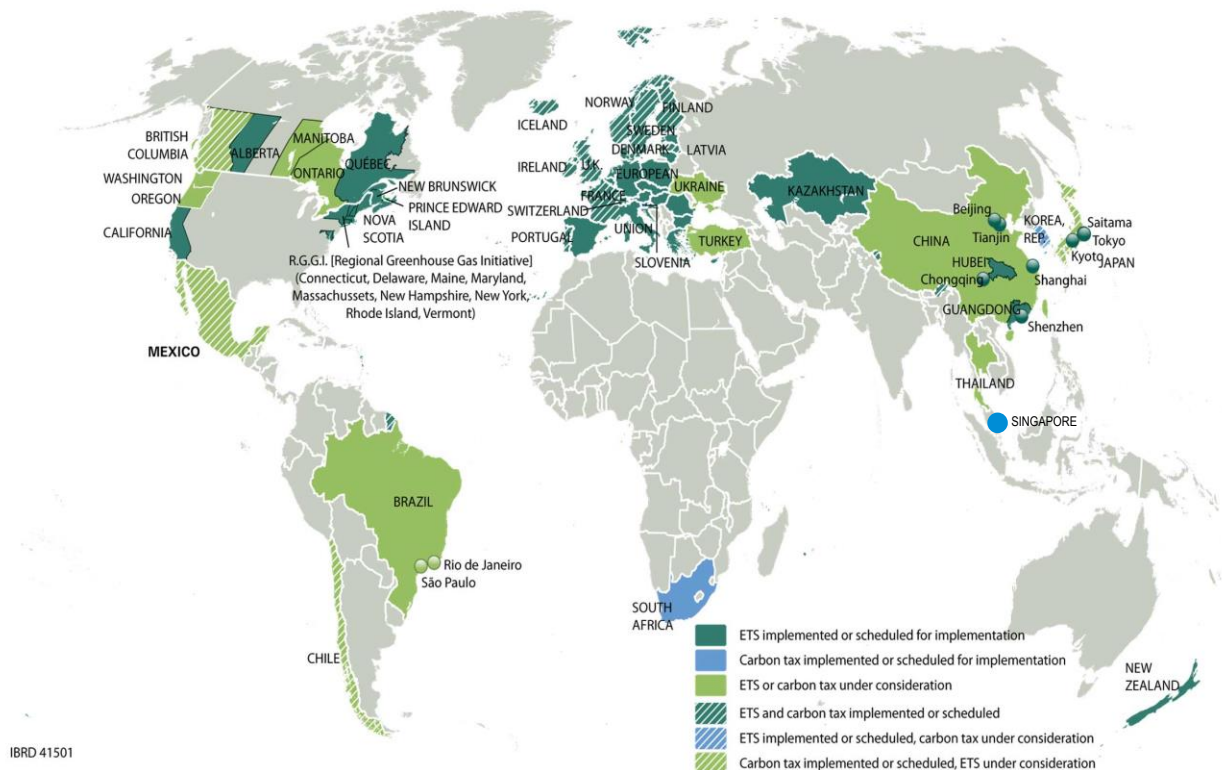


Climate change can open up new markets and boost competitive advantage

By embracing new technologies, strategies and processes, organizations will be able to minimize the risks and maximize the opportunities.

# Carbon tax/trading schemes are spreading

- Schemes to put a price on CO<sub>2</sub>/ GHG emissions are spreading globally, including in the Asia-Pacific region. The recent repeal in Australia is the only exception to this trend.
- Price of CO<sub>2</sub> is likely to increase significantly in the coming decade.
- Singapore carbon tax, scheduled for 2019, is latest indicator of the global trend.
- Carbon tax and trading schemes will significantly impact competitiveness of utility assets.



# Renewable energy reshapes power markets

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**“RWE posts €5.7bn loss and scraps dividend”**

**“Eon record loss of €16bn”**

“RWE and Eon’s losses reflect the continuing crisis in Germany’s power sector...cheap solar and wind power have squeezed energy produced from gas and coal out of the market and suppressed electricity prices, making some conventional power stations uneconomic.”

Financial Times, 2017



# Climate change poses physical risks to assets

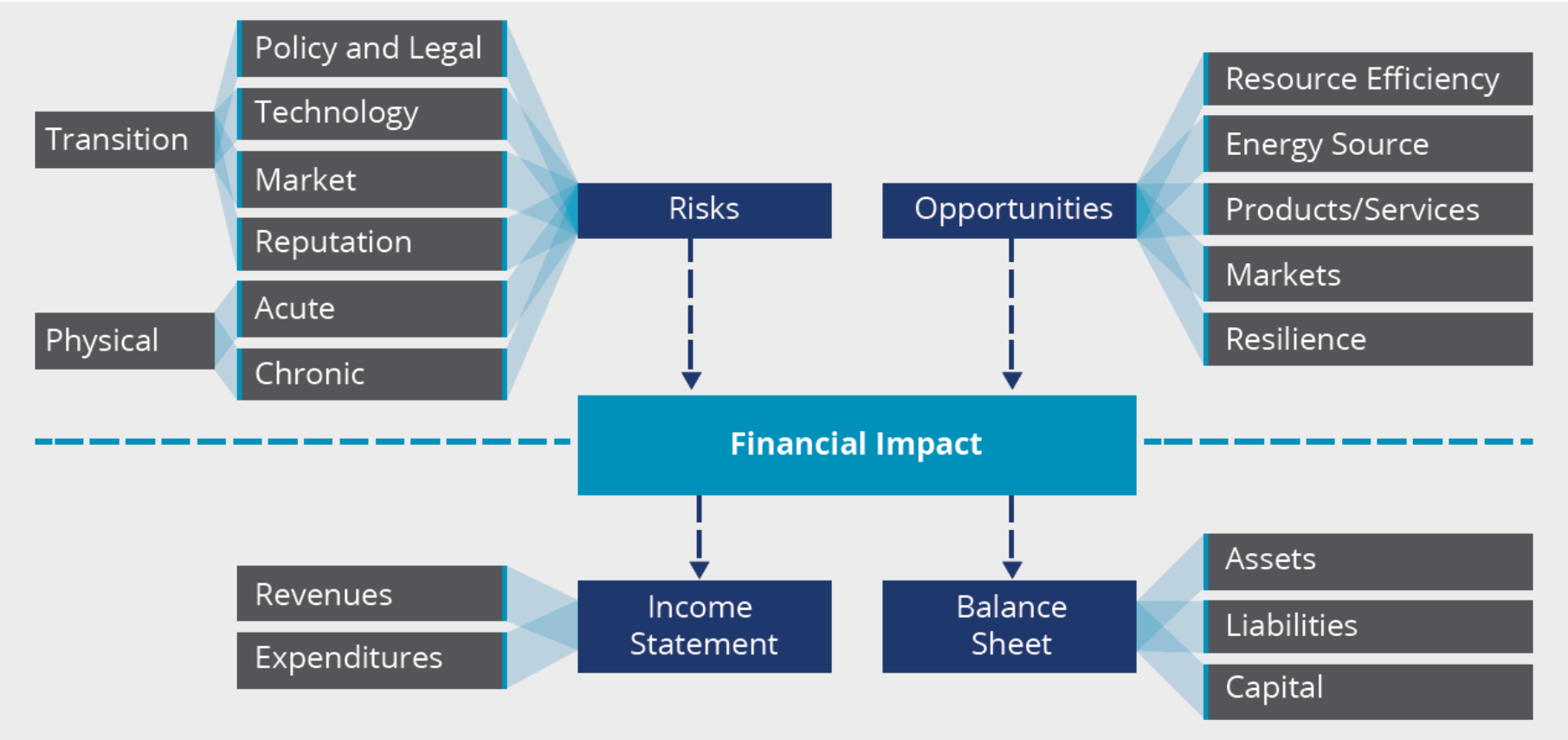
Climate/weather extremes (e.g. sea level rise and storm surge, cyclones, drought, flooding and extreme temperatures) are resulting in significant implications for power and utilities worldwide, including:

- Supply chain disruptions
- Reduced production
- Lost production
- Physical damage to infrastructure
- Impacts on staff health
- Impacts on staff safety
- Maintenance/clean up costs
- Licence/ law contraventions

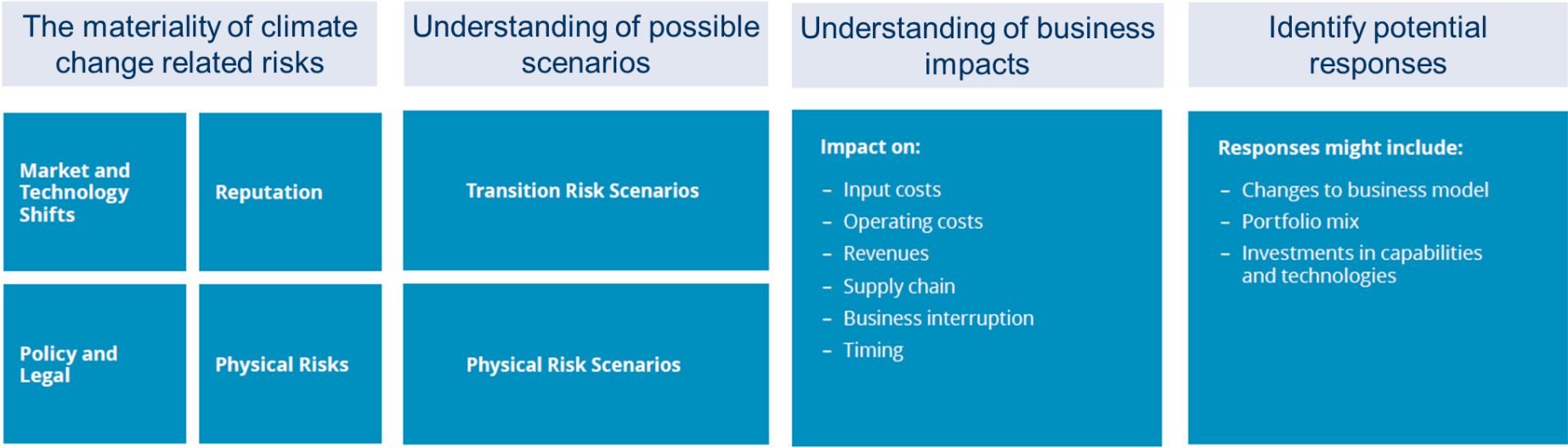




# Financial Exposure from Climate Change



# Climate-related Scenario Analysis

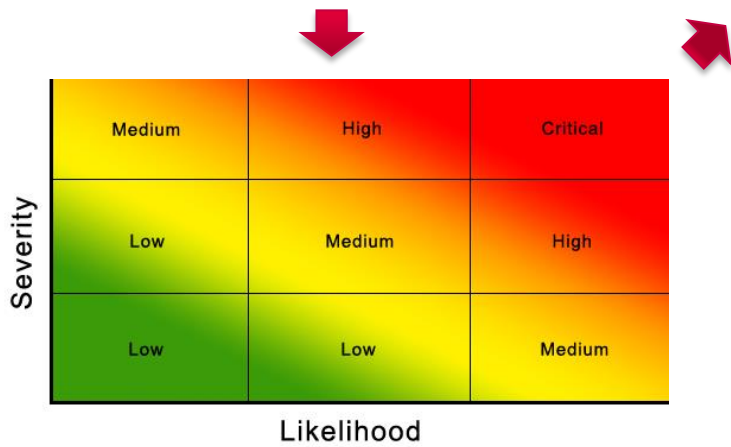


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# Building Resilience

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Businesses need to:

- Evaluate their operational and financial exposure to climate change issues
- Build long-term resilience combining **mitigation** strategies with **adaptation** response plans

mitigation actions + adaptation actions = resilience

# Mitigation

## Climate Change Mitigation

Efforts to reduce or prevent emission of greenhouse gases.

### Examples

- using new technologies and renewable energies
- making older equipment more energy efficient
- changing management practices or consumer behavior



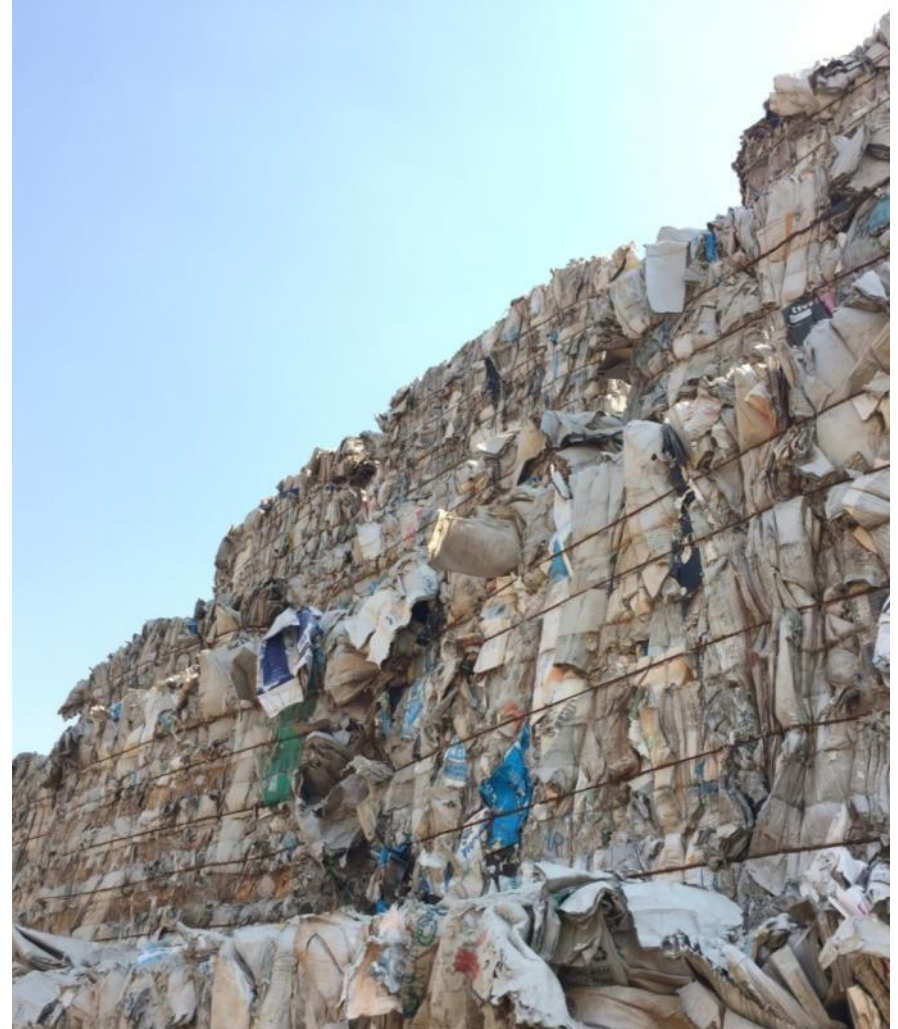
# Adaptation

## Climate Change Adaptation

Anticipating the adverse effects of climate change and adjusting processes, practices and structures to adapt to potential damage and take advantage of any associated opportunities.

### Examples

- building infrastructure to withstand more extreme weather events
- diversifying the supply chain to be less reliant



# What does this mean for organizations?



## IMPACTS ON:

- Markets and customers
- Market demand
- Technological disruption
- Revenues
- Cost of feedstock
- Cost of production
- Cost of transportation
- Resilience of supply chain
- Access to market
- Access to capital
- Trust and reputation

# Financial community is requesting disclosure

Established by G20 Financial Stability Board, the global Taskforce on Climate-related Financial Disclosures has made far-reaching recommendations

“With better information as a foundation, we can build a virtuous circle of better understanding of tomorrow’s climate-related risks, better pricing for investors, better decisions by policymakers, and a smoother transition to a lower-carbon economy.”



Large listed companies will increasingly be expected to provide disclosures on their financial exposure, and responses, to climate change, in order to maintain their reputation.

# TCFD Disclosure Recommendations

Governance	Strategy	Risk Management	Metrics and Targets
<ul style="list-style-type: none"><li>• Disclose the organization's governance around climate-related risks and opportunities</li></ul>	<ul style="list-style-type: none"><li>• Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning</li></ul>	<ul style="list-style-type: none"><li>• Disclose how the organization identifies, assesses, and manages climate-related risks</li></ul>	<ul style="list-style-type: none"><li>• Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities</li></ul>

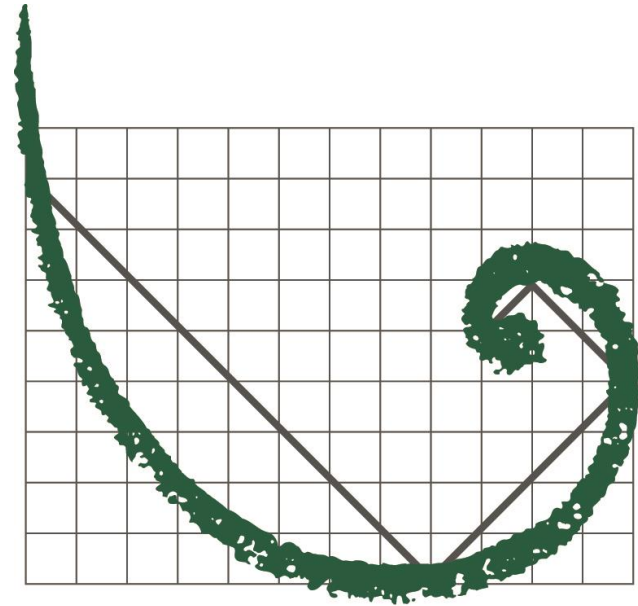


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# Greater Engagement with Key Stakeholders

With new policies and regulations, a broaden conversation on climate change across the company's value chain is required.

- **Engage with functions across the business**, including the C-Suite, Enterprise Risk, and Strategy & Planning
- **Deliver holistic solutions** not just tactical projects
- **Engage with the investor community** as they want to understand climate change risks for the organization in financial terms

