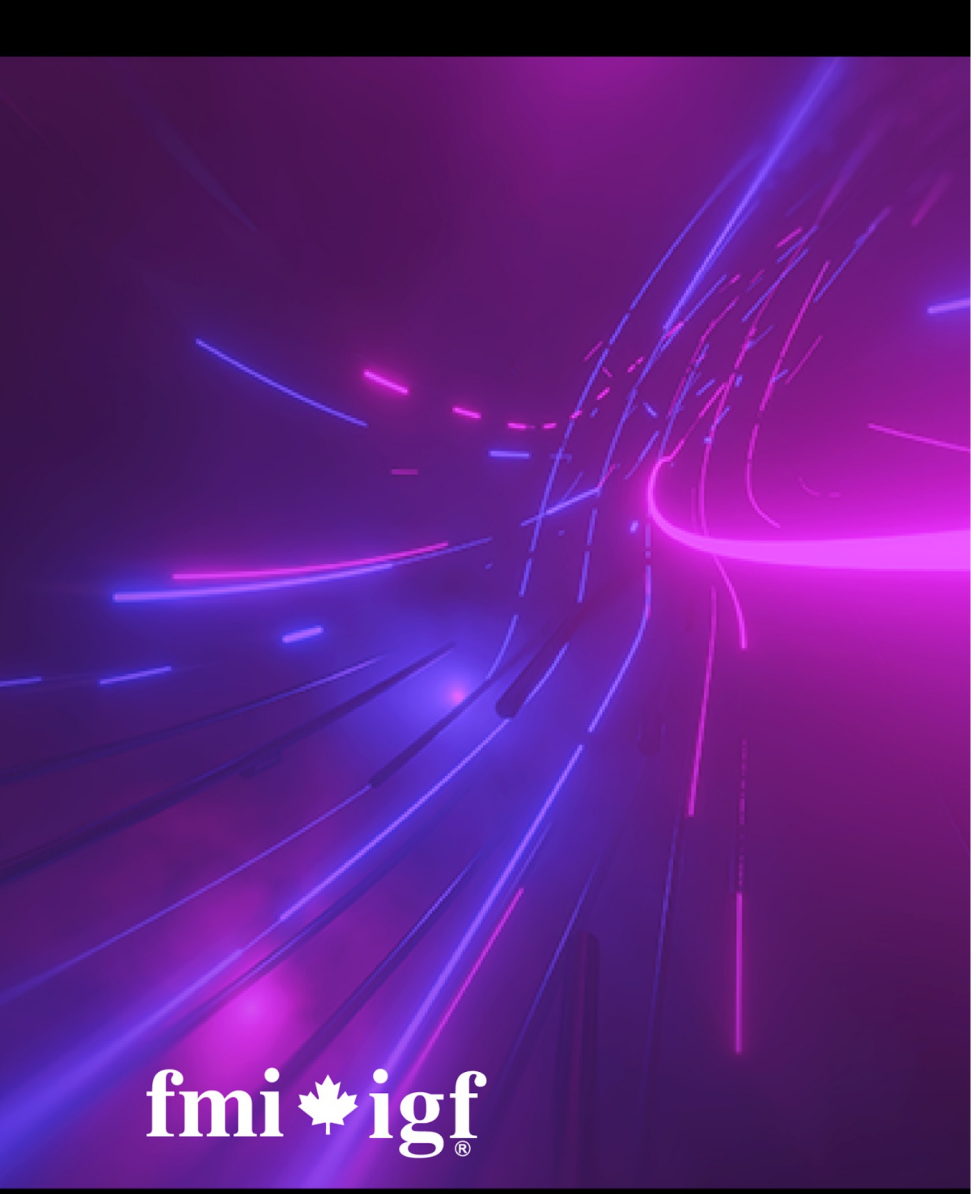


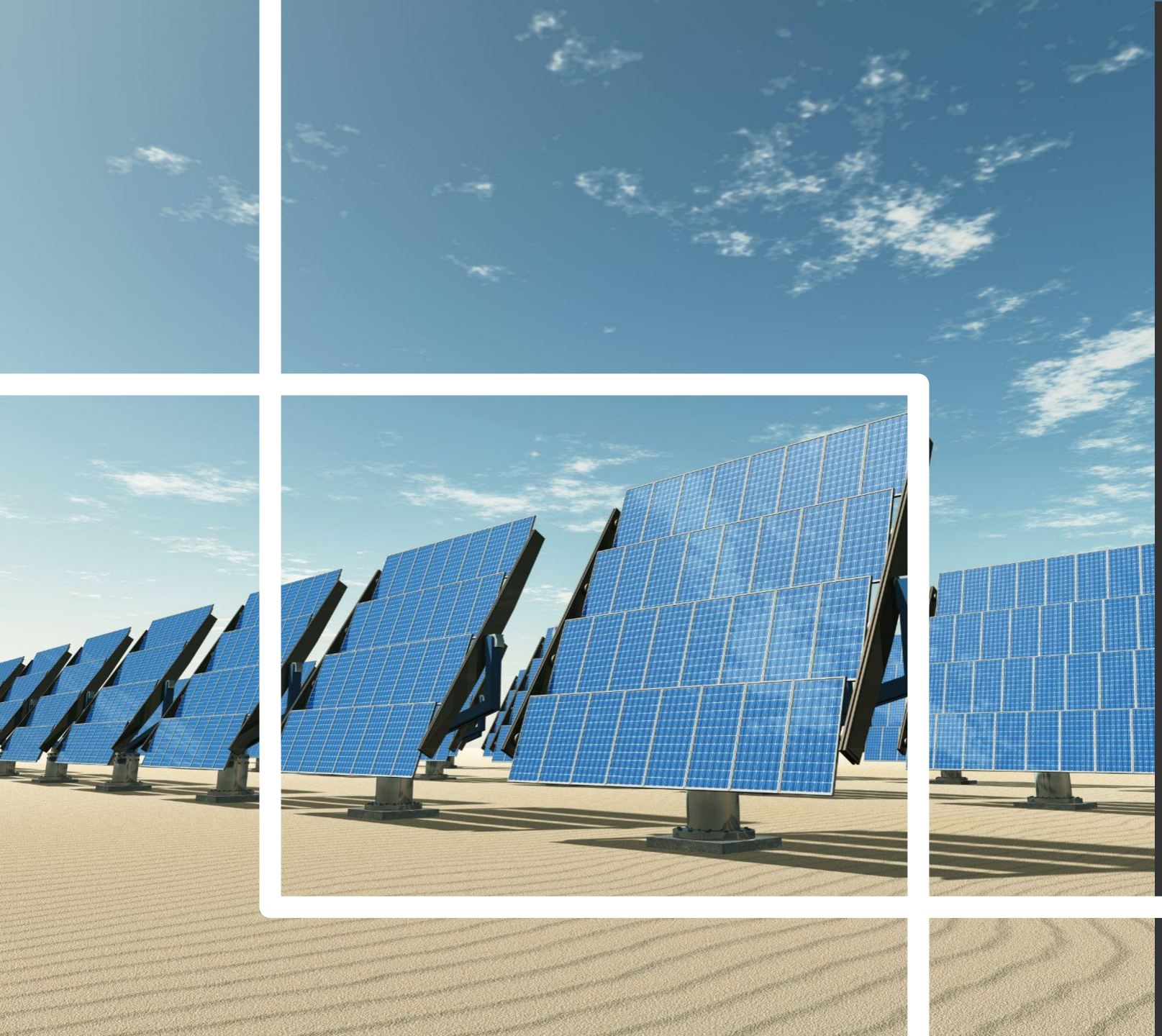
Responsible Government

The importance of the finance function in meeting climate-related goals

pwc

I am an engineer


I am a
numbers guy



But I am not your traditional accountant…

I’m a GHG Accountant

And while you have all heard of ESG:

Environmental	Social	Governance
Climate change	Human capital	Corporate governance
Natural resources	Product liability	Corporate behavior
Pollution & waste	Stake holder opposition	
Environ mental opportunity	Social opportunity	

I’m only really going to talk about climate change today

Environment

- **Carbon Emissions**
- **Product Carbon Footprint**
- **Financing Environmental Impact**
- **Climate Change Vulnerability**

Fort Myers, FL

Port Aux Basques, NL

In the news

A mud-caked doll and a case of White Claw bring hope and laughter to Fiona survivor

Krystle Collier's Port aux Basques home was badly damaged, but she managed to salvage a few key items

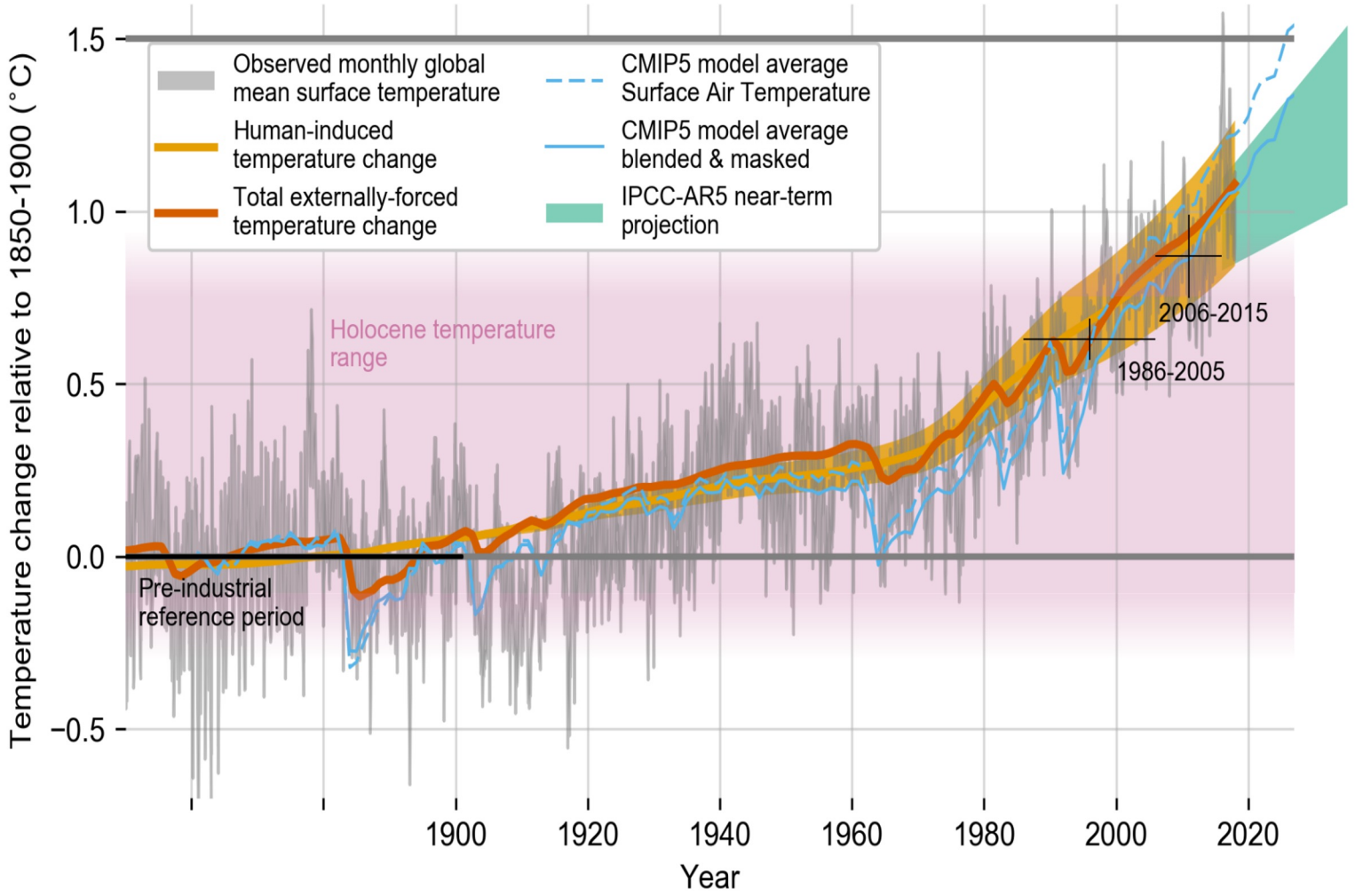
In the news

Hurricane Ian's rapid intensification is part of a trend for the most dangerous storms

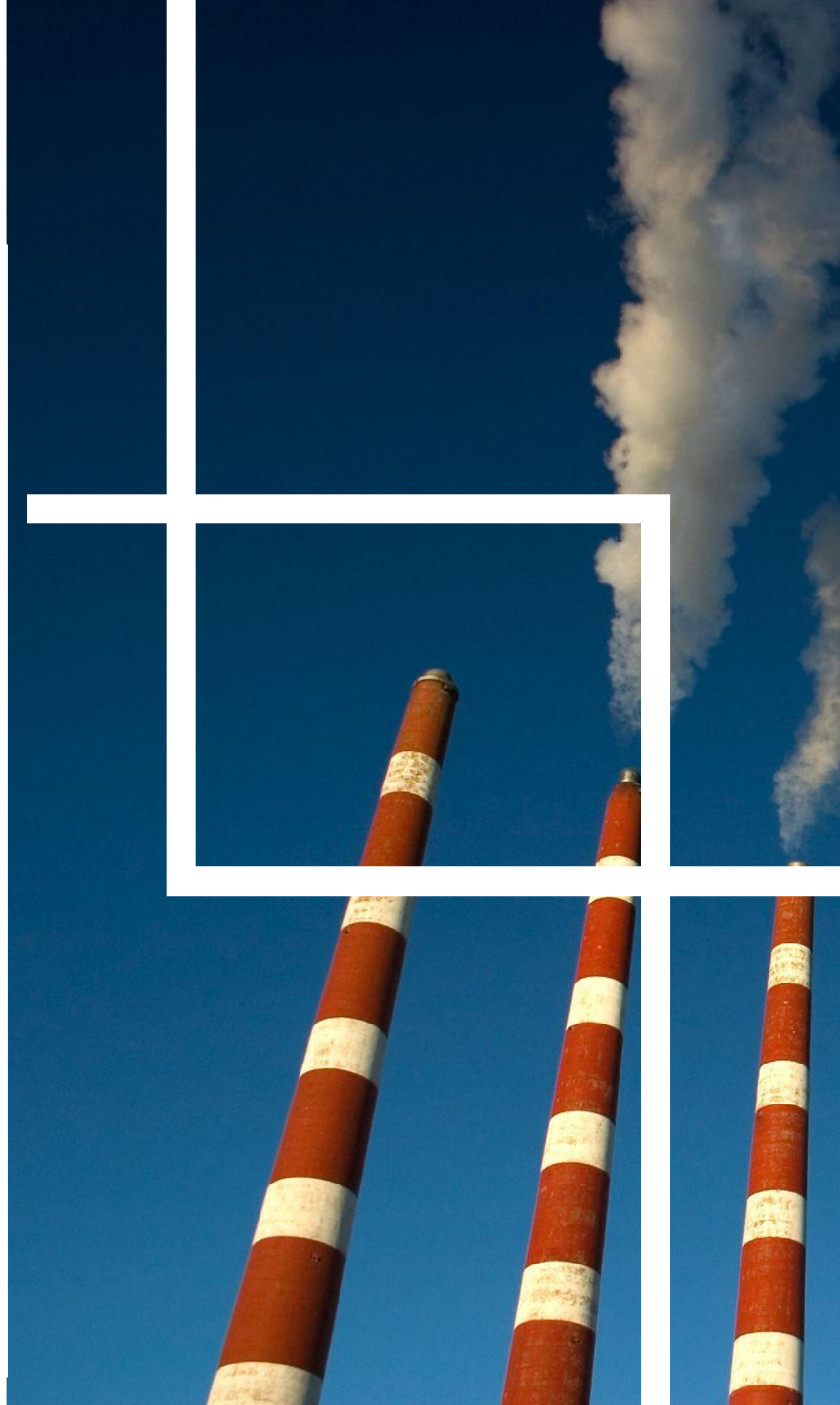
CAPITAL WEATHER GANG

How climate change is rapidly fueling super hurricanes

Temperature is increasing and we're generally to blame



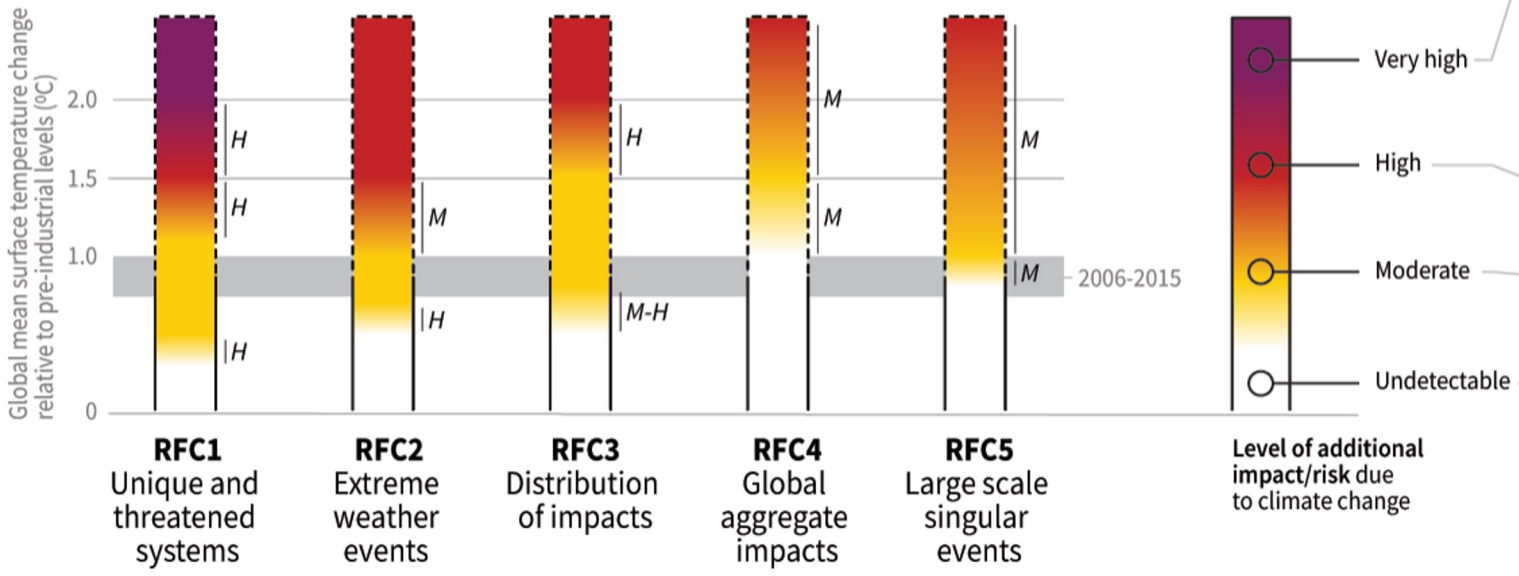
Source: IPCC; Global Warming of 1.5 degrees



And we're going to start see impacts more and more

Five Reasons For Concern (RFCs) illustrate the impacts and risks of different levels of global warming for people, economies and ecosystems across sectors and regions.

Impacts and risks associated with the Reasons for Concern (RFCs)



Purple indicates very high risks of severe impacts/risks and the presence of significant irreversibility or the persistence of climate-related hazards, combined with limited ability to adapt due to the nature of the hazard or impacts/risks.

Red indicates severe and widespread impacts/risks.

Yellow indicates that impacts/risks are detectable and attributable to climate change with at least medium confidence.

White indicates that no impacts are detectable and attributable to climate change.

Climate change for finance managers

How to do it?

How it impacts you

What you and others can do about it

The GHG Protocol

The Greenhouse Gas (GHG) Protocol is the main standard for carbon accounting and provides the world's most widely used greenhouse gas accounting standards for companies.

GHG Protocol standards and guidance enable companies to measure, manage and report greenhouse gas emissions from their operations and value chains.

GHG Protocol Resources

- **The GHG Protocol -** provides guidance on how to define the boundary of a company‘s reporting. Three scopes of emissions for accounting and reporting purposes are defined: Scope 1, 2 and 3
- **The GHG Website -** provides more details on standards for measuring and managing emissions
- **PCAF -** The Partnership for Carbon Accounting Financials (PCAF) is a reference for GHG emissions estimation for the financial industry.
- **The Global GHG Accounting and Reporting Standard for the Financial Industry**

Three ways to set an organizational boundary

Control Approach

Accounts for 100% of the emissions from operations over which the company has "control".

Financial

A company has the ability to direct the financial and operating policies of the business with a view to gaining economic benefits from its activities.

Operational

A company has the authority to implement its operational policies, it does not mean that it has authority to make all decisions.

Equity Share Approach

Account for emissions according to the equity share the company holds in the operations

Reflects economic interest (risks and rewards in an operation aligned with company's % ownership of that operation)

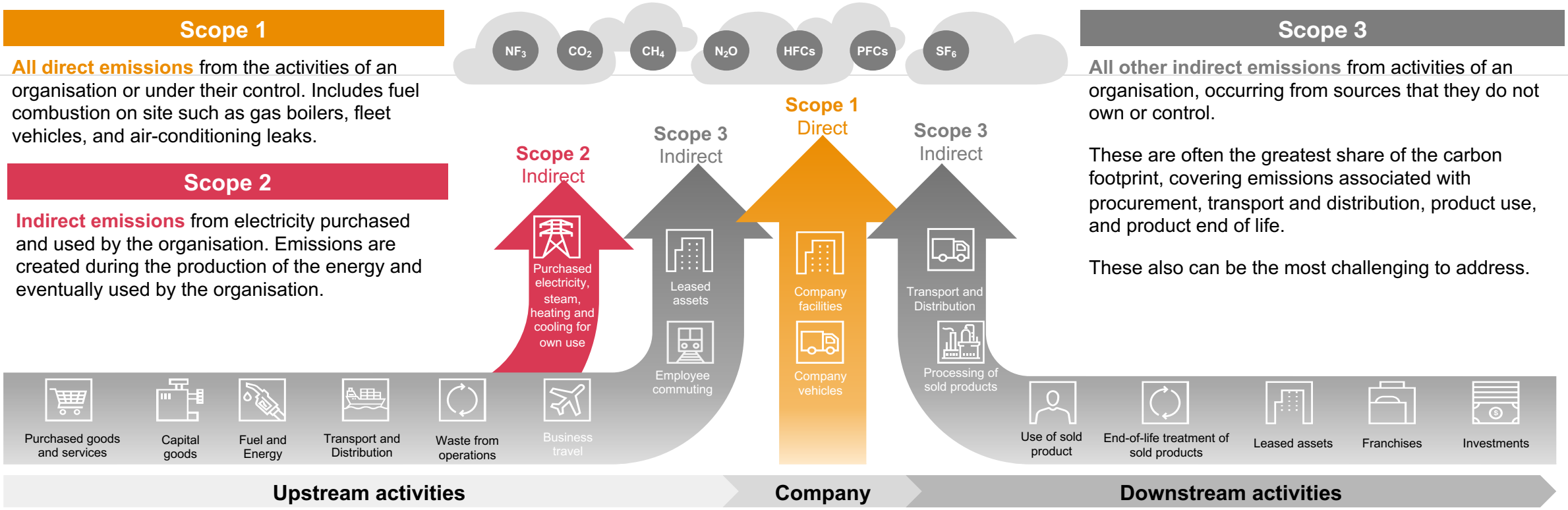
And three scopes for your operational boundary

Scope 1

All direct emissions from the activities of an organisation or under their control. Includes fuel combustion on site such as gas boilers, fleet vehicles, and air-conditioning leaks.

Scope 2

Indirect emissions from electricity purchased and used by the organisation. Emissions are created during the production of the energy and eventually used by the organisation.



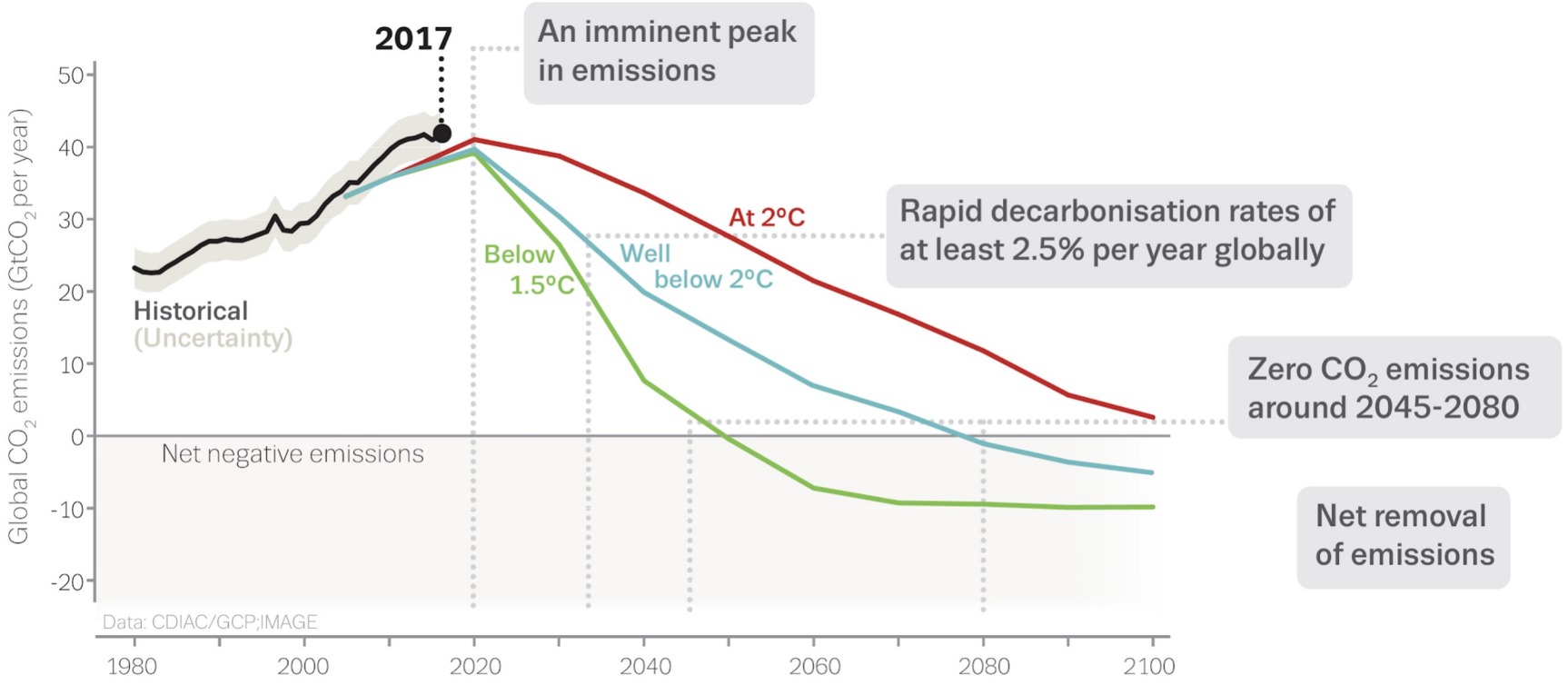
Scope 3

All other indirect emissions from activities of an organisation, occurring from sources that they do not own or control.

These are often the greatest share of the carbon footprint, covering emissions associated with procurement, transport and distribution, product use, and product end of life.

These also can be the most challenging to address.

A framework for science-aligned targets



SCIENCE BASED TARGETS

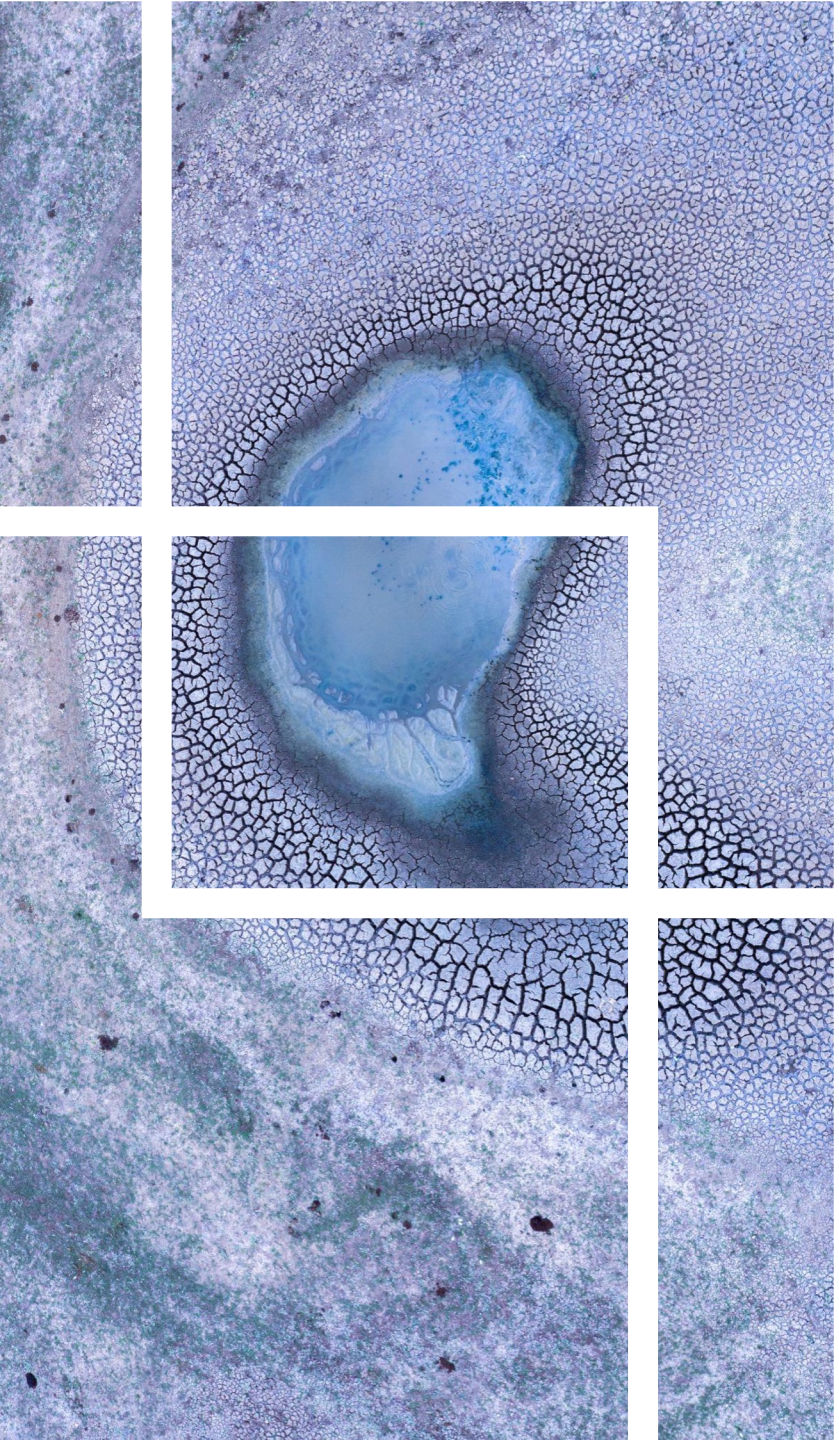
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Target minimum 5 and maximum 15 years from date the target is announced

Cover 95% of company-wide Scope 1 and 2 emissions

Include Scope 3 if it covers over 40% of total Scope 1, 2 and 3

Scope 3 target boundary should include 2/3 of total Scope 3 emissions



Six typical climate risks

Physical Risks

- Acute Physical Risks
- Chronic Physical Risks

Transitional Risks & Opportunities

- Reputational Risks
- Policy Risks
- Market Risk
- Technology Risk

A Framework for Climate Risk

Governance

The organizations governance around climate-related risks and opportunities

Strategy

The actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning

Risk Management

The processes used by organizations to identify, assess, and manage climate-related risks

Metrics & Targets

The metrics and targets used to assess and manage relevant climate-related risks and opportunities

Climate change for finance managers

How to do it?

How it impacts you

What you and others can do about it

The Greening Government Strategy

Helping Canada take action on climate change

Four Key Focus Areas:

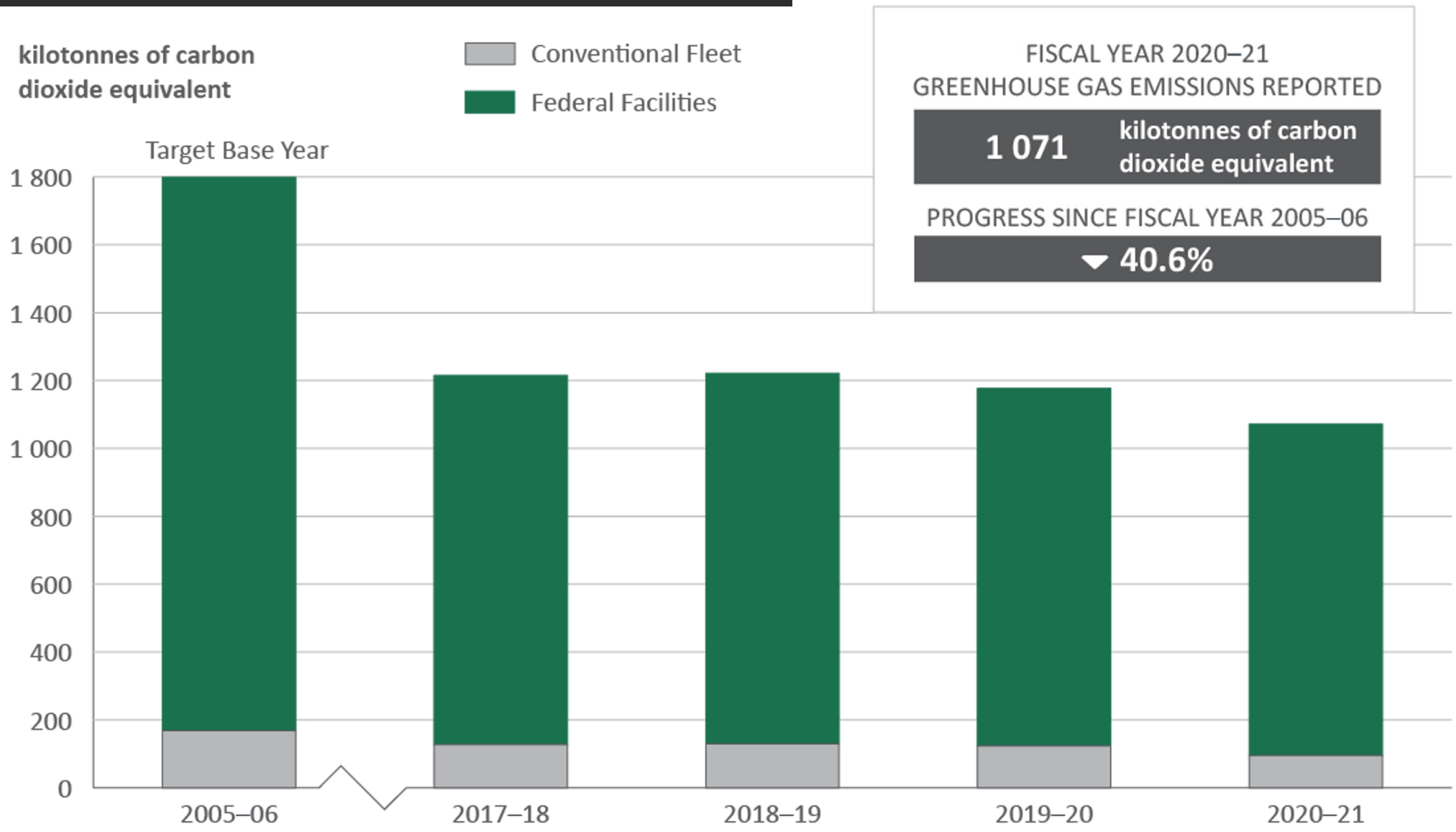
Mobility & Fleets

Property & Workplaces

Climate Resilient Service & Operations

Procurement of Goods and Services

GoC GHG inventory



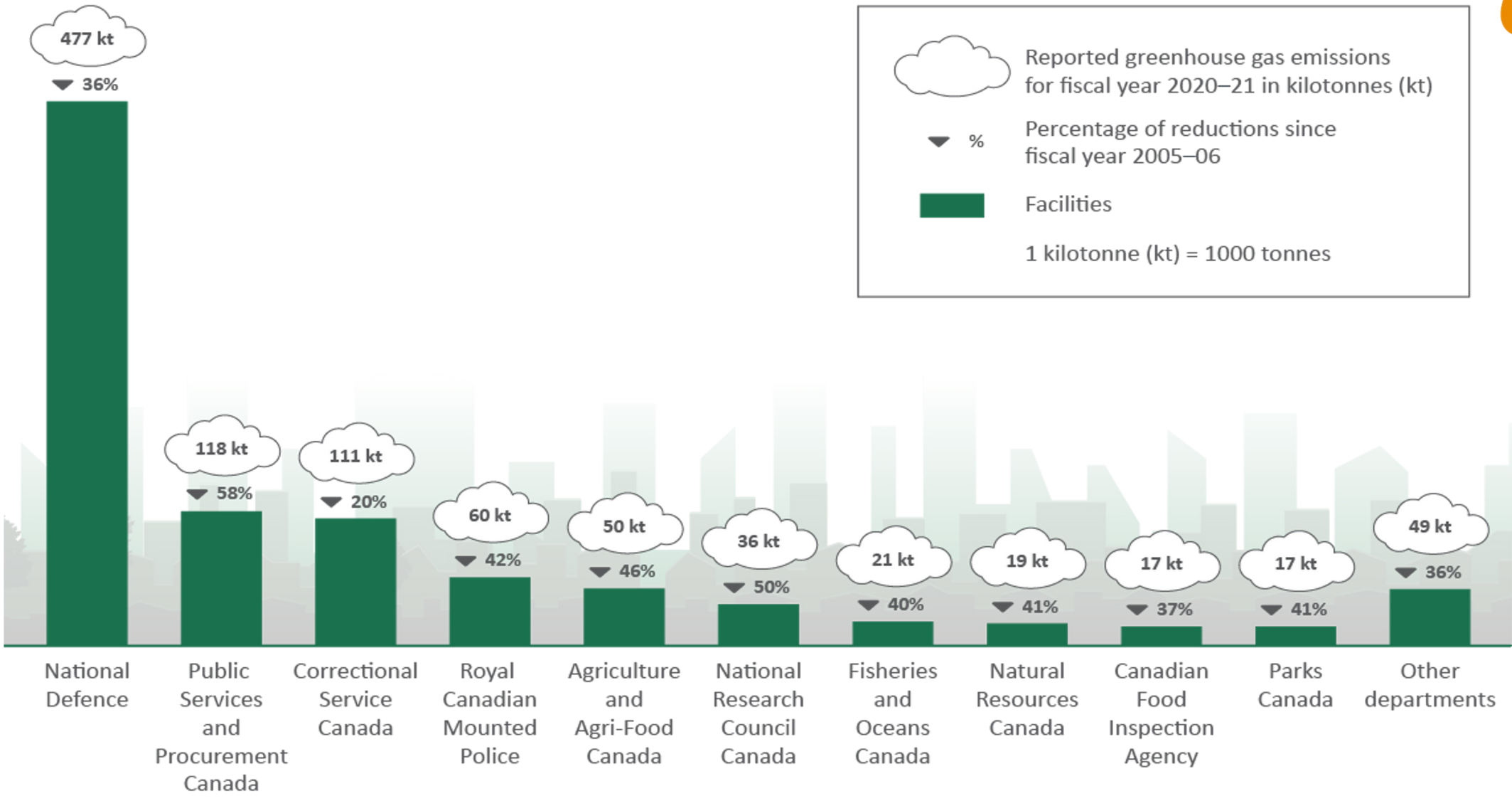
FISCAL YEAR 2020–21
GREENHOUSE GAS EMISSIONS REPORTED

1 071 **kilotonnes of carbon dioxide equivalent**

PROGRESS SINCE FISCAL YEAR 2005–06

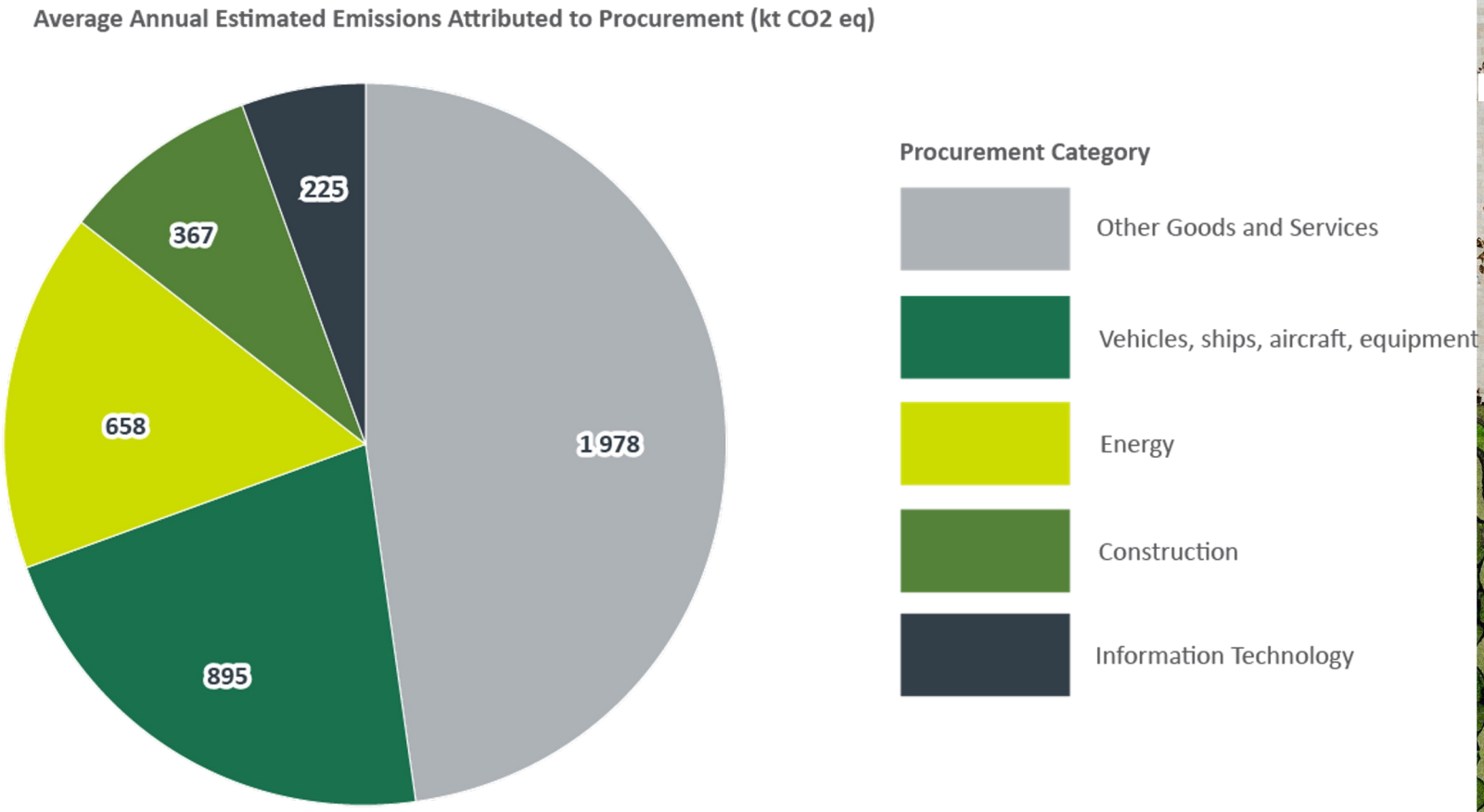
▼ 40.6%

Facilities only emissions



Source: Government of Canada's Greenhouse Gas Emissions Inventory

GoC Scope 3 emissions



Climate change for finance managers

How to do it?

How it impacts you

What you and others can do about it

Decarbonization Strategies

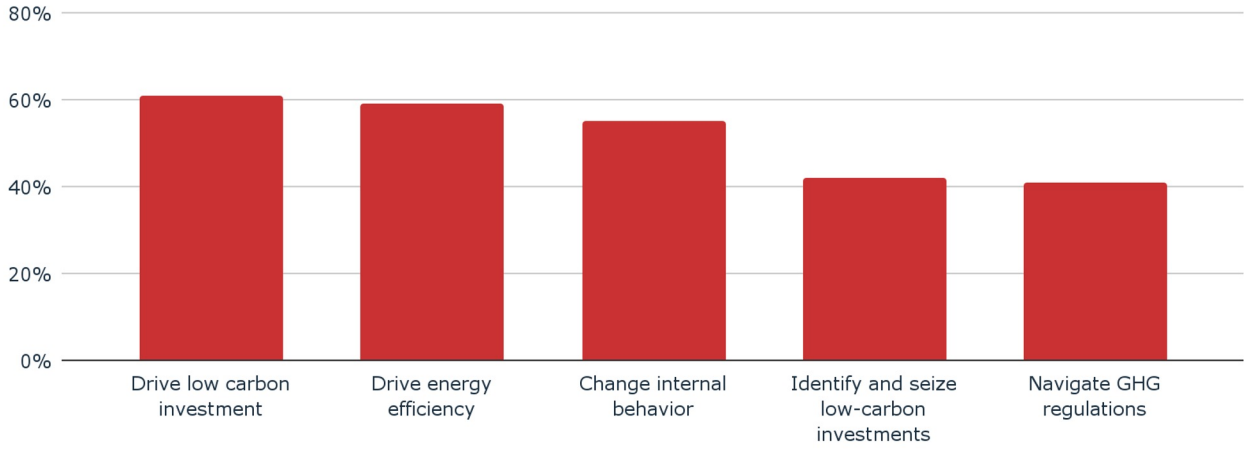
1. Net zero buildings
2. EV Fleets
3. Climate resilience measures
4. Deep retrofits

Decarbonization Strategies as Finance Managers

1. Climate risk within your ERM
2. Low carbon procurement and engagement
3. GHG analysis
4. Internal price on carbon

Carbon pricing trends

Companies are using IPC to achieve a range of objectives, most common among those are to



Within real estate and fixed income investment portfolios, and carbon pricing risk is probably increasing

20%

of NYC properties are on track to exceed emissions limits and incur fines in 2024*

$55-263

Cost per tCO_2e of emissions per various NYC and State organizations**

27%

Of issuers of fixed income would lose 25% or more of their value in a 1.5c scenario***

In response, companies and investors are increasingly using internal price on carbon (IPC)

80%

increase in the number of companies planning or using an IPC in past five years according to CDP

~40%

29% of the world's top financial institutions use an IPC with an additional 10% planning to do so by 2023

~50%

Of the worlds largest companies by market cap use an IPC or are planning to do so by 2023

*REBNY, **WEF *** MSCI, **** CDP

Internal carbon pricing has two forms

Shadow prices

Internal carbon pricing can be a shadow price; emissions are valued and integrated into financial business cases to support planning and investment decisions. The carbon price savings are not realised in financial flows. This is the more common approach for **investment** portfolios.

Attaching a hypothetical cost of carbon to each ton of CO_2

Carbon fees

Taking the shadow price further, a carbon fee is charged for emissions produced versus the lowest carbon option. In this case, carbon price savings are realised in financial flows as the activity does not incur the carbon fees. This is the more common approach for **operations.**

Charging responsible business units CO_2 emissions

A hybrid approach, combining both shadow prices and carbon fees can also be used to help prepare for a low-carbon future

Source: PwC based on CDP and Ecofys/The Generation Foundation/CDP

Four dimensions of an ICP

	Definition
HEIGHT	The **level of the carbon price** establishing the ambition of the ICP.
WIDTH	The **GHG emissions covered** throughout the value chain with the ICP.
DEPTH	The **level of influence** the ICP has on decision-making.
TIME	The **change or development** in the three other factors.

Who's doing it?

Canadian Bank

- $6 / tonne CO_2e
- No change over time
- Paid for via carbon offsets (i.e. carbon neutrality)

Government of Canada

- $50 / tonne CO_2e
- Up to $170 / tonne CO_2e by 2030

Making it Real: An example

	Building 1 (TGS Tier 3)	Building 2
Size	300,000 m^2	300,000 m^2
GHG emissions	0.015 t CO_2e/m^2	0.05 t CO_2e/m^2
Capital cost	$47,000,000	$39,000,000
Operating cost	$1,600,000/yr (25% lower energy use)	$2,000,000/yr
NPV (25 year) - Gov of Canada PC	**$69.2 M**	$70.6 M
NPV (25 year) - $50/t CO_2e	$68.1 M	**$66.8 M**
NPV (25 year) - $0/t CO_2e	$67.5 M	**$64.6 M**

Five Takeaways

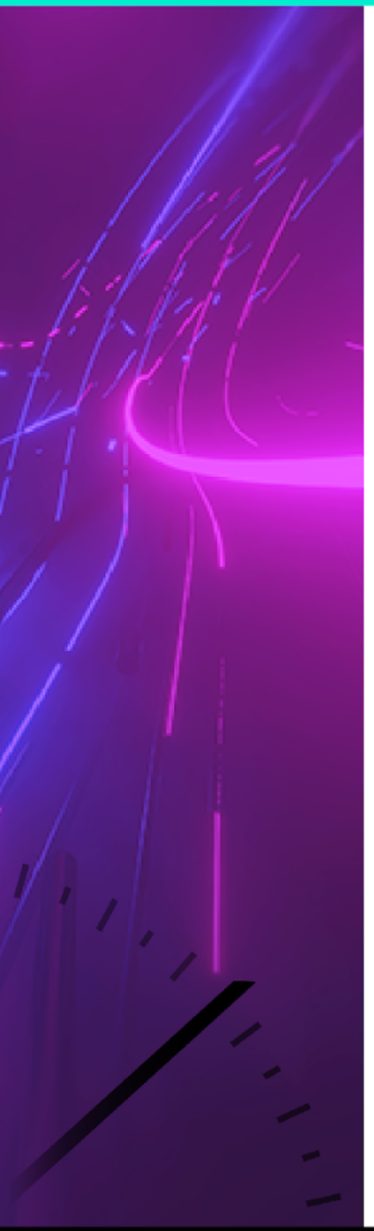
Upskill! Even finance managers should know GHGs and climate risk.

Calculate! The impact of your decisions on climate change.

Work! to embed climate change in decision making.

Create! Governance structures to incorporate climate change.

Build! Teams that have climate change knowledge, even in the finance function.



Thank you

Now - let’s hear from you - Questions?