Welcome to Sustainability for SMEs

22 September 2021
10:30am - 12:30pm

CM2 capital markets MALAYSIA

CENTRE FOR SUSTAINABLE CORPORATIONS

THOUGHTS IN GEAR

Sustainability for Companies

WHY and WHAT

HOW

Introductions

- Why Sustainability is a Must for Businesses Today
- 3 Things Every Company Needs to Know About Sustainability

Q&A First Half

- 8 Simple Steps in Adopting Sustainability
- Step-By-Step Guidance on Calculating Your GHG Emissions

Q&A Second Half

Who We Are

Thoughts In Gear is a sustainability consulting firm.

MARGIE ONG

- CEO of TIG, who's client produced Asia's Best Sustainability Strategy and Report
- Sustainability Leadership certification from London Business School
- Engineer with previous experience in The Boston Consulting Group, Intel and HCL

KAVITHA SOMASUNDRAM

- 23 years of corporate experience
- 6 years focused on Bursa's Sustainability requirements and recommendations
- Helped client secure inclusion into FTSE4Good Bursa Malaysia Benchmark Index

ANGELINA JOHN

- Experience in environmental consulting firm running impact assessment reports
- Master in Sustainable Development Management with the Jeffrey Sachs Centre
- Part of Sustainability founding team in Genting Malaysia

GUEST SPEAKER: TOBIAS MANGELMANN (LASAJU Consulting)

- Managing Director of LASAJU Consulting, a Malaysian consulting firm focused on transforming systems for a better and more sustainable future
- Spent most of his professional life Southeast Asia with McKinsey & Co. and Poyry Management Consulting and set up a renewable energy company

CM2 capital markets MALAYSIA

THOUGHTS IN GEAR

Customising this session for you

Chat Box : INDUSTRY

What industry are you from?

We invite you to type your industry in the chat box.

Unsplash: Museums Victoria; England

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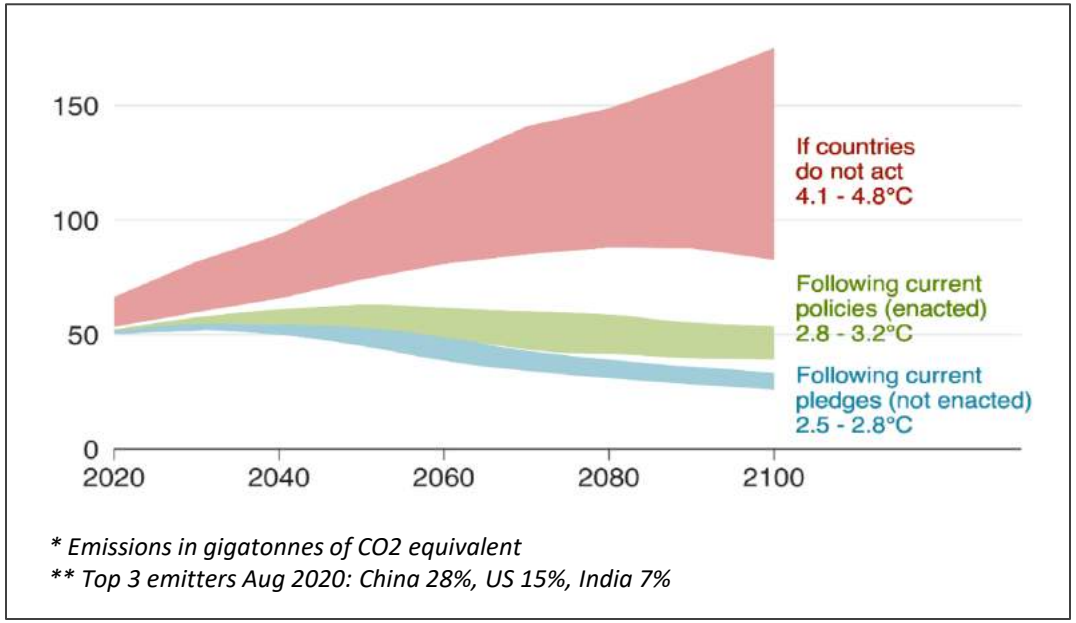
Q&A Second Half

What's the fuss all about?

Emissions and Expected Warming by 2100



** Emissions in gigatonnes of CO2 equivalent*
*** Top 3 emitters Aug 2020: China 28%, US 15%, India 7%*

"We are running the most dangerous experiment in history right now, which is to see how much carbon dioxide the atmosphere can handle before there is an environmental catastrophe."

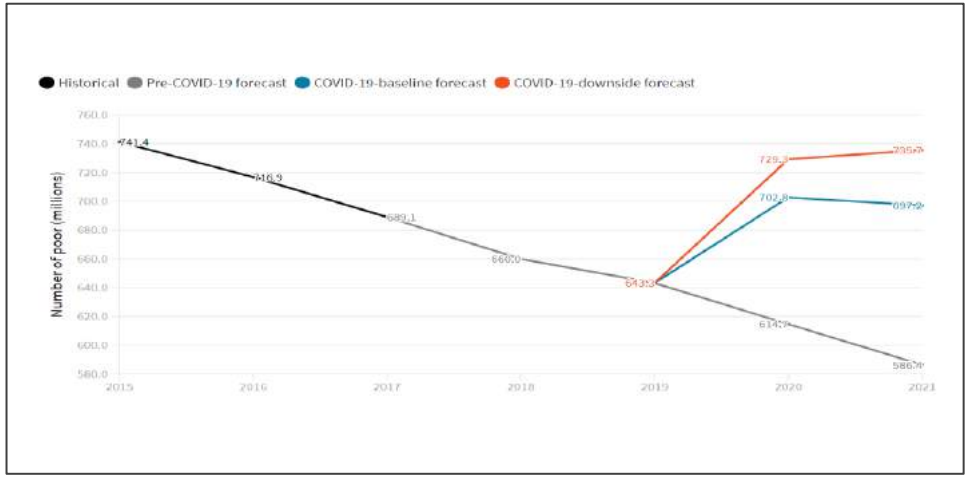
- Elon Musk

Source: BBC Climate Action Tracker, January 2020

What's the fuss all about?

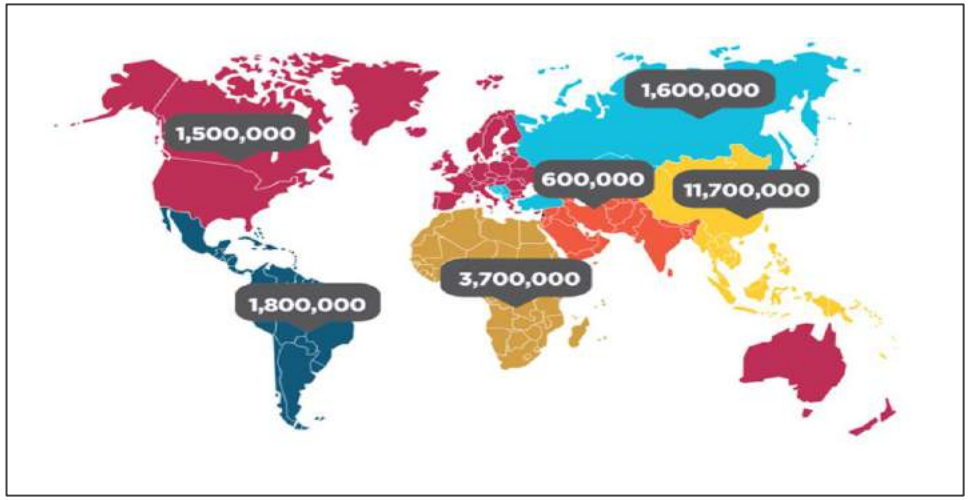
First Rise in 20 Years:

Projected Number of People in Extreme Poverty



Over 40 million in Modern Slavery:

Instances of Forced Labour Globally

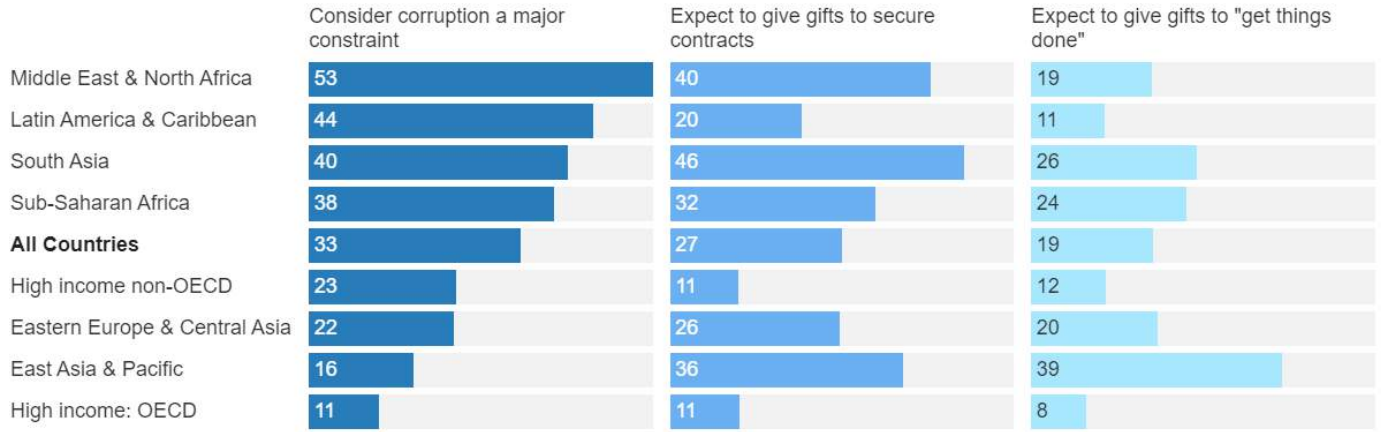


Source:
Global Poverty Monitoring, June 2020 ;
International Labour Organisation, 2012

What's the fuss all about?

1 on 3 Companies Constrained by Corruption:

Percentage of companies dealing with corruption



Source: World Bank Enterprise Surveys, 2016

What's the fuss all about?

The world sat up and took notice

SUSTAINABLE DEVELOPMENT GOALS
17 GOALS TO TRANSFORM OUR WORLD

1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS
SUSTAINABLE DEVELOPMENT GOALS

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11

The 'why' might not resonate with all companies, but all companies need to know it's coming your way

Ok, but who's actually looking out for it?

(1 of 5)

- GOVERNMENTS
- FINANCIAL INSTITUTIONS
- INVESTORS
- TALENT
- COMPANIES
- CONSUMERS

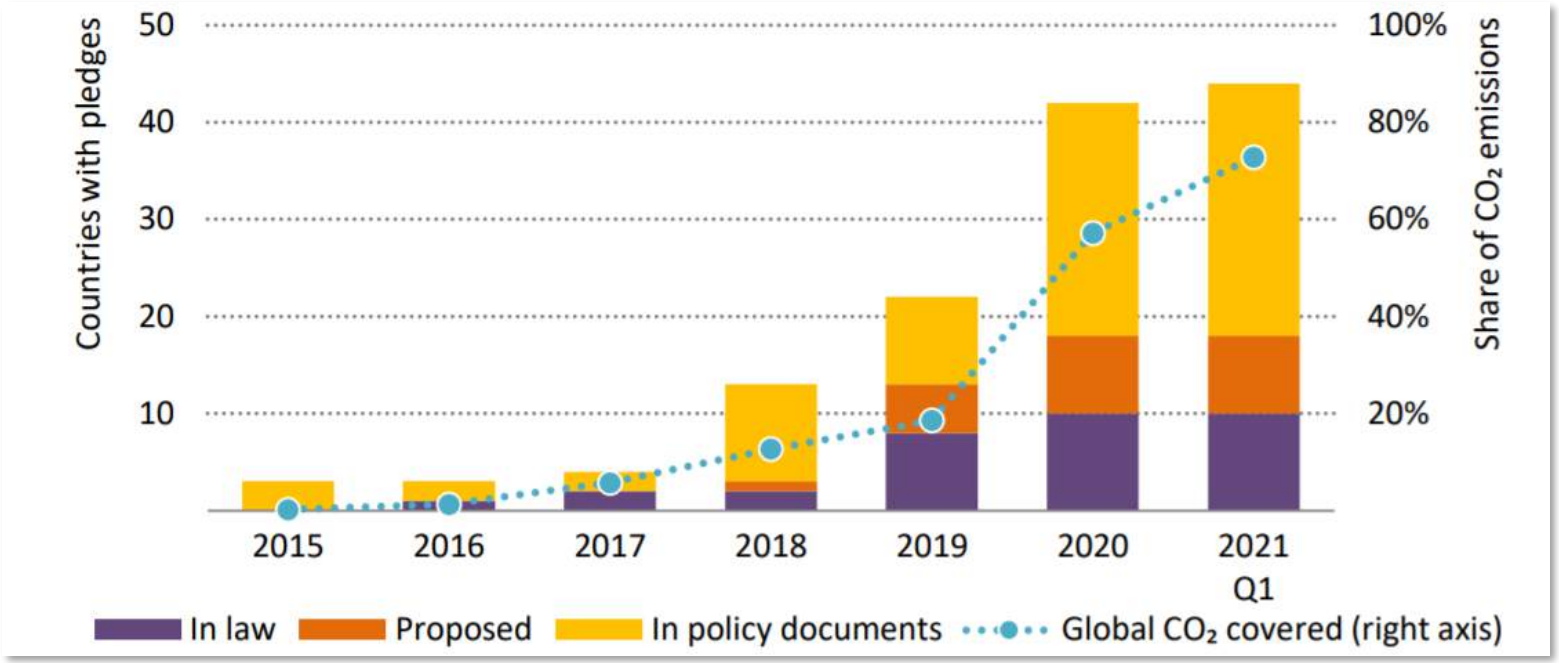
Source:
Net Zero by 2050: A Roadmap for the Global Energy Sector, IEA, July 2021

Ok, but who's actually looking out for it?

GOVERNMENTS

- **In law** = net zero pledge has been approved by parliament and is legally binding
- **Proposed** = a net zero pledge has been proposed to parliament to be voted into law
- **In policy document** = a net zero pledge has been proposed but does not have legally binding status

Number of National Net Zero Pledges and Share of Global CO_2 Emissions Covered



There has been a significant acceleration in net-zero emissions pledges announced by governments, with an increasing number enshrined in law

Source:
Net Zero by 2050: A Roadmap for the Global Energy Sector, IEA, July 2021

Ok, but who's actually looking out for it?

INVESTORS

"ESG assets are on track to hit more than one third of global AUM by 2025, more than $50 trillion"

- Bloomberg Intelligence

- Asia is still very much at the beginning of its sustainable investing journey, with the trend only having gained traction in the region over the past two years
- By contrast – Europe, which now accounts for over 80% of global ESG AUM – has experienced a decade of growth
- Albeit from a much smaller base, Asia is now seeing much faster growth
- Total ESG assets in the region reached $25.4 billion by the end of 2020, with inflows of $7.9 billion in 2020, up from a mere $801 million in 2019

PRI Principles for Responsible Investment

There are 12 Malaysian Signatories to UNPRI

KWSP EPF

KWAP

KHAZANAH NASIONAL

- Navis Capital Partners
- Xeraya Capital
- BIMB Investment Management Berhad
- Corston-Smith Asset Management
- Crea8 Capital
- Pheim Asset Management
- Bee Alternatives
- Principal Asset Management
- Singular Asset Management

Source:
Bloomberg Intelligence, July 2021
MSCI Investment Insights, Global Institutional Investor Survey, *2021*

Ok, but who's actually looking out for it?

COMPANIES

"78% of MNCs are planning to cut suppliers by 2025 for impacting their carbon reduction goals"

- Standard Chartered

Market	Annual Export Revenue At Risk
China	USD512.3bn
India	USD273.7bn
Hong Kong	USD205.5bn
Singapore	USD146.6bn
South Korea	USD142.5bn
The UAE	USD119.6bn
Malaysia	USD65.3bn
Nigeria	USD34.3bn
South Africa	USD33.7bn
Indonesia	USD25.6bn
Bangladesh	USD18.7bn
Kenya	USD3.9bn

Racing against the clock to hit their net-zero carbon goals, **MNCs are increasing the pressure on their suppliers to become more sustainable in less than 3.5 years**

Source:
Carbon Dated, Standard Chartered Bank, July 2021

Ok, but who's actually looking out for it?

FINANCIAL INSTITUTIONS[1]

UNEP FINANCE INITIATIVE | PRINCIPLES FOR RESPONSIBLE BANKING

247 Banks

63 Countries

In Malaysia:

CIMB

BPMB Malaysia Development Bank

TALENT[2]

By 2025, millennials will account for approximately 75% of the overall workforce

50% of this pool would consider quitting their current role and transitioning into one which was offered by a more environmentally responsible company

CONSUMERS[3]

SUSTAINABILITY SELLS

	OVERALL CATEGORY SALES GROWTH	SUSTAINABLE PRODUCTS SALES GROWTH
WEIGHTED AVERAGE OF 3 CATEGORIES	+2%	+5%
CHOCOLATE	+5%	+16%
COFFEE	-1%	+1%
BATH PRODUCTS	+1%	+14%

e.g.: Unilever's purpose-based businesses are trending 70% additional growth compared to non

Sources: [1]UNEP FI, as of Sep 2021
[2]TotalJobs, Jan 2020
[3]Nielsen, 2018

So, what's in it for me?

THREAT → OPPORTUNITY

Reduce Risks

- THE ABILITY TO STAY IN BUSINESS
- THE ABILITY TO BE COMPETITIVE

Increase Profits

- THE ABILITY TO IMPROVE MARGINS
- THE ABILITY TO IMPROVE MARKET TERMS

Unlock Growth Opportunities

- THE ABILITY TO DIFFERENTIATE
- THE ABILITY TO INNOVATE

Source: Adapted from The London Business School, Dr. Ioannis Ioannou

So, what's in it for me?

(2 of 4)

Reduce Risks

THE ABILITY TO STAY IN BUSINESS

THE ABILITY TO BE COMPETITIVE

PHYSICAL RISKS

The most tangible risk to assets lies in areas that climate change will directly affect, including those that may be submerged and assets affected by the result of extreme weather, including more frequent severe storms, droughts and wildfires.

EXISTENTIAL RISKS

Assets in several sectors risk becoming stranded assets. Extractors of fossil fuels and the producers of energy sourced from coal, oil and dirty gas are obvious examples; also applies to areas including the auto aviation and construction.

TRANSITIONAL RISKS

Business models will have to change. Transport, for instance, must shift to zero-emission vehicles; emissions from offices also need to be cut. Even companies that avoid setting a target will be affected by decisions taken elsewhere.

REGULATORY RISKS

If companies do not voluntarily work towards low-carbon targets, regulation will force the issue, costly to those late to make the change. Policy change will come by 2025 and could wipe up to $2.3tn in value from the world's largest companies.

REPUTATIONAL RISKS

For many businesses, transition may still seem a distant problem. This is dangerous — and not only because of the high likelihood of carbon taxes. Young people, the consumers of the future, are particularly engaged in the issue.

Source: Financial Times, December 2020

So, what's in it for me?

Increase Profits

THE ABILITY TO IMPROVE MARGINS

THE ABILITY TO IMPROVE MARKET TERMS

EFFICIENCIES[1]

Eco-efficiency generates **more value through technology and process changes whilst reducing resource use and environmental impact** throughout the product or service's life.

Eco-efficiency **applies to all business aspects**, from purchasing and production to marketing and distribution.

The main aspects of eco-efficiency are:

- Reduction of energy, water and virgin material use
- Reduction of waste and pollution levels
- Extension of function and therefore product/service life
- Incorporation of life cycle principles
- Consideration of the usefulness and recyclability of products/services at the end of their useful life
- Increased service intensity

ADVANTAGES[2]

Cost of Capital

90% of the cost of capital studies show that sound ESG standards lower the cost of capital

Operational Performance

88% of the studies show that solid ESG practices result in better operational performance

Share Price Performance

80% of the studies show that stock price performance is positively influenced by good Sustainability practices

Sources: [1]World Council for Sustainable Business Development (WCSBD)
[2]University of Oxford-Arabesque Partners, a study of more than 200 sources

So, what's in it for me?

Unlock Growth Opportunities

THE ABILITY TO DIFFERENTIATE

THE ABILITY TO INNOVATE

DIFFERENTIATE

- Serving a B2B market's need for eco-sensitive good and services
- Serving a B2C consumer's demand for eco-sensitive goods and services
- Build brand value in justifiably associating your goods and services with environmental and social awareness

Multi-National Companies (MNCs) are willing to spend more on net-zero products and services. Some 45 per cent said they would pay a premium, of 7 per cent on average, for a product or service from a net-zero supplier.[1]

INNOVATE

"Sustainable innovation is about integrating sustainability principles into the innovation process and can be defined as **innovation that realises economic value and generates positive environmental and social impacts**"[2]

- **Purpose:** Having a clear company purpose that guides the sustainable innovation process
- **Process:** Introducing specific Sustainability requirements and performance targets as part of the innovation planning process
- **Partnerships**: Building strong external networks and working collaboratively

Source:
[1] Carbon Dated, Standard Chartered Bank, July 2021
[2] Indicator Systems for Sustainable Innovation, Springer, 2005

Sustainability for Companies

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Q&A Second Half

Customising this session for you

Poll : BIGGEST OBSTACLE

What are some of your company's biggest obstacles in adopting Sustainability today?

(multiple choice)

- ❑ We don't see the need to
- ❑ No Board or Senior Management buy-in
- ❑ No clear ownership of Sustainability in the company
- ❑ Benefits/returns are not obvious
- ❑ High cost/investment perceived to be required to start
- ❑ We have the will but we do not know the way
- ❑ Measurements/indicators are confusing
- ❑ No obstacles currently

3 Things Every Company Needs to Know About Sustainability

1. What is Corporate Sustainability?
2. What are the Current Regulations?
3. What Guidance is Available?

1 What is Corporate Sustainability?

Sustainability is….

MEETING THE NEEDS OF THE PRESENT WITHOUT COMPROMISING THE ABILITY OF FUTURE GENERATIONS TO MEET THEIR NEEDS

encompassing…

THE ABILITY TO SUSTAIN

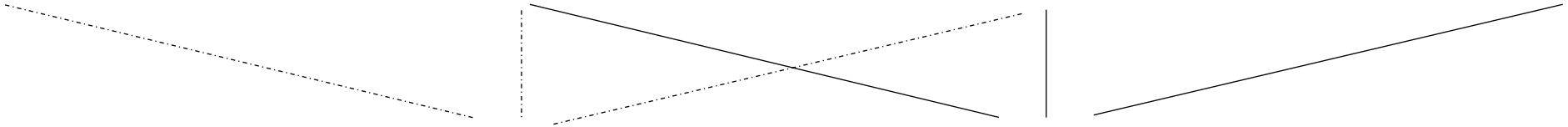
THE CAPACITY TO ENDURE

1 What is Corporate Sustainability? (2 of 3)

Sustainability is….

LARGELY DEFINED INTO 4 BROAD CATEGORIES

ECONOMIC | **E**NVIRONMENTAL | **S**OCIAL | **G**OVERNANCE



EES
(profit, planet, people)

ESG
(non-financial disclosures)

1 What is Corporate Sustainability?

(3 of 3)

THE SUSTAINABILITY WAVE

STAGE 1
Pre-Compliance

The company feels no obligation beyond profits. It cuts corners and tries not to get caught if it breaks the law or uses exploitative practices that cheat the system. It ignores Sustainability and actively fights against related regulations.

STAGE 2
Compliance

The business manages its liabilities by obeying the law and all labour, environmental, health, and safety regulations. It reactively does what it legally has to do and does it well. Emerging environmental and philanthropic social actions are treated as costs, projects are end-of-pipe retrofits, and CSR is given lip service.

STAGE 3
Beyond Compliance

The company moves from defence to offense. It realises it can save expenses with proactive and incremental operational eco-efficiencies, cleaner processes, and better waste management. It recognises that community investment and social marketing can minimise uncertainty, enhance its reputation, and help maximise shareholder value. However, Sustainability initiatives are still marginalised in specialised departments, they are tacked on as "green housekeeping", not built in and institutionalised.

STAGE 4
Integrated Strategy

The firm transforms itself. It re-brands itself as a company committed to Sustainability and integrates Sustainability with key business strategies. It captures added value from breakthrough Sustainability initiatives that benefit all stakeholders. Instead of costs and risks, it sees investments and opportunities. It makes cleaner products, applies eco-effectiveness and life-cycle stewardship, and enjoys competitive advantages from Sustainability initiatives.

STAGE 5
Purpose and Passion

Driven by a passionate, values-based commitment to improving the well-being of the company, society, and the environment, the company helps build a better world because it is the right thing to do.

Source: Bob Willard, The Next Sustainability Wave

CM2 capital markets MALAYSIA

2 What are the Current Regulations?

Making Sustainability Reporting Mandatory

Bursa Malaysia's Sustainability Reporting

The obligations under the Listing Requirements are aimed at:

- Improving the quality of Sustainability-related practices and reporting of listed issuers;
- Aiding listed issuers to meet Sustainability expectations of their stakeholders;
- Attracting funds with a Sustainability focus into the Malaysian capital market; and
- Facilitating more listed issuers to qualify for FTSE4Good Bursa Malaysia Index and other international Sustainability indices.

Introducing the ESG Index with FTSE

FTSE4Good Bursa Malaysia

- Introduced in 2014, selected PLCs are mandatorily evaluated
- Evaluation is based on the company's publicly available information only
- Companies are evaluated in June and December and can be added or removed from the index
- There are currently 76 constituents (as of June 2021) on the FTSE4Good Bursa Malaysia (F4GBM) Benchmark Index

Introducing the SRI Roadmap for the Financial Sector

Securities Commission's SRI Roadmap

- Introduced in November 2019 to guide growth in sustainable and responsible investing
- 20 recommendations in 5 strategies:
  - Widening the range of SRI instruments
  - Increasing the SRI investor base
  - Building a strong SRI issuer base
  - Instilling strong internal governance culture
  - Designing information architecture in the SRI ecosystem

3 What Guidance is Available?

REPORTING FRAMEWORKS

Frameworks that guide you how and what to report to align with global standards to ensure that what you are disclosing can be widely understood to get credit for your efforts

Global Reporting Initiative™

SASB (Sustainability Accounting Standards Board)

TCFD Task Force on Climate-Related Financial Disclosures

Science Based Targets

CDP Climate Disclosure Leader 2014

EVALUATION FRAMEWORKS

Frameworks that evaluate what you have disclosed to determine a rating and ranking of your ESG performance, providing good benchmark against yourself and your peers

FTSE4Good

Dow Jones Sustainability Indexes

MSCI

SUSTAINALYTICS

ROBECOSAM

3 What Guidance is Available?

(2 of 6)

"When people tell me they've learned from experience,
I tell them the trick is to learn from other people's experience."

- Warren Buffett

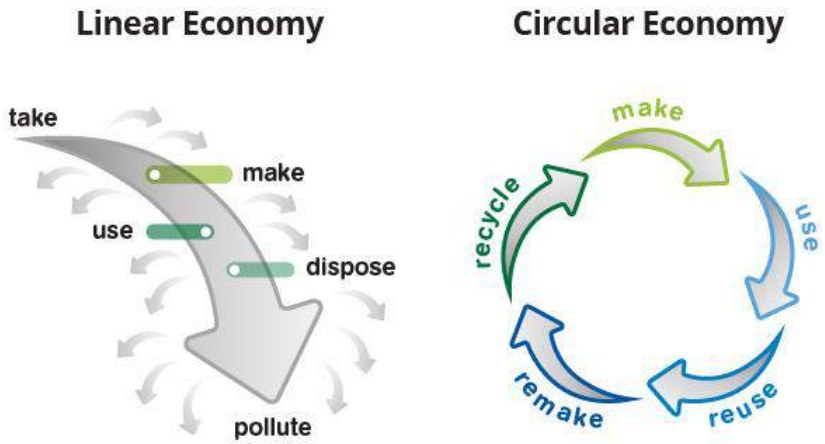
3 What Guidance is Available?

CASE STUDY

DESSO

The Floor is Yours

- **On the verge of bankruptcy**, the new CEO of Desso decided to adopt the Cradle-To-Cradle concept
- Making it **one of the most successful carpet companies today**, known for its commitment to consumer health and safety



"Waste is food for new products."

- CEO DESSO

3 What Guidance is Available?

CASE STUDIES

From Sceptic to True Believer

Initially skeptical, stationery and business supplies provider UKOS has not only reduced its energy costs by an average of 5% year-on-year for the last four years, it has also realised increased sales and profits by differentiating itself as a sustainable supplier.

Efficiency First

In an industry under scrutiny for its level of carbon emissions, haulier Rainbow Nightfreight targeted fuel efficiency by adopting a multi-user nightfreight service with high levels of vehicle capacity usage. Originally for the commercial reason of cutting operating costs, it has found as a consequence that its sustainable performance has improved, bringing unanticipated advantages in terms of the appeal of its business model to customers.

Innovate to Reuse the Refuse

WCT launched a Green Technology Adoption Programme in a collaboration with Monash University on a 4-year programme to research the use of existing asphalt as a sub-base material. Used for repairs for a temporary diversion road in the Pan Borneo Highway project

Small Change Big Impact

myNEWS initiated a business process amendment across its retail chain for its cashiers to ask the customers if they needed the credit card paper slip before printing, resulting in overall decrease in thermal paper use, increased procurement efficiency and lowered costs.

3 What Guidance is Available? (6 of 6)

SAMPLE INITIATIVES

Example Sustainability Initiatives for Small Business:

1. **Seek efficiencies (energy, water, paper)**
2. **Buy or install green energy**
3. **Use green office space (LEED-certified space)**
4. **Invest in business process improvement**
5. **Focus on productivity and innovation**
6. **Focus on developing human capital**
7. **Champion one or two Sustainability causes**

Source: TIG Analysis

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Customising this session for you

Poll : AREA OF MOST INTEREST NOW IN SUSTAINABILITY

What would you be most interested in hearing about in this section?

(multiple choice)

- ❑ How to get started in Sustainability
- ❑ How to strategise and plan our Sustainability efforts
- ❑ How to measure and track our Sustainability efforts
- ❑ How to report on our Sustainability efforts

Unsplash: Hermes Rivera; Nicaragua

The Sustainadata™ Framework

The 8-step Sustainability Adoption Methodology

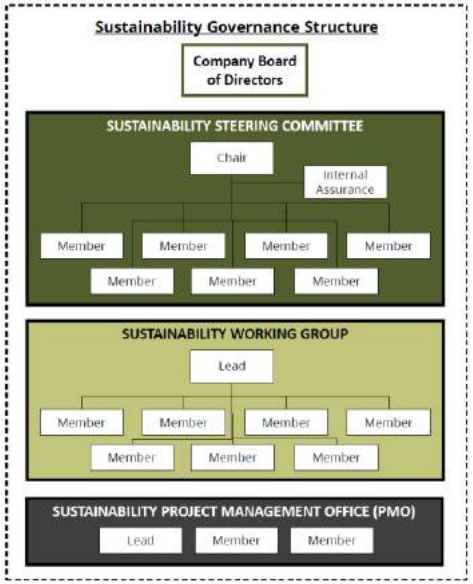
KNOW: Critical to understand and setup Sustainability well

KNOW | **PLAN** | **DO** | **TELL**

AWARENESS | **SETUP** | STRATEGY | ACTIONS | TRACKING | IMPLEMENTATION | REPORTING | STORYTELLING

- Seek sufficient level of understanding for your Board of Directors, Top Management Team and Sustainability Working Team
- Communicate at least a basic level of awareness and understanding across your organisation as your Sustainability efforts will involve and affect the entire organisation
- Feel free to use the material from this webinar to achieve the first level of awareness

- Set up your Sustainability Governance Structure



- Conduct a baseline to understand existing Sustainability initiatives across your organisation

PLAN: Integrating Sustainability is business planning

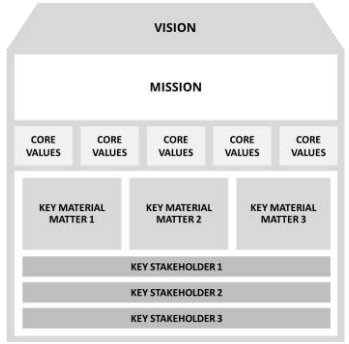
KNOW | **PLAN** | DO | TELL

AWARENESS | SETUP | **STRATEGY** | **ACTIONS** | TRACKING | IMPLEMENTATION | REPORTING | STORYTELLING

- Identify where you are and where you aspire to be

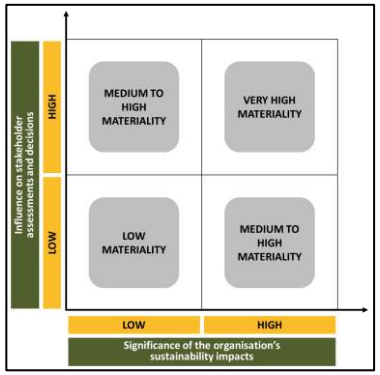
- Determine how fast you want to achieve your aspiration

- Determine your Sustainability Strategy, Framework, Roadmap and Targets

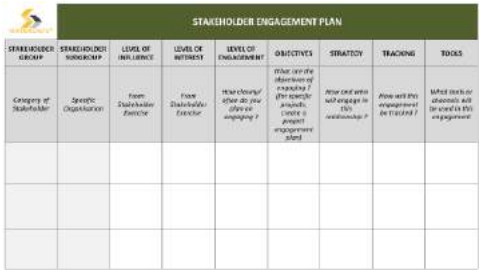


SCIENCE BASED TARGETS

- Determine your materiality matrix by running:
  (1) a materiality assessment
  (2) a stakeholder assessment
  (3) a stakeholder survey

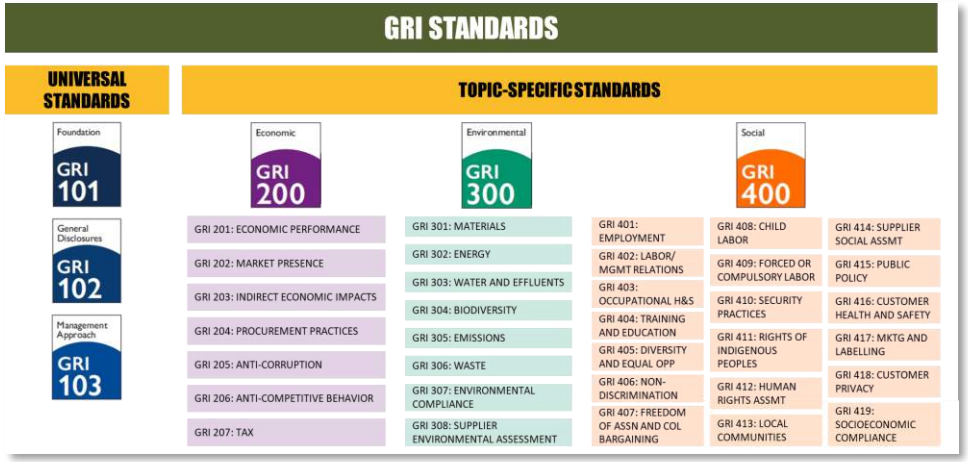


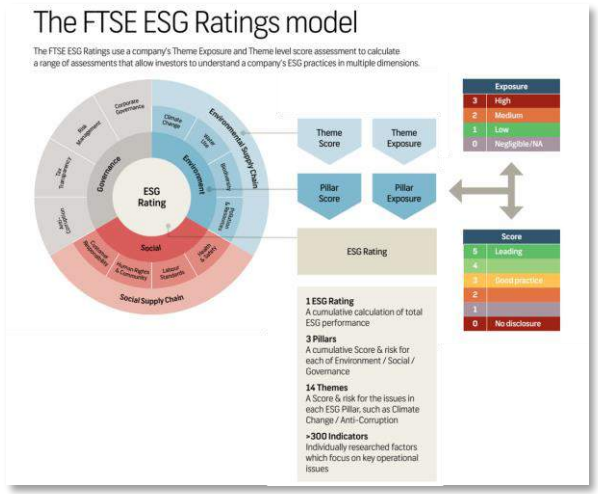
- Plan your strategic stakeholder engagement based on your stakeholder assessment



DO: Measure execution progress diligently and consistently

KNOW	PLAN	DO	TELL
AWARENESS	SETUP	STRATEGY	ACTIONS	TRACKING	IMPLEMENTATION	REPORTING	STORYTELLING





TELL: Report clearly and in a balanced, transparent manner

KNOW		PLAN		DO		TELL	
AWARENESS	SETUP	STRATEGY	ACTIONS	TRACKING	IMPLEMENTATION	REPORTING	STORYTELLING

- To the extent of the need and ability of your company, track and report on your Sustainability

- If not full-scale Sustainability Reporting, early approaches can be:
  1. Include **environmental, social and governance considerations** in your decision making
  2. Kick off a few **isolated Sustainability initiatives** and document case studies
  3. **Pick a few disclosures** to track your Sustainability, eg:
     - List of Material Matters (102-47)
     - List of Key Stakeholders ((102-21)
     - Governance Structure, including Executive Ownership (102-18; 102-20)
     - GHG Scope 1 and 2 Emissions (305-1; 305-2)
     - Labour Practices (408-1; 409-1; 411-1; 412-1)

- Make Sustainability your brand story

Keep It Simple

Communicate Your Purpose

Let Your Personality Shine Through

Connect with Your Customers

Get Other People to Tell Your Story

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Customising this session for you

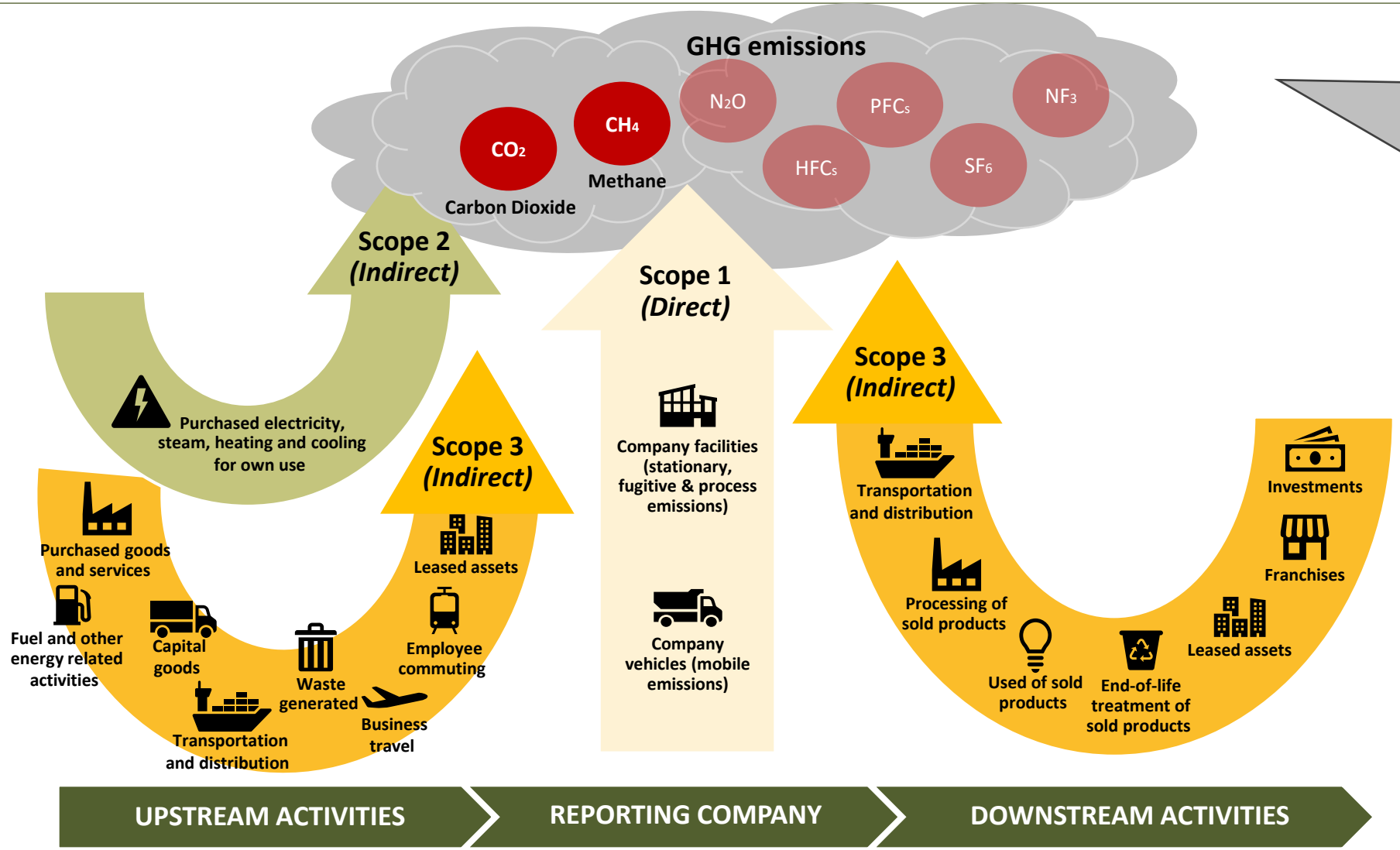
POLL : FAMILIARITY WITH GHG EMISSIONS

Where are you in the journey to measure and reduce your company's GHG Emissions?

(single choice)

- Beginner: I don't fully understand yet why and how my company would calculate our GHG emissions
- Advanced: I understand the global need to reduce GHG emissions, but I don't know how my company would calculate GHG emissions
- Proficient: I understand how to measure my company's GHG emissions (e.g. Scope 1, 2 and 3), I just need to start doing it now
- Expert: I have already calculated my company's GHG footprint including Scope 1, 2 and 3 emissions

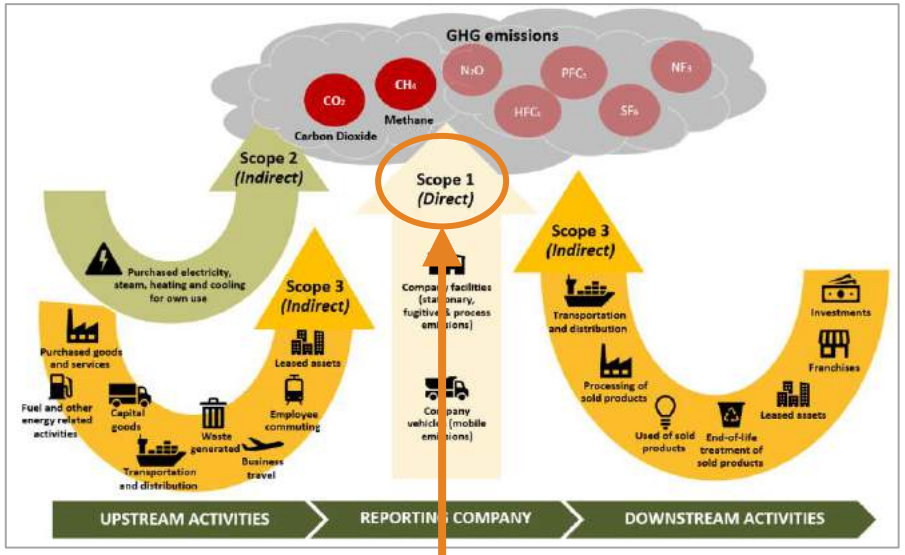
For companies there are 3 categories of GHG Emissions Scope 1, 2 and 3



- Seven greenhouse gases (GHG) with different impact
- Impact of each GHG measured as Global Warming Potential (GWP)
- Translated into CO2 equivalent or CO2e

Source: Adapted from WRI/WBCSD GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard

Scope 1 Emissions



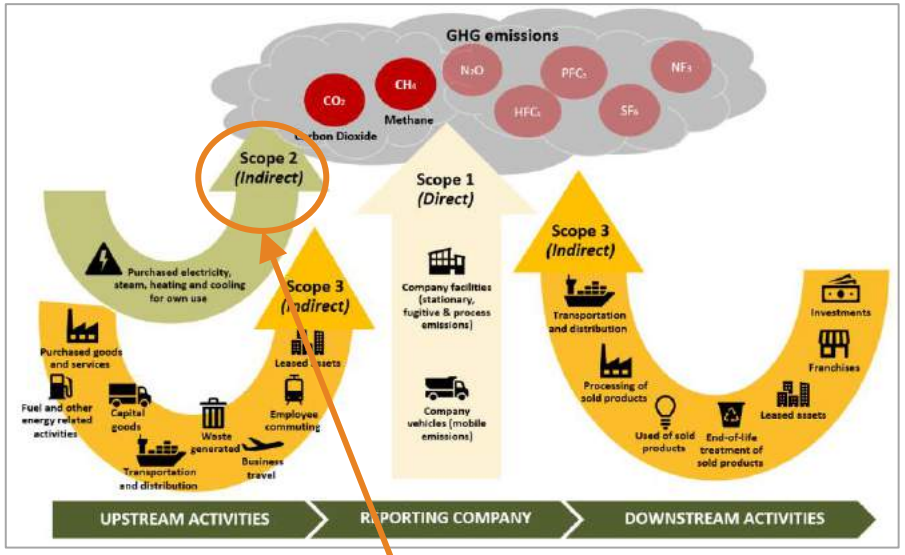
Scope 1 emissions are direct GHG emissions from sources that are owned or controlled by the company

Examples of Scope 1 emissions:

- ❑ Generation of electricity, heating or cooling and steam in own boilers or CHP plants
- ❑ Physical or chemical processing such as cement, steel or waste processing
- ❑ Transportation of materials, products, waste and employees
- ❑ Fugitive emissions from equipment leaks and HFC emissions from refrigeration

Source: Adapted from WRI/WBCSD GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard

Scope 2 Emissions



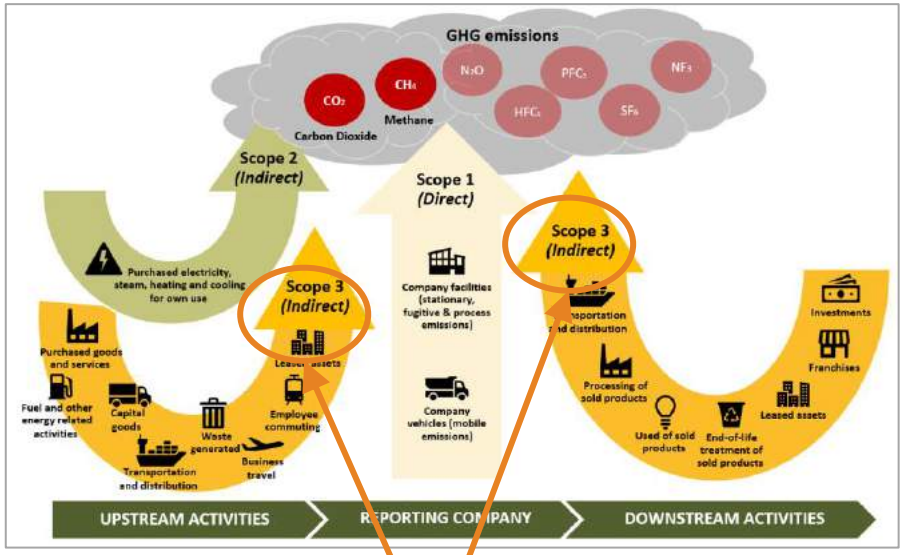
Scope 2 emissions are indirect GHG emissions resulting from the purchase of energy products

Examples of Scope 2 emissions:

- GHG emissions from electricity consumed by the company but purchased from a third party (e.g. electricity purchase from Tenaga Nasional, Sarawak Energy or Sabah Electricity SESB
- GHG emissions from purchased steam or 3rd party cooling plant

Source: Adapted from WRI/WBCSD GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard

Scope 3 Emissions: Upstream & Downstream



Scope 3 emissions are other indirect GHG emissions that occur as a result of the company's activities but occur outside the company

Examples of Scope 3 emissions:

UPSTREAM:

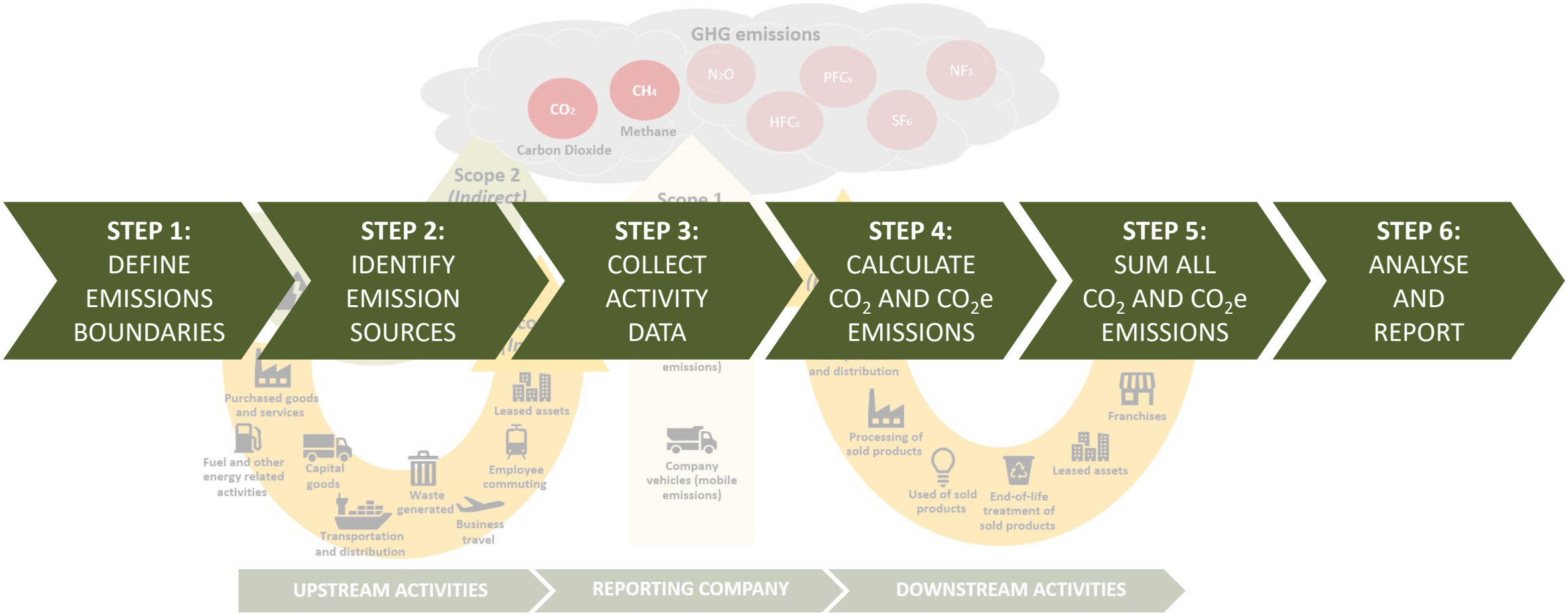
- ❑ Purchase goods, materials and services
- ❑ Capital goods
- ❑ Upstream transportation and distribution
- ❑ Waste generated in operations
- ❑ Business travel and employee commuting

DOWNSTREAM:

- ❑ Downstream transportation and distribution of sold products
- ❑ Emissions from use of sold products and services
- ❑ Disposal of sold products at the end of their life
- ❑ Franchises and investments

Source: Adapted from WRI/WBCSD GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard

Simple steps to determine your GHG emissions



Source: TIG's analysis based on The Climate Registry and GHG Reporting Guidance for Small Business

Step 1: Define Emission Boundaries

- **Identify your organisational boundaries – operations, facilities and sources**
- **These boundaries are either of which you own or have control over (wholly-owned operations, divisions, subsidiaries, joint-ventures)**
- **They can be constructed with 3 established approaches**

ORGANISATIONAL BOUNDARY APPROACHES

1) By Equity Share
(by percent of ownership – wholly and partially owned e.g.: joint-ventures)

2) By Operational Control
(influence on operating policies e.g.: control over electricity consumption in leased building)

3) By Financial Control
(influence on financial policies for economic benefits)

Source: TIG's analysis based on The Climate Registry and GHG Reporting Guidance for Small Business

Step 2: Identify Emission Sources

- **List down all the emissions sources based on the boundaries set earlier**
- **Adhere to the 3 categories of emissions**

CATEGORIES OF EMISSIONS

Scope 1 – Stationary and mobile combustion and fugitive and process emissions

Scope 2 – Consumption of purchased electricity, steam, heating and cooling

Scope 3 – Upstream emissions (purchased materials, business travel, employee commuting to and from work etc) and downstream (transportation of sold products, waste disposal, use of sold products and services etc)

Source: TIG's analysis based on The Climate Registry and GHG Reporting Guidance for Small Business

Step 3: Collect Activity Data

- **Collect activity data for each emission source for a calendar year**
- **Break down the data according to business unit/facility, type of source and type of activity**

ACTIVITY DATA BY CATEGORY

Scope 1

Activity Data for Stationary Combustion

- Amount of natural gas, LPG or diesel used in stationary combustion

Activity Data for Mobile Combustion

- Fuels consumed for mobile combustion (e.g. diesel, gasoline)
- Or km driven combined with vehicle fuel consumption or vehicle make and model

Activity Data for Fugitive Emissions

- Type of refrigerant and air conditioning equipment
- Capacity of equipment

Scope 2

Activity Data for Scope 2 Emissions

- Electricity consumption within your boundaries (e.g. in kWh, MWh)
- Amount of 3rd party cooling / steam purchased

Scope 3

Activity Data for Scope 3 Emissions

- To be included if your Scope 3 emissions are likely to account for more than 40% of total
- 15 possible activities including 8 upstream and 7 downstream

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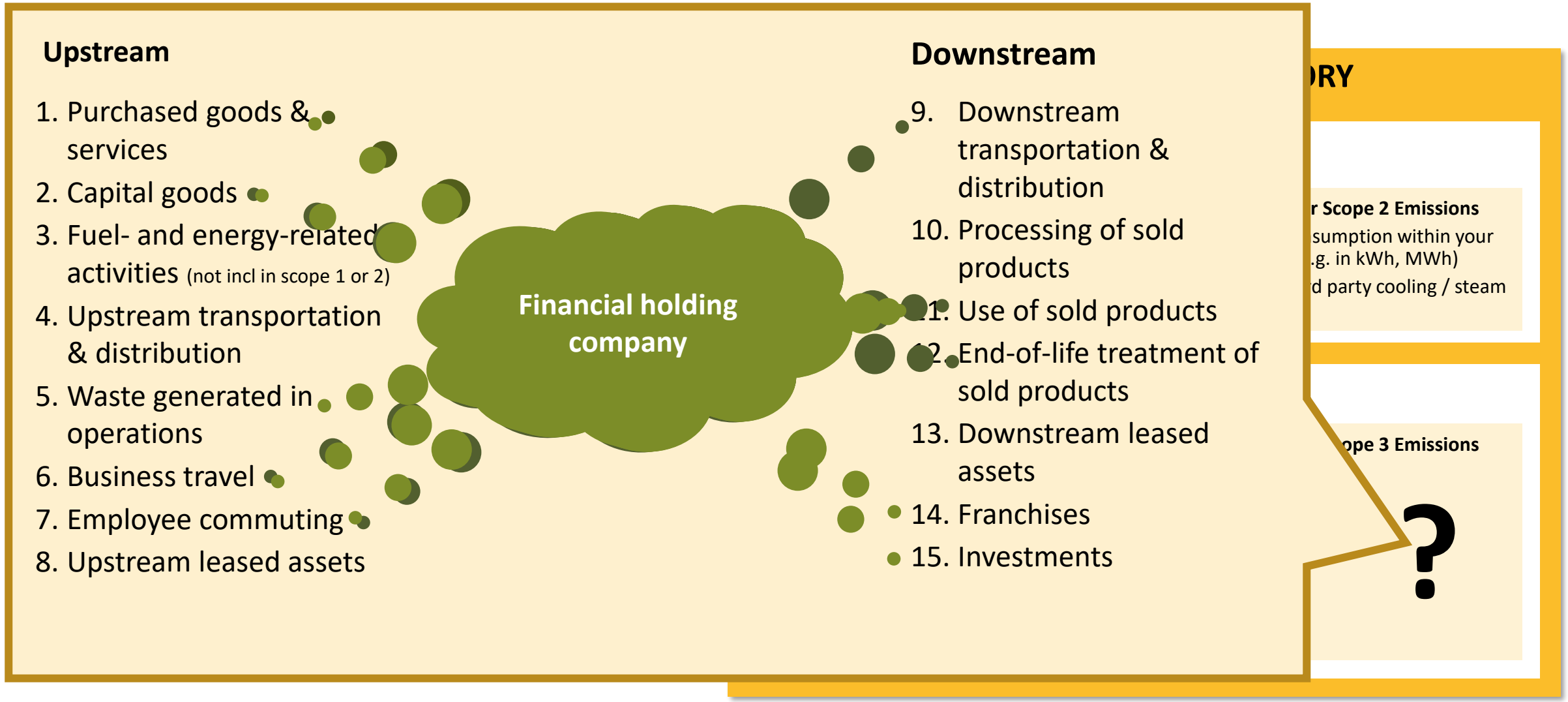
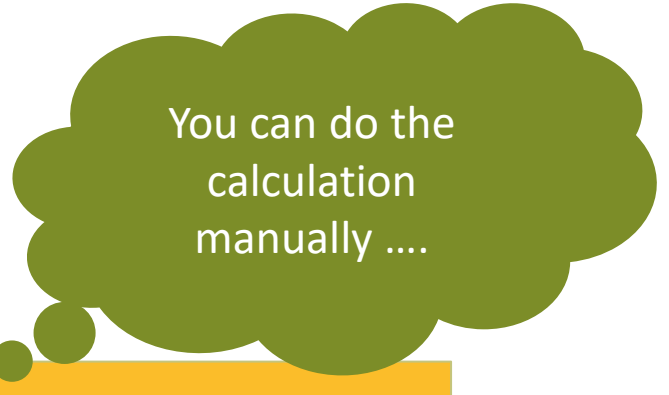
Source: TIG's analysis based on The Climate Registry and GHG Reporting Guidance for Small Business

Step 3: Collect Activity Data



Source: The Climate Registry GHG Reporting Guidance for Small Business; GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard

Step 4: Calculate CO_2 and CO_2e Emissions



- **To calculate GHG emissions related to each activity, the data collected needs to be converted using relevant emission factors**

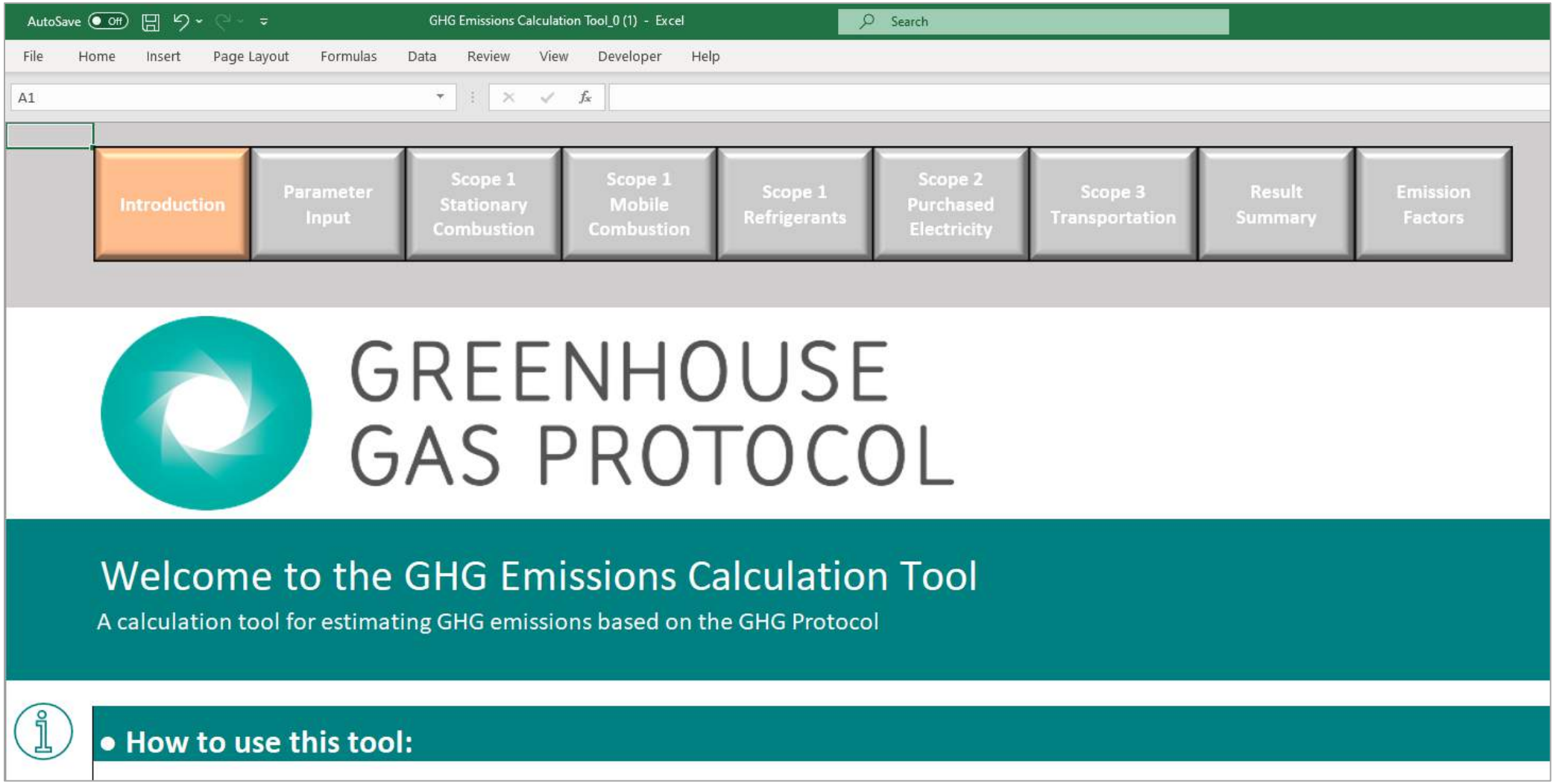
Data x Emission Factor = GHG emissions

- **For example:**
  Calculating CO2 emissions from mobile combustion (Scope 1)

1,247 liter diesel x CO2e Emission Factor OR
62,541 km with company car x CO2e Emission Factor

Source: GHG Protocol, Corporate Value Chain (Scope 3) Accounting and Reporting Standard, GHG Emissions Calculation Tool

Step 4: Calculate CO_2 and CO_2e Emissions



Source: GHG Emissions Calculation Tool – GHG Protocol
https://ghgprotocol.org/sites/default/files/GHG%20Emissions%20Calculation%20Tool_0.xlsx

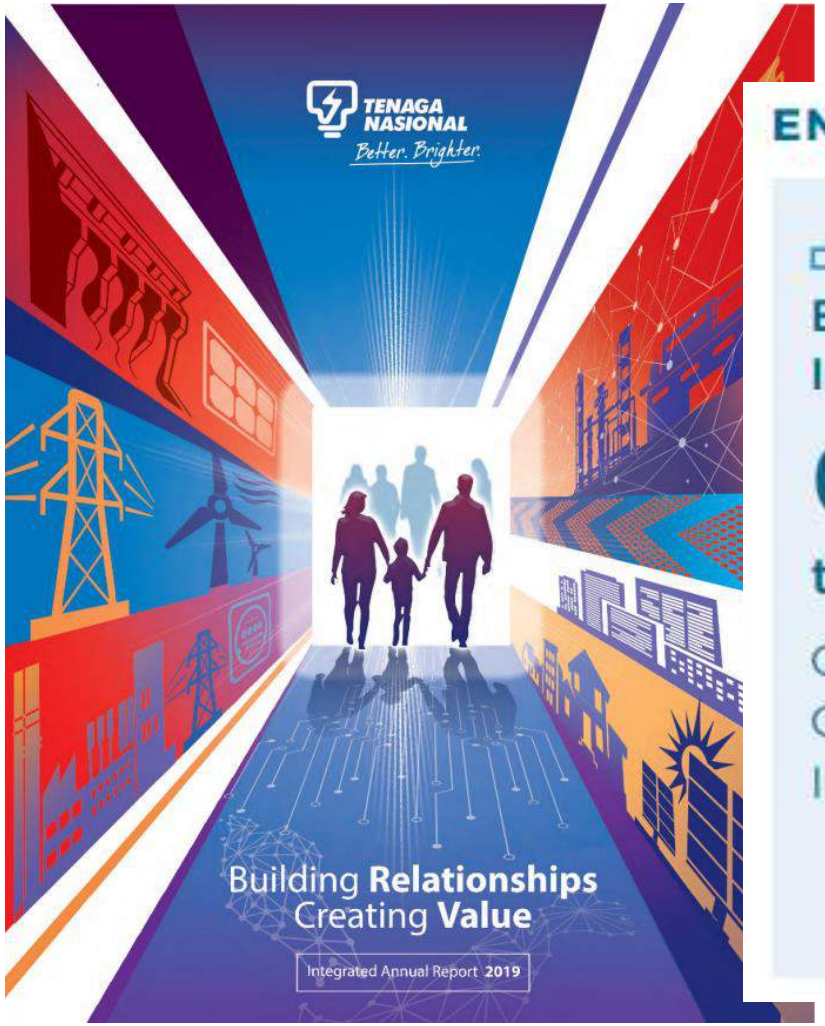
Step 4: Calculate CO_2 and CO_2e Emissions

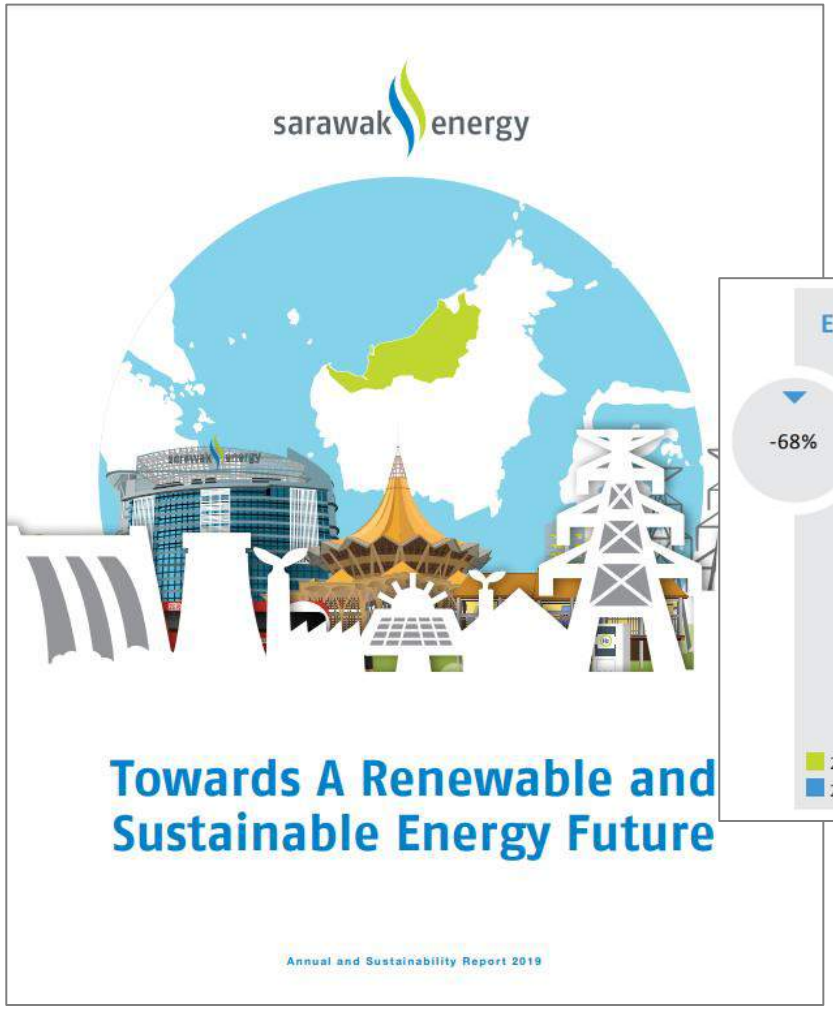
S1 - Mobile Combustion

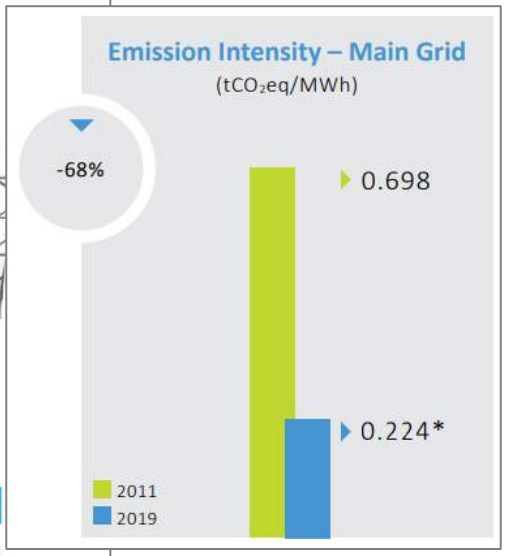
Year	Description	Activity Type	Fuel Source	Vehicle Type	Amount	Fuel Am	GHG Emissions (tonnes CO_2e) CO_2 (tonnes)	CH_4 (tonnes)	N_2O (tonnes)	CO_2e (tonnes)
2020	Truck WXT 7254	Fuel Use	Diesel Fuel	Diesel Light-duty Trucks	1,247	L	3.363	0.000005	0.000008	3.366
2020	Truck WVT 1324	Fuel Use	Diesel Fuel	Diesel Light-duty Trucks	3,215	L	8.671	0.000014	0.000021	8.677
2020	Company car	Fuel Use	Motor Gasoline	Gasoline Passenger Cars	1,432	L	3.321	0.000147	0.000031	3.334
2020	Company car	Distance Activity	Motor Gasoline	Gasoline Passenger Cars	62,541	km	15.165	0.000672	0.000140	15.220

Source: GHG Emissions Calculation Tool – GHG Protocol
https://ghgprotocol.org/sites/default/files/GHG%20Emissions%20Calculation%20Tool_0.xlsx

Step 4: Calculate CO_2 and CO_2e Emissions







Step 5: Sum all CO_2 and CO_2e Values

Introduction | Parameter Input | Scope 1 Stationary Combustion | Scope 1 Mobile Combustion | Scope 1 Refrigerants | Scope 2 Purchased Electricity | Scope 3 Transportation | Result Summary | Emission Factors

GHG Emissions Summary

Scope	Activity Type	Year 2018	2019	2020	2021	2022	2023
Scope 1	Stationary combustion	0.00	0.00	0.00	0.00	0.00	0.00
	Mobile combustion	0.00	0.00	30.60	0.00	0.00	0.00
	Fugitive emissions from air-conditioning	0.00	0.00	0.00	0.00	0.00	0.00
	Other fugitive or process emissions						
	Scope 1 - Total	**0.00**	**0.00**	**30.60**	**0.00**	**0.00**	**0.00**
Scope 2	Purchased electricity - location based	0.00	4.28	4.82	0.00	0.00	0.00
	Purchased electricity - market based	0.00	0.00	0.00	0.00	0.00	0.00
	Purchased heat and steam	0.00	0.00	0.00	0.00	0.00	0.00
	Scope 2 - Location based + heat and steam	**0.00**	**4.28**	**4.82**	**0.00**	**0.00**	**0.00**
	Scope 2 - market based + heat and steam	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Scope 3	Purchased goods and services						
	Capital goods						
	Fuel-and energy-related activities (not included in scope 1 or scope 2)						
	Upstream transportation and distribution	0.18	0.00	0.00	0.00	0.00	0.00
	Waste generated in operations						
	Business travel	0.00	0.00	0.00	0.00	0.00	0.00
	Employee commuting	0.00	0.03	0.00	0.00	0.00	0.00
	Upstream leased assets						
	Downstream transportation and distribution						
	Processing of sold products						
	Use of sold products						
	End-of-life treatment of sold products						
	Downstream leased assets						
	Franchises						
	Investments						

		2019	2020
Scope 1	Stationary combustion	0.00	0.00
	Mobile combustion	0.00	30.60
	Fugitive emissions from	0.00	0.00
	Other fugitive or proces		
	Scope 1 - Total	**0.00**	**30.60**
Scope 2	Purchased electricity - lo	4.28	4.82
	Purchased electricity - m	0.00	0.00
	Purchased heat and stea	0.00	0.00
	Scope 2 - Location based	**4.28**	**4.82**
	Scope 2 - market based -	**0.00**	**0.00**

Source: GHG Emissions Calculation Tool – GHG Protocol
https://ghgprotocol.org/sites/default/files/GHG%20Emissions%20Calculation%20Tool_0.xlsx

Step 6: Analyse and Report

ANALYSE:

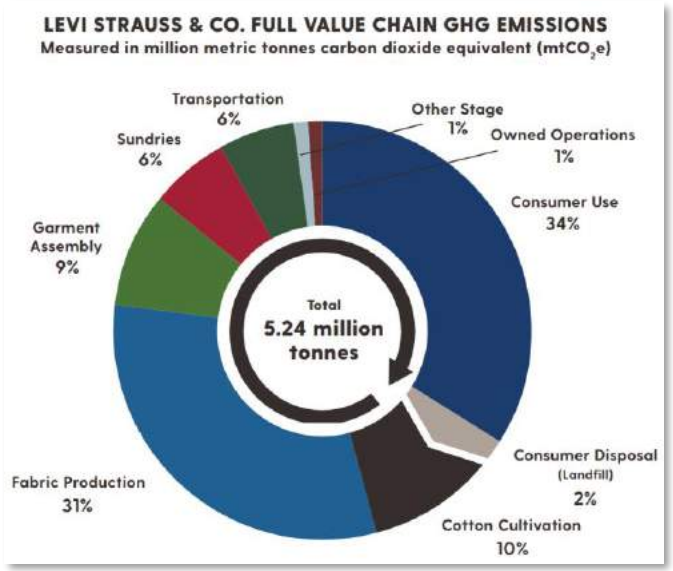
- **Determine carbon intensity** (based on relevant per unit calculation, e.g.: products, production volume, size, floor space, number of full-time employees, monetary units, etc)
- **Review major sources of emissions** (along Scope 1, 2 and 3 and within Scope 3)
- **Identify opportunities for reductions** (process redesign, conversion and retrofitting equipment, fuel switching, changes in behaviour, offsets, working with suppliers to reduce Scope 3 emissions etc)
- **Set targets** (refer to Science Based Target initiatives)

Step 6: Analyse and Report

ANALYSE:

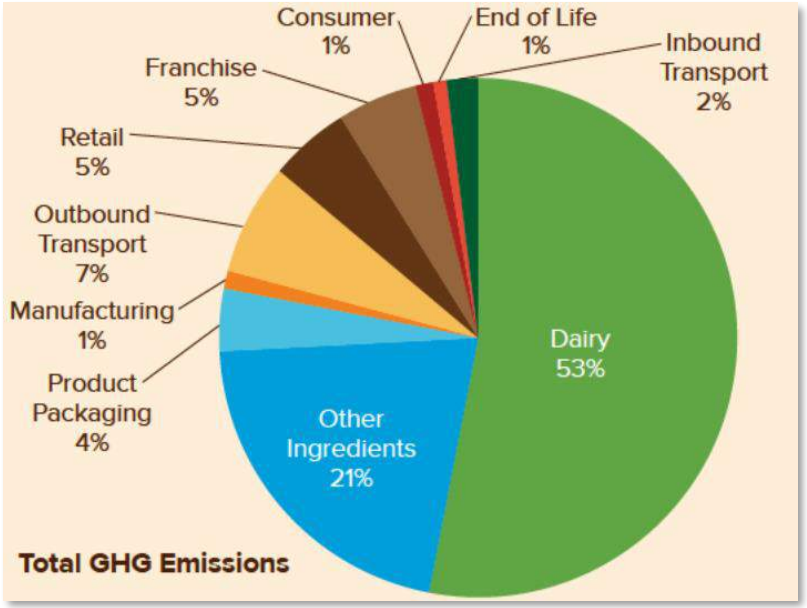
Examples of sector-specific emissions:

Apparel



Source: Climate Action Strategy 2025 – Levi Strauss & Co.

F&B Retailing



Source: 2019 Social and Environmental Assessment Report – Ben & Jerry's

Technology Hardware & Equipment

Breakdown of Scope 1, 2 and 3 across supply chain (megaton)

Scope 1	**26**
Scope 2	**347**
Scope 3	**7,110**
Category 1 End-of-life treatment of sold products	3,820
Category 2 Capital goods	183
Category 3 Fuel and energy related activities not included in Scope 1 and 2	59
Category 4 Transportation and distribution (upstream)	75
Category 5 Waste generated in operations	7
Category 6 Business travel	15
Category 7 Employee commuting	22
Category 8 Leased assets (upstream)	4
Category 9 Transportation and distribution (downstream)	0
Category 10 Processing of sold products	0
Category 11 Use of sold products	2,923
Category 12 End-of-life treatment of sold products	1
Category 13 Leased assets (downstream)	-
Category 14 Franchises	-
Category 15 Other	-

Source: 2020 Sustainability Report – NEC Corporation

Thank you

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