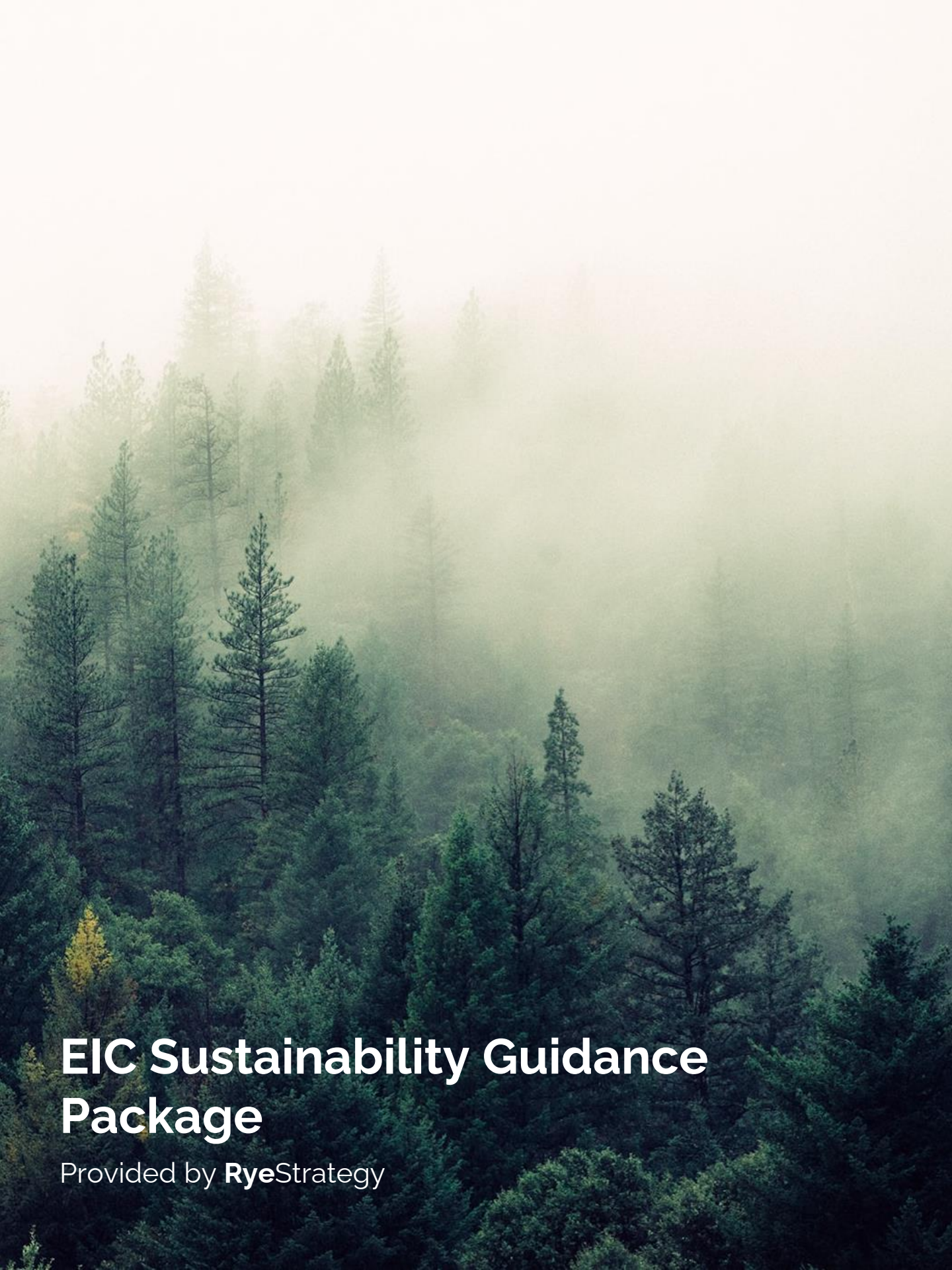
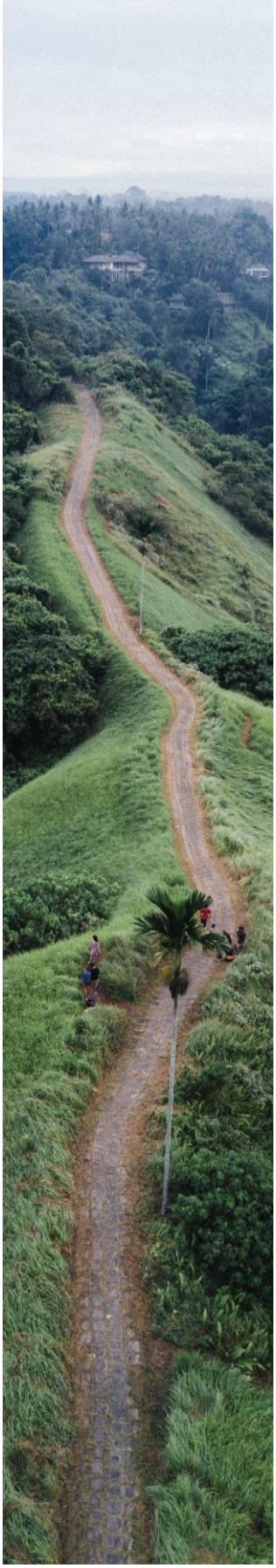


EIC Sustainability Guidance Package

Provided by **Rye**Strategy



Overview

The following package has been built to help your organization better understand and communicate its current or future environmental impact, particularly with regards to green house gas emissions. Covered topics include **understanding footprints**, **calculating your footprint**, and **conveying sustainability** in your business.

Understanding Footprints

Calculating Your Footprint

Conveying Sustainability & Key Sources

Carbon Footprints & the GHG Protocol

A carbon footprint is the sum of all emissions created by your organization's activities over a specific period of time, usually a calendar year. While CO_2, or carbon dioxide, is the primary focus when it comes to global warming, your footprint is actually made up of several other environmentally damaging gases as well, which are converted into CO_2 equivalents (commonly referred to as CO_2e). These include carbon dioxide **(CO_2)**, methane **(CH_4)**, nitrous oxide **(N_2O)**, hydrofluorocarbons **(HFCs)**, perfluorocarbons **(PCFs)**, sulphur hexafluoride **(SF_6)** and nitrogen trifluoride **(NF_3)**.

Covered Greenhouse Gases

- CO_2 Carbon Dioxide
- N_2O Nitrous Oxide
- PCFs Perfluorocarbons
- CH_4 Methane
- SF_6 Sulphur Hexafluoride
- HFCs Hydrofluorocarbons
- NF_3 Nitrogen Trifluoride

Given the complicated nature of these emissions, numerous calculation methods have been devised over the years, however, the most commonly known and used technique is the Greenhouse Gas Protocol, or the GHG. Created in 1997 by the World Resources Institute and the World Business Council for Sustainable Development, the GHG is an international accounting method built to help government and business leaders understand, quantify, and manage greenhouse gas emissions. Currently, it is used by more than **9 out of 10** Fortune 500 companies who share sustainability metrics.

Who uses the GHG Protocol?

01 Governments


China


India


United States

02 NGOs

World Resources Institute

World Business Council on Sustainable Development

Carbon Disclosure Project

03 Businesses

Microsoft

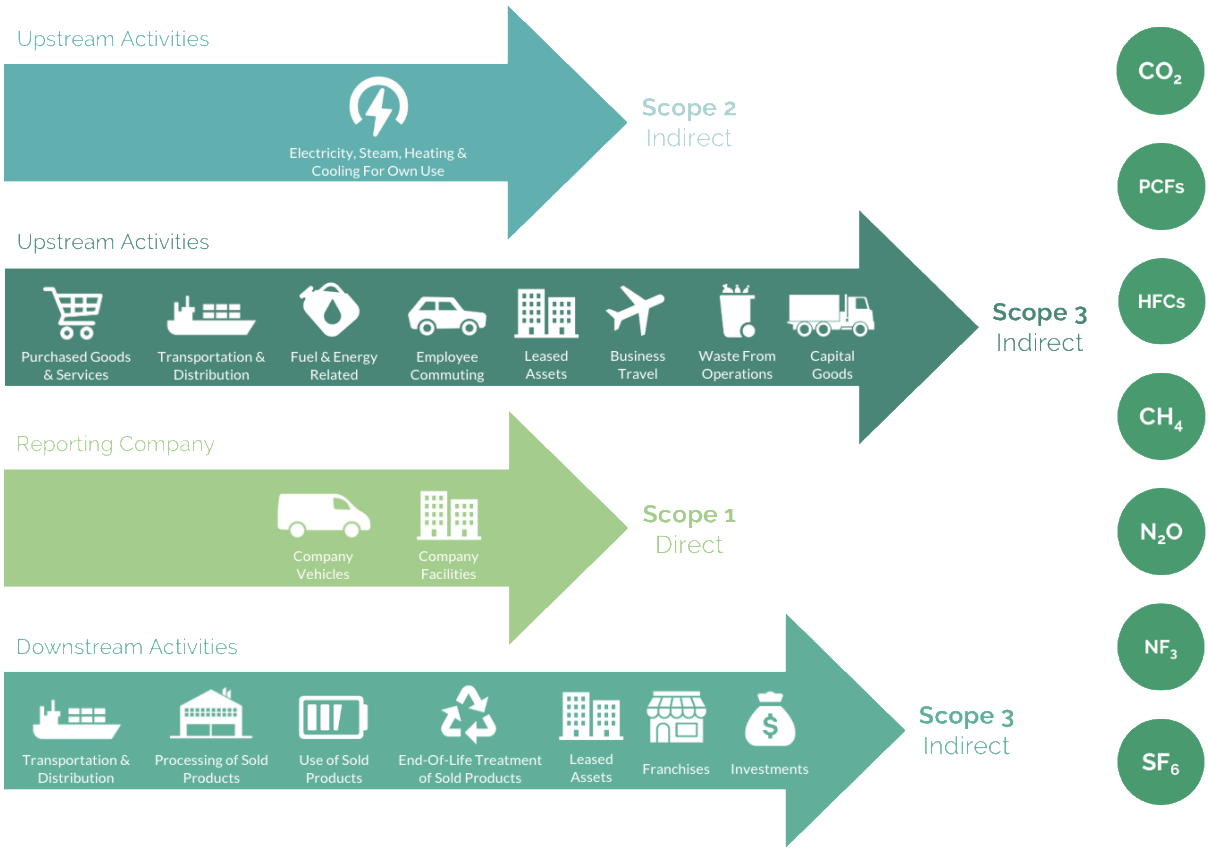
Salesforce

Apple

Understanding the Scopes

In order to provide an easily replicable and standardized process, the GHG Protocol has established a mutually exclusive yet collectively exhaustive framework for capturing all organizational CO_2e emissions: the Scopes.

- **Scope 1 Emissions**: Scope 1 emissions relate to fuel combustion as well as the release of certain greenhouse gases. Fuel combustion most often occurs when offices are heated by boilers or when corporate vehicles are utilized. Highly polluting greenhouse gases, such as HFCs and PFCs, can be released using fire suppression systems and refrigeration/AC units, and are included within Scope 1.
- **Scope 2 Emissions**: Scope 2 emissions occur due to the use of electricity, steam, and purchased heating or cooling. The majority of Scope 2 emissions arise from the use of purchased electricity.
- **Scope 3 Emissions**: Scope 3 accounts for all further emissions associated with an organization's activities — within software & professional services, these can include servers, food reimbursements, business travel, purchased business services, and capital assets, among others. Scope 3 comprises 15 subcategories in total, and often makes up more than 80% of an organization's emissions.



Simplified Footprint Process & Example

Step 1: Revenue Calculation

Advice: apply the TAM, SAM, SOM method, first identifying total addressable market, serviceable addressable market, serviceable obtainable market, and then revenue.

Example:
TAM: # of pet owners in the U.S = **100M**
SAM: # of pet owners in the U.S earning over $100K = **2M**
SOM: # of pet owners in the U.S earning over $100K who would purchase your product = **500K**
Revenue: SOM * Price / Year <> 500K * $20 = **$10M**

Step 2: Industry Selection

Advice: identify which industry best matches your organization's activities by referring to *Industry Definitions (1), Industry Definitions (2), and Industry Definitions (3).*

Example: as a tech-enabled dog/cat collar producer, your product best falls under the *Tech Hardware & Equipment* industry.

Step 3: Multiplier Use

Advice: with your industry now identified, simply take your previously calculated revenue figure and multiply it by the "Multiplier (metric tons CO2e / $ Revenue)" found on *Industry Multipliers & Breakdowns (1,2).* This is your overall carbon footprint, expressed in metric tons of CO2e.

Example:
$10M (*revenue*) * 0.0006154 (*metric tons CO2e / $ rev*) = **6,154 total metric tons CO2e**

Step 4: Breakdown Use

Advice: now that you've calculated your overall carbon footprint, refer back to *Industry Multipliers & Breakdowns (1,2,3)* and multiply your total calculated carbon footprint by the relevant respective scope category percentages.

Example:
Scope 1: 6,154 * 7.8% = **480 mt CO2e**
Scope 2: 6,154 * 14.6% = **899 mt CO2e**
Scope 3 – Purchased Goods & Services: 6,154 * 19.4% = **1,194 mt CO2e**
Etc. *Repeat this process for all available scope percentages; disregard those labelled "N/A"*

Industry Definitions (1)

Food & Beverage Processing

This industry includes companies involved in processing raw food materials, packaging, and distributing them. Any product meant for consumption, aside from pharmaceuticals, passes through this industry. **Example: PepsiCo**.

Banks, Financials, Insurance

This industry includes firms and institutions providing financial services and insurance to commercial and retail customers.
Example: Bank of America.

Real Estate

This industry refers to the production, purchase, and selling of property, land, buildings, air rights and underground rights.
Example: RE/MAX.

Tech Hardware & Equipment

This industry refers to the production of physical components for any computer, mobile communication system, or other technological device.
Example: Apple

Professional Services

This industry refers to the range of different occupations that provide support for businesses in the form of advice or tertiary roles.
Example: Bain & Company, a consulting firm.

An exact industry match may be unavailable; if this is the case, identify and select the industry out of those available which is closest to your organization's operations

Industry Definitions (2)

Electrical Equipment & Machinery

This industry refers to the production of machinery that uses electricity, including lighting fixtures, heating, ventilation and air conditioning systems, among others.
Example: American Standard.

Software & Services

This industry refers to digital products customers can display, run, access, or otherwise interact with, directly or indirectly.
Example: Salesforce.

Telecommunication Services

This industry refers to companies that create the infrastructure which allows data in words, voice, audio or video to be sent anywhere in the world.
Example: T-Mobile.

Construction & Engineering

This industry refers to organizations which deal with the designing, planning, construction and management of infrastructures such as roads, tunnels, bridges, airports, railroads, facilities, and buildings.
Example: Skanska USA.

Automobiles & Components

This industry refers to organizations involved in the design, development, manufacturing, marketing, and selling of motor vehicles and associated components.
Example: Ford.

An exact industry match may be unavailable; if this is the case, identify and select the industry out of those available which is closest to your organization's operations

Industry Definitions (3)

Retailing

This industry refers to organizations which sell consumer goods or services to customers through multiple channels.
Example: Target.

Pharma, Biotech, Life Sciences

This industry refers to organizations which produce drugs and other products that help people and animals live healthier lives, recover from injuries, and fight illnesses.
Example: Johnson & Johnson.

Electric Utilities & Other Power

This industry refers to organizations which engage in electricity generation and the distribution of electricity for sale generally in a regulated market.
Example: Puget Sound Energy.

Textiles, Apparel, Footwear, & Luxury

This industry refers to organizations which manufacture apparel merchandise, footwear and a wide variety of accessories, such as handbags, eyewear, and travel-related goods.
Example: Nike.

An exact industry match may be unavailable; if this is the case, identify and select the industry out of those available which is closest to your organization's operations

Industry Multipliers & Breakdowns (1)

	Food & Bev. Processing	Banks, Financials, Insurance	Real Estate	Tech Hardware & Equipment	Professional Services	Electrical Equip. & Machinery	Software & Services
Multiplier (metric tons CO2e / $ Revenue)	**0.0008851**	**0.0000365**	**0.000088**	**0.0006154**	**0.0001962**	**0.001463**	**0.0000230**
Scope 1 %	15.80%	11.70%	11.70%	7.80%	11.70%	37.70%	2.70%
Scope 2 %	22.80%	44.30%	44.30%	14.60%	44.30%	7.90%	11.80%
S3: Purchased Goods & Services	42.40%	20.70%	10.60%	19.40%	21.10%	10.30%	38.50%
S3: Capital Goods	3.10%	N/A	3.50%	2.30%	6.20%	1.60%	10.30%
S3: Fuel + Energy Related Activities	2.50%	3.10%	9.70%	N/A	N/A	1.10%	N/A
S3: Upstream Dist. & Transportation	4.90%	N/A	4.00%	2.30%	2.60%	N/A	N/A
S3: Waste Generated in Operations	N/A	3.10%	N/A	N/A	N/A	N/A	9.40%
S3: Business Travel	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S3: Employee	N/A	4.40%	N/A	N/A	2.20%	N/A	8.60%
S3: Upstream Leased Assets	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S3: Downstream Dist. & Transport	3.70%	N/A	N/A	2.30%	2.20%	2.20%	N/A
S3: Processing of Sold Products	4.90%	N/A	N/A	N/A	N/A	N/A	6.80%
S 3: Use of Sold Products	N/A	N/A	11.90%	43.50%	N/A	35.90%	N/A
S3: EoL Treatment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S3: Downstream Leased Assets	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S3: Franchises	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S3: Investments	N/A	12.80%	N/A	N/A	N/A	N/A	N/A
S3: Other	N/A	N/A	4.40%	7.80%	9.70%	3.30%	12.00%

First multiply your projected revenue(s) by the industry multiplier (second row) most closely identified with your organization. Then break this total footprint down across the Scopes, multiplying the total by all available industry Scope percentages. These numbers summed should once again equal your total footprint figure (in mt CO2e)

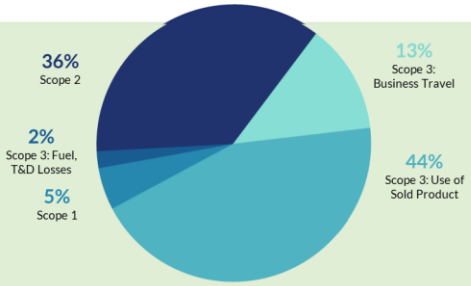
Industry Multipliers & Breakdowns (2)

	Telecom Services	Construction & Engineering	Automobiles & Components	Retailing	Pharma, Biotech, & Life Sciences	Electric Utilities & Other Power	Textiles, Apparel, Footwear, & Luxury
Multiplier (metric tons CO2e / $ Revenue)	**0.0002769**	**0.0004980**	**0.0017688**	**0.0001345**	**0.0001184**	**0.007498**	**0.0005332**
Scope 1 %	0.60%	37.70%	37.70%	7.80%	13.50%	65.40%	7.80%
Scope 2 %	6.50%	7.90%	7.90%	14.60%	21.50%	2.80%	14.60%
S3: Purchased Goods & Services	39.00%	20.70%	12.00%	52.00%	37.10%	4.40%	53.60%
S3: Capital Goods	28.80%	4.40%	N/A	6.20%	7.20%	1.60%	0.00%
S3: Fuel + Energy Related Activities	5.60%	3.30%	1.10%	N/A	2.00%	20.00%	3.10%
S3: Upstream Dist. & Transportation	2.80%	N/A	N/A	7.00%	9.10%	N/A	4.70%
S3: Waste Generated in Operations	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S3: Business Travel	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S3: Employee	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S3: Upstream Leased Assets	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S3: Downstream Dist. & Transport	N/A	N/A	3.30%	4.70%	N/A	N/A	3.90%
S3: Processing of Sold Products	N/A	2.70%	N/A	5.40%	N/A	N/A	N/A
S 3: Use of Sold Products	9.30%	16.90%	33.80%	2.30%	3.90%	3.20%	3.90%
S3: EoL Treatment	N/A	N/A	1.60%	N/A	N/A	N/A	N/A
S3: Downstream Leased Assets	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S3: Franchises	N/A	N/A	N/A	N/A	N/A	N/A	N/A
S3: Investments	N/A	N/A	N/A	N/A	N/A	0.60%	N/A
S3: Other	7.40%	6.50%	2.70%	N/A	5.90%	1.90%	8.50%

First multiply your projected revenue(s) by the industry multiplier (second row) most closely identified with your organization. Then break this total footprint down across the Scopes, multiplying the total by all available industry Scope percentages. These numbers summed should once again equal your total footprint figure (in mt CO2e)

Conveying Sustainability & Key Sources

Climate impact is a key part of the EIC application: the new Climate Challenge Prize is for **$5,000** and will be awarded to *"a team that has thoughtfully incorporated and quantified a carbon footprint into the development and comm. of their innovation"*.



Sample Scope Breakdown

Revenue:	10,000,000							
Multiplier:	0.0006154							
Calculated Footprir	6154							
Tech & Hardware	Scope 1	Scope 2	S3: Purchased G&S	S3: Capital Goods	S3: Fuel + Energy Related Activities	S3: Upstream Leased Assets	S3: Processing of Sold Products	S3: Other
Scope Breakdown %:	7.80%	14.60%	19.40%	2.30%	2.30%	2.30%	43.50%	7.80%
Calculated Scope Category Footprints:	**480.012**	**898.48**	**1193.876**	**141.542**	**141.542**	**141.542**	**2676.99**	**480.012**

Sample Spreadsheet Breakdown (in mt CO2e)

Look Further

Look further than the resources we are providing: implement the **Quantis Calculator**; identify the areas which are emitting the most carbon, and work on **mitigation strategies**; come visit RyeStrategy **Office Hours**!

Highlight Your Sustainability

If your product is more sustainable than competitors in one aspect, highlight that – identify where you have an environmental advantage

i.e. reusable rockets require less carbon due to reduced manufacturing

Highlight Other Areas of Impact

Even though carbon is important, **highlight other areas** of sustainability. Look into the Clean Energy Prize and EarthLab Community Impact Prize. CSR is **multifaceted**, and social sustainability is important too!

Know Your Audience

Do more **research** into your specific industry to decide how best to proceed – are there **existing** sustainability trends within the industry you can join? Additionally, make sure to keep your sustainable efforts **digestible** and **positive** for customers.

Certifications

Once your organization is established, look into getting environmental certifications, such as **B Corp**. There are many certifications to choose from, so look into which ones **make the most sense** for your business.

Learn more about the **GHG Protocol** here: https://ghgprotocol.org/

Use the **Quantis Scope Calculator** here: https://quantis-suite.com/Scope-3-Evaluator/

Review **TAM**, **SAM**, **SOM** here: https://www.process.st/tam-sam-som/

Learn more about **RyeStrategy** and our **services** here: https://www.ryestrategy.com/