Scope 3 Carbon Footprinting
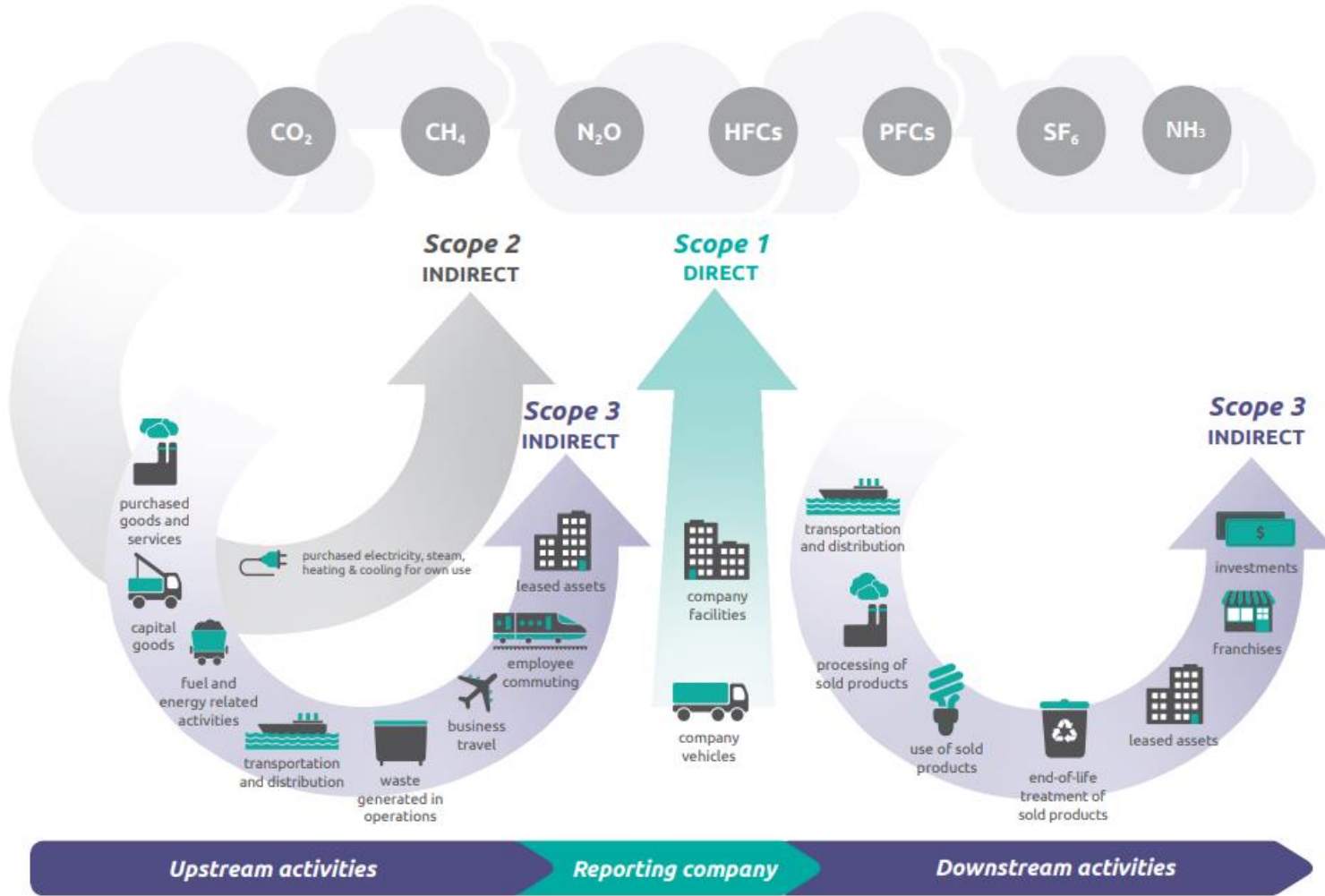
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The Scopes

Figure [1.1] Overview of GHG Protocol scopes and emissions across the value chain

(GHG Protocol)

Why measure and manage your scope 3 emissions

- **Mandatory Disclosure -** of Scope 3/Supply Chain emissions is becoming more popular and requires reporting in their **Annual Reports (SECR, PPN 06/21).**

- **Voluntary Disclosure -** The **Carbon Disclosure Project** and **Science Based Target Initiative** are actively promoting the need for Scope 3 carbon footprint reporting.

- **Internal Understanding –**

-**Identify** and respond to **carbon 'hot spots' in your supply chain**.

-**Save cost and improve sustainability** in your supply chain.
[Microsoft Word - PPN 0621 Technical standard for the Completion of Carbon Reduction Plans.docx (publishing.service.gov.uk)](publishing.service.gov.uk)
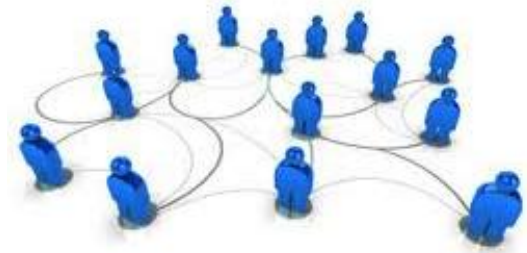
Where to Begin

Scope 1 and 2, understand your own footprint first.

Scope 3 emissions are someone else's scope 1 and 2. Despite this, it should be tracked and reported to give better supply chain understanding and to drive change.

Two Options

Option 1 – Gap Analysis

Options 2 – Screening (Cost or Average Based)

Where to begin – Gap Analysis

Table [5.4] Description and boundaries of scope 3 categories

Upstream scope 3 emissions

Category	Category description	Minimum boundary
1. Purchased goods and services	• Extraction, production, and transportation of goods and services purchased or acquired by the reporting company in the reporting year, not otherwise included in Categories 2 - 8	• All upstream (cradle-to-gate) emissions of purchased goods and services
2. Capital goods	• Extraction, production, and transportation of capital goods purchased or acquired by the reporting company in the reporting year	• All upstream (cradle-to-gate) emissions of purchased capital goods
3. Fuel- and energy-related activities (not included in scope 1 or scope 2)	• Extraction, production, and transportation of fuels and energy purchased or acquired by the reporting company in the reporting year, not already accounted for in scope 1 or scope 2, including: a. Upstream emissions of purchased fuels (extraction, production, and transportation of fuels consumed by the reporting company) b. Upstream emissions of purchased electricity (extraction, production, and transportation of fuels consumed in the generation of electricity, steam, heating,	a. For upstream emissions of purchased fuels: All upstream (cradle-to-gate) emissions of purchased fuels (from raw material extraction up to the point of, but excluding combustion) b. For upstream emissions of purchased electricity: All upstream (cradle-to-gate) emissions of purchased fuels (from raw material extraction up to the point

4. Upstream transportation and distribution

5. Waste generated in operations

6. Business travel

7. Employee commuting

8. Upstream leased assets

9. Downstream transportation and distribution

10. Processing of sold products

11. Use of sold products

12. End-of-life treatment of sold products

13. Downstream leased assets

14. Franchises

15. Investments

https://ghgprotocol.org/standards/scope-3-standard

Data Availability

Primary- Exact usage data from operations (e.g. Fuels, Mileage, Materials).

Secondary- Data from global average emissions factors based on known processes.

Tertiary- Cost Based Analysis to identify key data sources to help identify where to target the above data. Need the above data to have measurable reductions.

AVAILABILITY

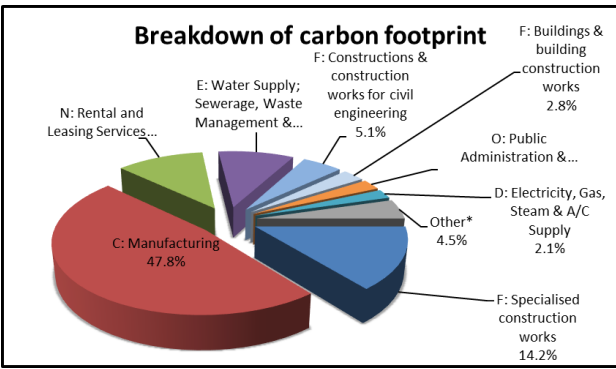ACCURACY

Where to begin – Spend based carbon assessment

- Using cost-based factors to estimate supply chain GHG emissions based on financial spend.
- Identify "Hot Spots", typically the top 3 sources to focus on.
- Report on findings, identifying suppliers contributing to your Organization's footprint.

SIC Group	Section	Sector Summary	Total Cost (£)	Comments	EF (thousand tonnes CO2e / £million)	tCO2e
2	A	Products of forestry, logging and related services	30,156	Forestry	0.15	4.52
8	B	Other mining and quarrying products	91,603	Mining products	0.71	65.04
10	C	Processing and preserving of meat and production of meat products	11,520	Meat products	0.23	2.65
13	C	Textiles	74,108	Textiles	0.31	22.97
16	C	Wood and of products of wood and cork, except furniture; articles of straw and plaiting materials	989,169	Wood products	0.59	583.61
18	C	Printing and recording services	66,575	Printing services	0.08	5.33
20	C	Manufacture of cleaning & toilet preparations	301,760	Cleaning products	0.08	24.14
21	C	Basic pharmaceutical products and pharmaceutical preparations	32,149	Pharmaceutical products	0.06	1.93
22	C	Rubber and plastic products	46,123	Rubber and plastic products	0.49	22.60
23.1-4 & 23.7-9	C	Manufacture of glass, refractory, clay, other porcelain and ceramic products, Stone, & abrasive products	4,529	Natural soil based products	1.33	6.02
23.5-6	C	Cement, lime, plaster and articles of concrete, cement and plaster	3,862	Cement products	3.15	12.17
24.1-3	C	Manufacture of basic Iron & Steel	296,468	Iron and steel	3.83	1,135.47
24.4-5	C	Other basic metals and casting	1,036,849	Other metals	0.54	559.90
25.1-3+25.5-9	C	Fabricated metal products, except machinery and equipment, excluding weapons and ammunition	2,236,097	Metal products	0.21	469.58
26	C	Computer, electronic, communication and optical products	1,705,287	Electronics	0.05	85.26
27	C	Electrical equipment	1,256,920	Electrical equipment	0.16	201.11
28	C	Machinery and equipment n.e.c.	5,756,326	Machinery and equipment	0.12	690.76

Breakdown of carbon footprint

- N: Rental and Leasing Services…
- E: Water Supply; Sewerage, Waste Management &…
- F: Constructions & construction works for civil engineering 5.1%
- F: Buildings & building construction works 2.8%
- O: Public Administration &…
- D: Electricity, Gas, Steam & A/C Supply 2.1%
- Other* 4.5%
- F: Specialised construction works 14.2%
- C: Manufacturing 47.8%

Some downstream emissions sources may need modeling if not directly paid for e.g. Distribution, Product Use and Waste.

Progression
Improving data as you go

Year 1 – 100% Tertiary Data

Hybrid approach
Year 2 – Primary or secondary data for the top 3 identified sources.

Year 3 – Working with suppliers to reduce emissions. Majority Primary or secondary.

Year 5 – A better understanding of your supply chain allowing more data and more influence

Shifting toward primary and secondary data allows for tracking and measuring emission reductions

Recap

carbon footprint ™

- Reduce overall emissions through identifying hotspots.

- Tenders to becoming part of or remaining in supply chains.

- Go above and beyond minimum reporting to show Environmental understanding.

- Show green credentials, differentiate your brand and show transparency.

The aim of this talk was to:

- Identify your next step and a potential strategy for understanding your Scope 3 emissions

- Identify the benefits of monitoring your scope 3 emissions/supply chain

- Provide details on how extensive and how far a supply chain can stretch
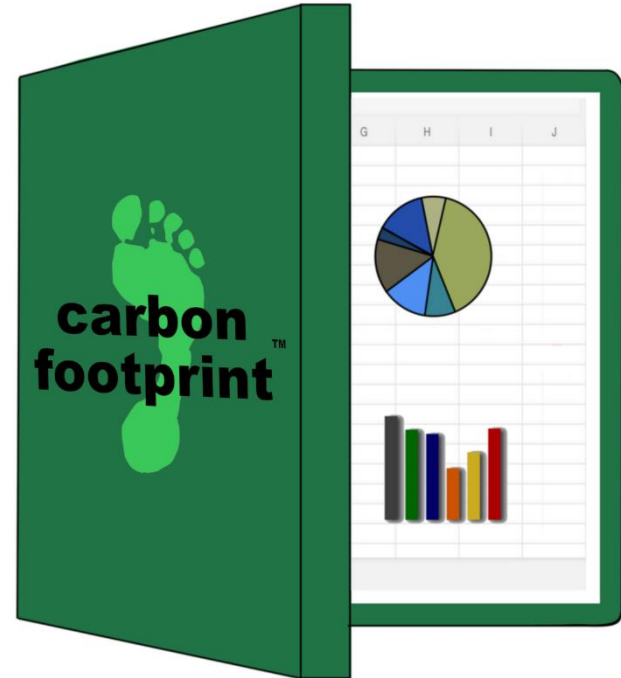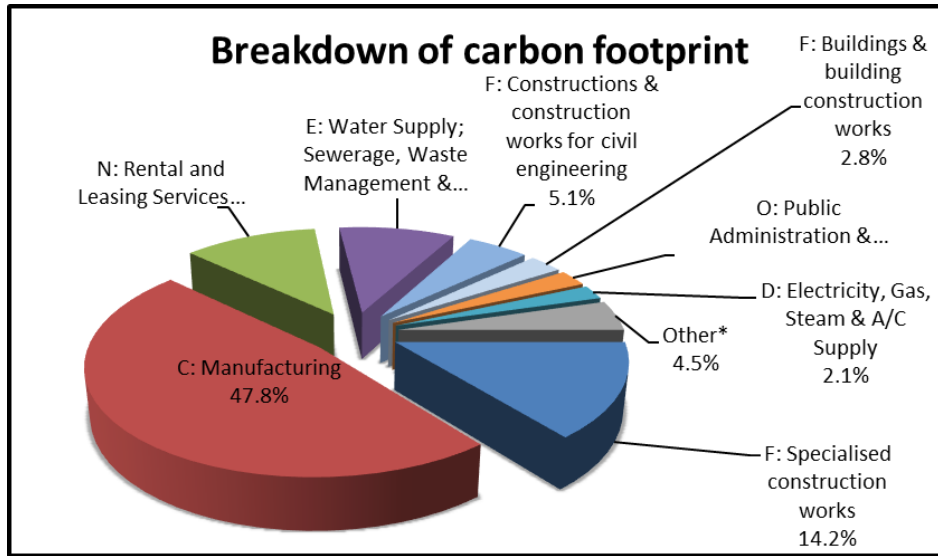
Information & Further Resources

SUPPLY CHAIN FOOTPRINT

Services To Calculate The Environmental Impact Of Your Supply Chain

- Carbon Footprint Website https://www.carbonfootprint.com/supplychainfootprint.html

- Scope 3 GHG Protocol https://ghgprotocol.org/scope-3-technical-calculation-guidance

- PPN 06/21 Scope 3 Guidance Microsoft Word - PPN 0621 Technical standard for the Completion of Carbon Reduction Plans.docx (publishing.service.gov.uk)

- Gov.UK https://www.gov.uk/government/statistics/uks-carbon-footprint

- ONS.gov.uk https://www.ons.gov.uk/economy/environmentalaccounts

- WIOD Socio Economic Accounts 2016 http://www.wiod.org/database/seas16

Carbon Footprint

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https://www.carbonfootprint.com/supplychainfootprint.html

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CO₂e Assessed Supply Chain