

The Plan

10:00 – 10:05 – Overview and Intro from Beth

10:00 – 10:15: Net Zero Definitions, what is coming for you + your Businesses

10:15 – 10:30: Measurement Options and Challenges

10:30: Q+A

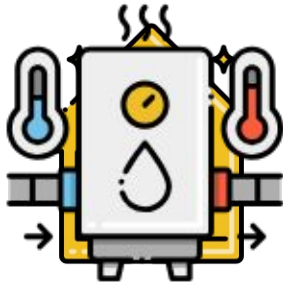
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**How prepared do you feel for
the transition to net zero?**

Thinking about Carbon Footprints

SME Carbon footprint has 5 key areas



**Energy
& Buildings**



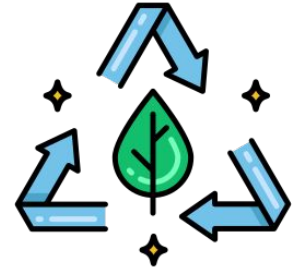
Transport



Water



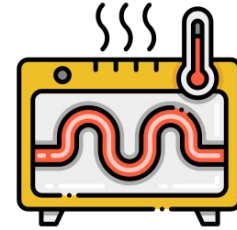
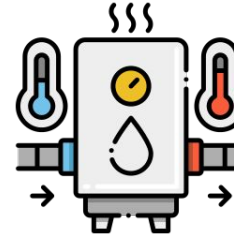
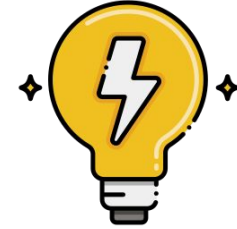
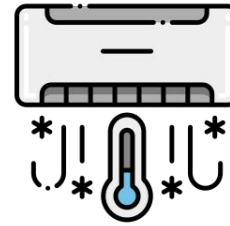
Suppliers



Waste

Energy & Buildings

- Air Conditioning / Cooling
- Lighting
- Heating
- Devices & Machinery
- Cooking



Transport

- Staff commuting
- Business travel
- Owned vehicles
- Subcontractors
- Visitor miles – E.g. Customers to a remote campsite



Suppliers

- Services you purchase
- Services you sell
- Products
- Anything you spend money on!
 - Packaging
 - Products
 - Promotional Materials
 - Services e.g. Accountants, Marketing



Waste

- Raw Materials: Glass, Paper, Cans etc
- Processed goods: Products made, unwanted returns



Water

- Toilets
- Manufacturing / Industrial processes
- Cleaning
- Washing machines

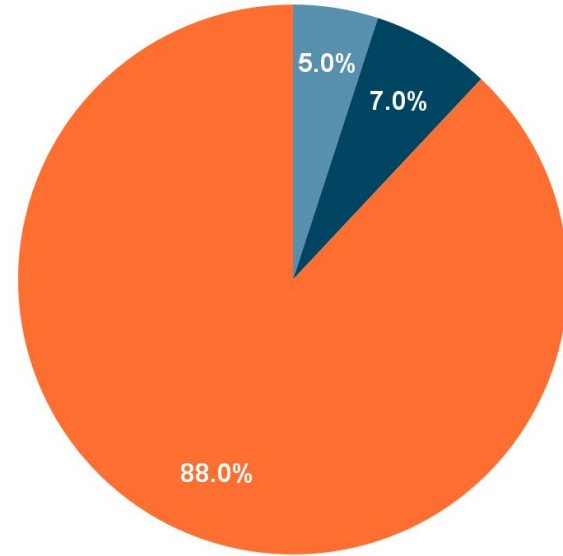


Measuring Footprints

Split into 3 areas:

- Scope 1 - Heating + Vehicles
- Scope 2 - Electricity
- Scope 3 - Buy, Sell, Throw Away & Travel

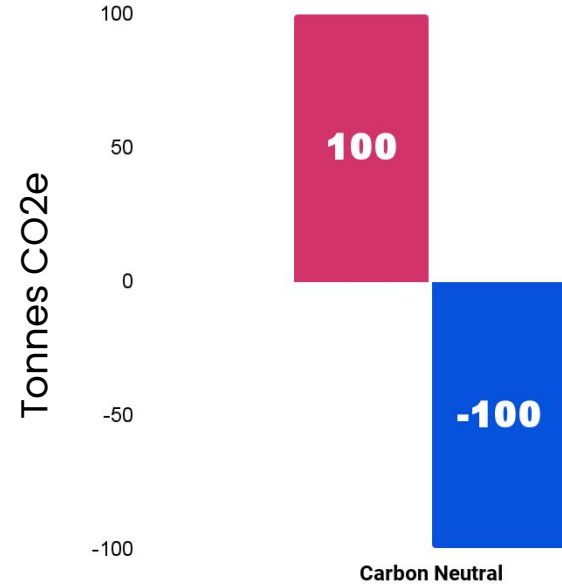
CO₂e - A single figure to represent total Global Warming Potential



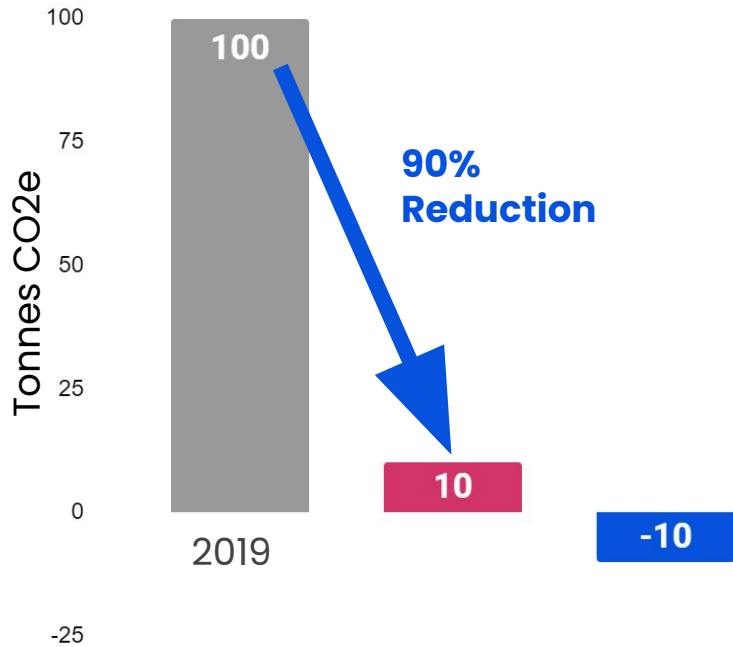
What is Net Zero & SME impact?

Carbon Neutral

- **Sometimes** only Carbon Dioxide
- Buy Offsets
 - Footprint of 100T
 - Buy 100T of credits
- Throws money at the problem (but is certified)
 - PAS2060
- Increasingly under scrutiny



What is Net Zero?



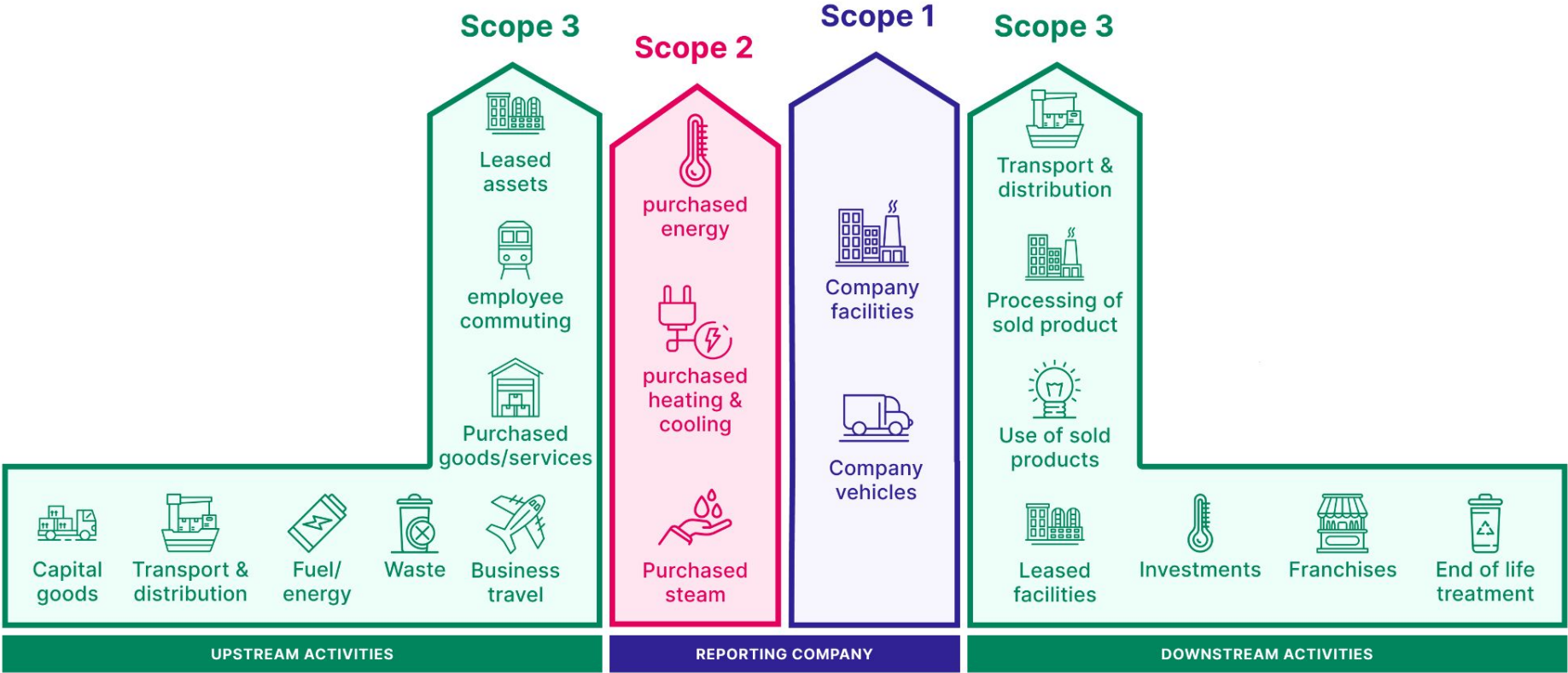
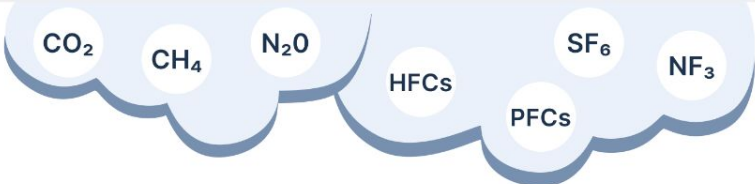
- **ACTION** is key
- Requires a 90% reduction against a baseline measurement year
 - 50% by 2030



SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

The GHG Protocol



The Net Zero Journey

Measure

Calculate your total emissions and identify sources

Reduce

Then take action

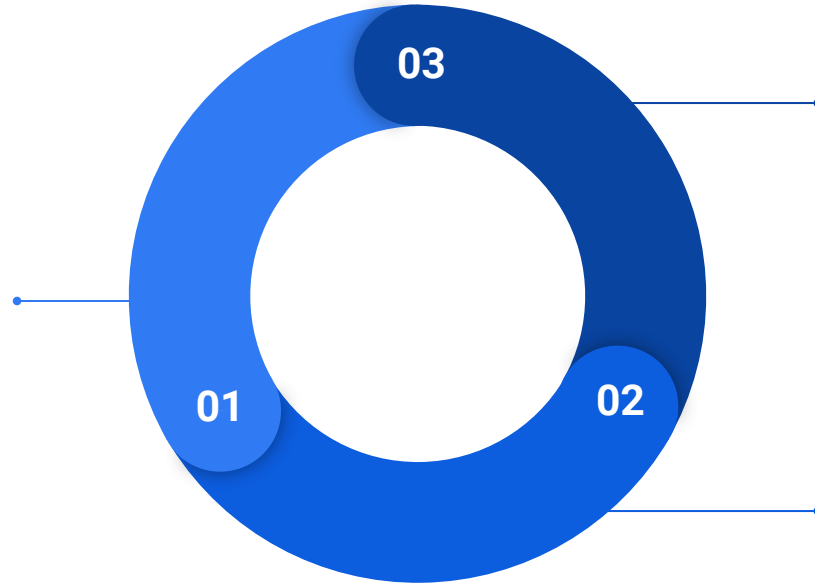
Offset

Offset what you can't control with verified carbon credits

The Reality – All at once!

Reduce

As you take action on reduction, you'll find areas that you want to measure to understand the impact.



Measure

As you measure basics you'll gain confidence and want to measure more, and you'll find areas to take action and reduce.

Offset

Offset immediately as you build understanding of your emissions. Go big and get a great story!

Legislation

Which bits are required?

SECR

- £36m or more OR 250 employees or more
- Full Scope 1 and 2
- Transport and Travel data
- Emissions intensity ratio
 - (Tonnes per Employee, £ of revenue)

Summary:

- Limited Scope 3 impact
- Focus on big companies
- Short term focus for many around energy efficiency

STREAMLINED ENERGY & CARBON REPORTING

What is needed? PPN 06 21

- 2045 Target
- Contracts of £5m+
- High level document
- Scope 1 and 2 Measured
- Scope 3 Measured if possible:
 - Transportation
 - Business Travel
 - Employee Commuting
 - Waste

Reduction plan – yearly, transparent, but no fixed terms yet.

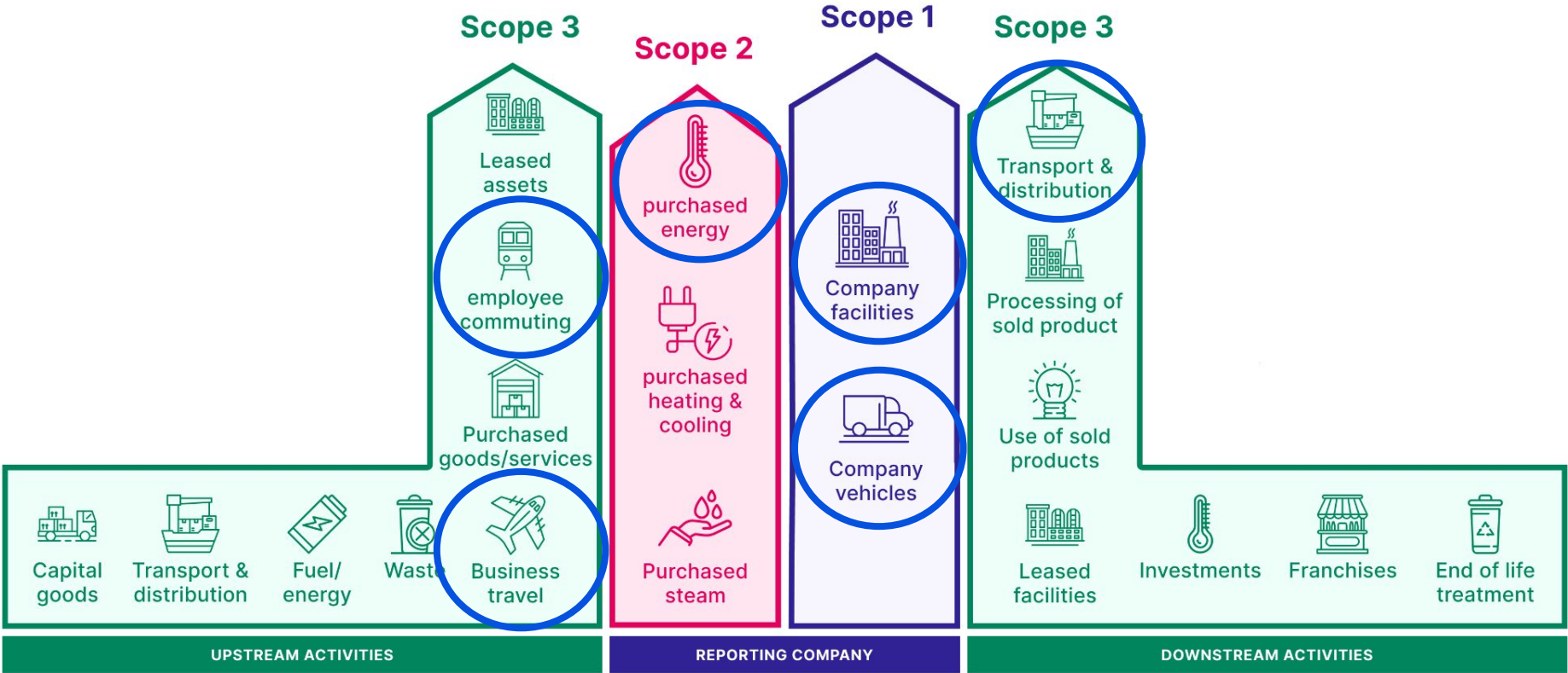


PPN 06 21

“Taking account of Carbon Reduction Plans in the procurement of major government contracts”

- Contracts over £5m need a **Carbon Reduction Plan**
 - Scopes 1+2
 - Scopes 3:
 - Upstream transportation and distribution
 - **Waste generated in operations**
 - **Business Travel**
 - **Employee Commuting**
 - Downstream Transportation
 - *10 other Scope 3 categories not required*
- < Relatively easy

The GHG Protocol



What is coming for SMEs?

Example 1: Scottish Enterprise

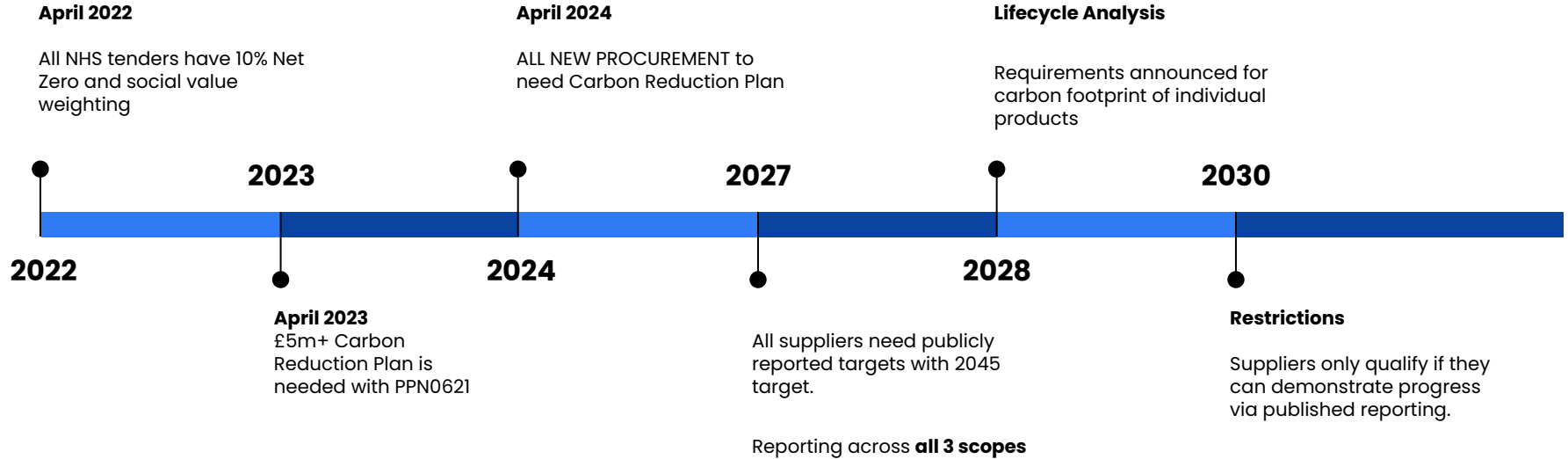


- Net Zero by 2045 latest date
- For any support worth £10k or more, businesses need a Net Zero plan
- No plan = no support

Net Zero Plan

- Scope 1 and 2 Minimum
- 50% reduction by 2030
- “Easily calculated Scope 3”
 - Business travel
 - Commuting

Example 2: NHS England



Measurement Options

When Should You measure?

Before you get started

Get an accurate picture of everything

Demonstrate clear reductions

Start from a higher point – Reductions look bigger for motivation

BUT may delay you – and lead to months of emissions easily avoided

After you start

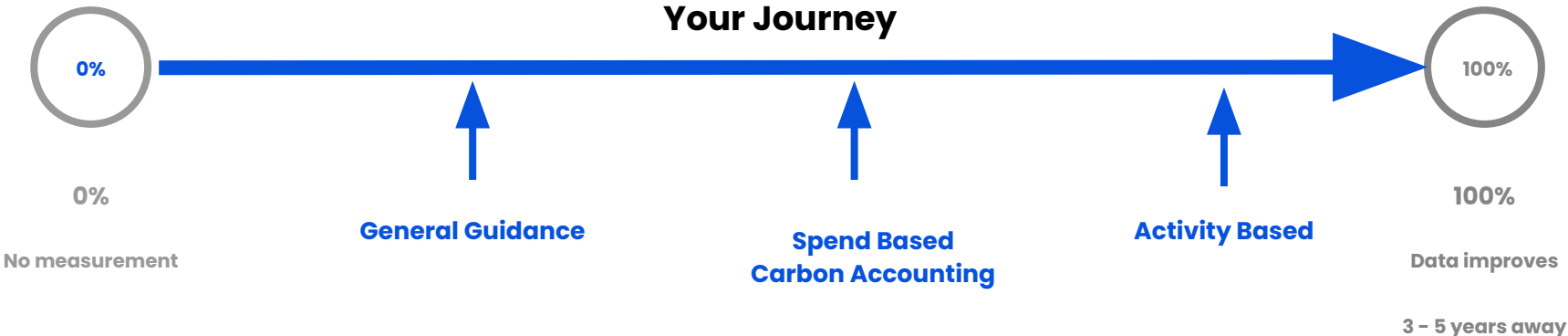
Don't get a breakdown of progress

More cost effective

More likely to keep momentum

Do make a bigger impact quicker, otherwise left with emissions ongoing

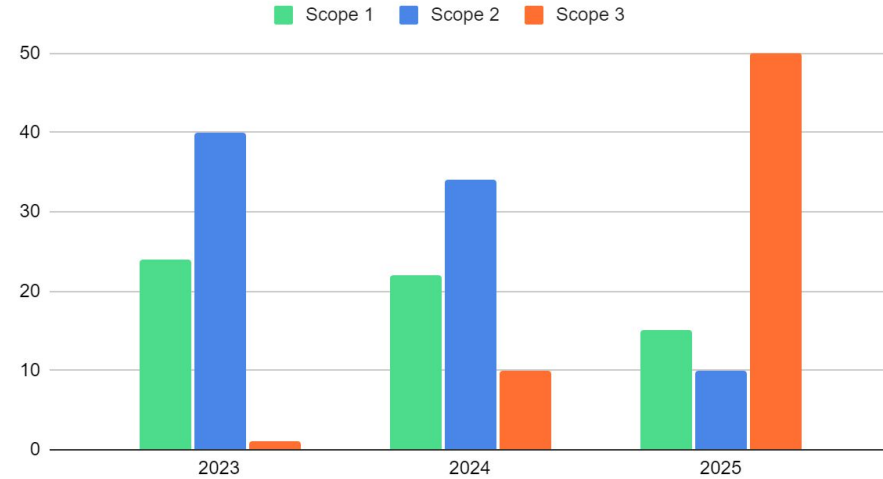
It's a Scale



Your footprint will go up!

- More data = more accurate
- More data = more footprint!
- You'll be filling in gaps as you go

Let's look at some examples of measurement.



Year 1

Year 2

Year 3

Scope 1

- Gas
- Vehicles (Owned)
- Refrigerants



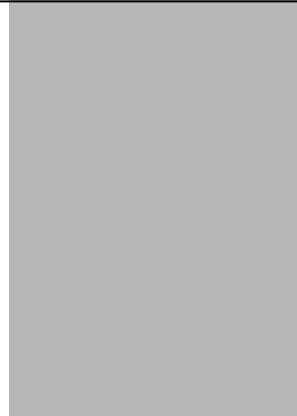
Scope 2

- Electricity



Scope 3

- Business Travel
- Waste Generated
- Employee Commuting
- Water Usage
- Purchased Goods and Services
- Leased Vehicles
- Contractors Vehicle Emissions
- Use of Sold Products



Year 1

Year 2

Year 3

Scope 1

Gas
Vehicles (Owned)
Refrigerants



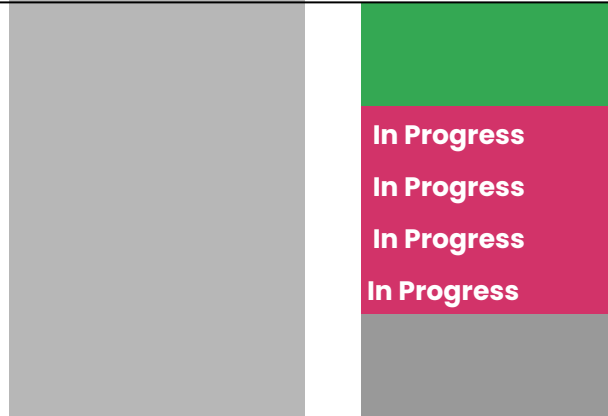
Scope 2

Electricity



Scope 3

Business Travel
Waste Generated
Employee Commuting
Water Usage
Purchased Goods and Services
Leased Vehicles
Contractors Vehicle Emissions
Use of Sold Products



Year 1

Year 2

Year 3

Scope 1

Gas
Vehicles (Owned)
Refrigerants



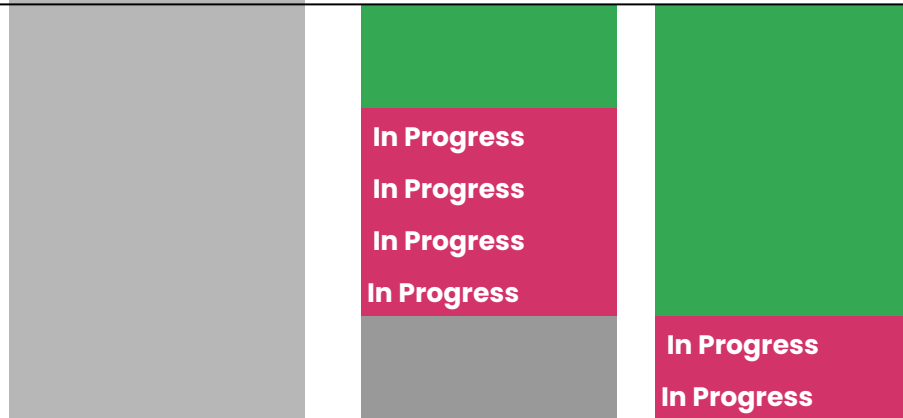
Scope 2

Electricity



Scope 3

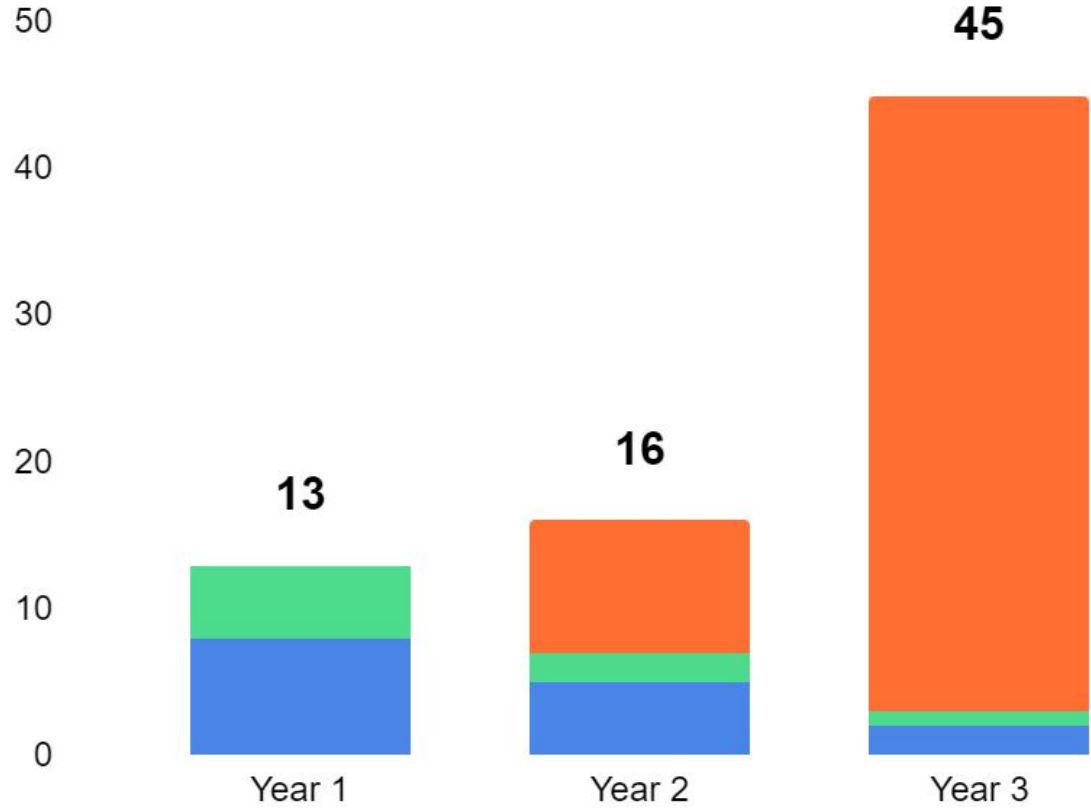
Business Travel
Waste Generated
Employee Commuting
Water Usage
Purchased Goods and Services
Leased Vehicles
Contractors Vehicle Emissions
Use of Sold Products



	Year 1	Year 2	Year 3
Scope 1			
Gas	8t	5t	2t
Vehicles (Owned)		5t	4t
Refrigerants		In Progress	
Scope 2			
Electricity	5t	2t	1t
Scope 3			
Business Travel		3t	1t
Waste Generated		6t	4t
Employee Commuting		In Progress	30t
Water Usage		In Progress	1t
Purchased Goods and Services		In Progress	5t
Leased Vehicles		In Progress	1t
Contractors Vehicle Emissions			In Progress
Use of Sold Products			In Progress
Total	13t	23t	49t

Scope 3 Scope 2 Scope 1

	Year 1	Year 2	Year 3
Scope 1	8	5	2
Scope 2	5	2	1
Scope 1+2	13	7	3
Scope 3	0	9	42
Total	13	16	45



Spend Based

Great for:

- Energy bills
- Rough modelling of spend
 - E.g. Meat vs Vegetarian catering

Not great if:

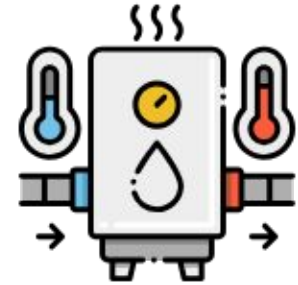
- You have a lot of travel or visitors
- You have ethical suppliers

Energy Bills: Spend

In 2022 you spent **£10,000** on gas heating for your premises.

The tool works on an assumption that gas has an average price of **4p per kWh**.

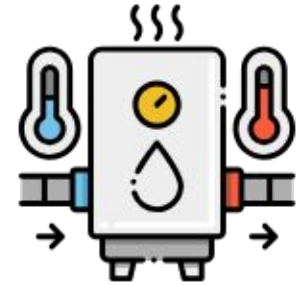
For £10,000, assumes **250,000kWh** of gas was used.



Energy Bills: Activity

In 2022, gas prices increased to **20p per kWh**.

Looking through energy bills, you actually used **50,000kWh**.



What's the footprint?

	kWh
Spend Based kWh Assumption	250,000
Activity Based kWh Real	50,000

The top right corner of the slide features a decorative arrangement of overlapping triangles. There are two dark blue triangles pointing downwards and two light blue triangles pointing upwards, creating a complex geometric pattern.

Activity Based Measurement

Scope 3: Transport Emissions

- Gets a bit more complicated
- Commuting a big chunk of your emissions unless fully remote
- Let's look at how calculating
- Often required by legislation as one of the easier areas to tackle



Scope 3 Transport: Commuting



Key info for commuting data:

- Miles travelled (8 miles per day average)
- How many days a week
- Vehicle / Method

You'll likely need an internal travel survey to do.

Important to include an aspirational one - how do people **want** to get to work?

Scope 3: Commuting

Step 1: Find Sam's commute distance from home

10 miles a day return (5 one way)

Step 2: Find how many days a week they are in

3 Days a week

Step 3: Find the vehicle they use

Nissan Leaf

Step 4: Find the conversion factor from UK Gov Figures

0.0785kg per mile – Nissan Leaf

Why does the Nissan Leaf Have Emissions?

- All vehicles have emissions factors
- Government figures look at **“Well to Tank”** figures, not tailpipe.
- Well to Tank are emissions from the creation of fuels and electricity to the fuel pump, or plug socket.
- Fossil fuels need extracting, refining and transporting
- Electricity often generated from Gas
- If you have solar power - your emissions could be 0.



“40% of all emissions from shipping are from transporting fossil fuels”

Calculating Emissions

10 Miles x 3 days a week = 30 miles a week.

Working 48 weeks a year = **1,440 miles a year.**

1440 x 0.0785kg per mile = 113kg

1 Employee

1 Electric Vehicle

113kg a year



Photo by [CHATTERSNAP](#) on [Unsplash](#)

Petrol: 276g

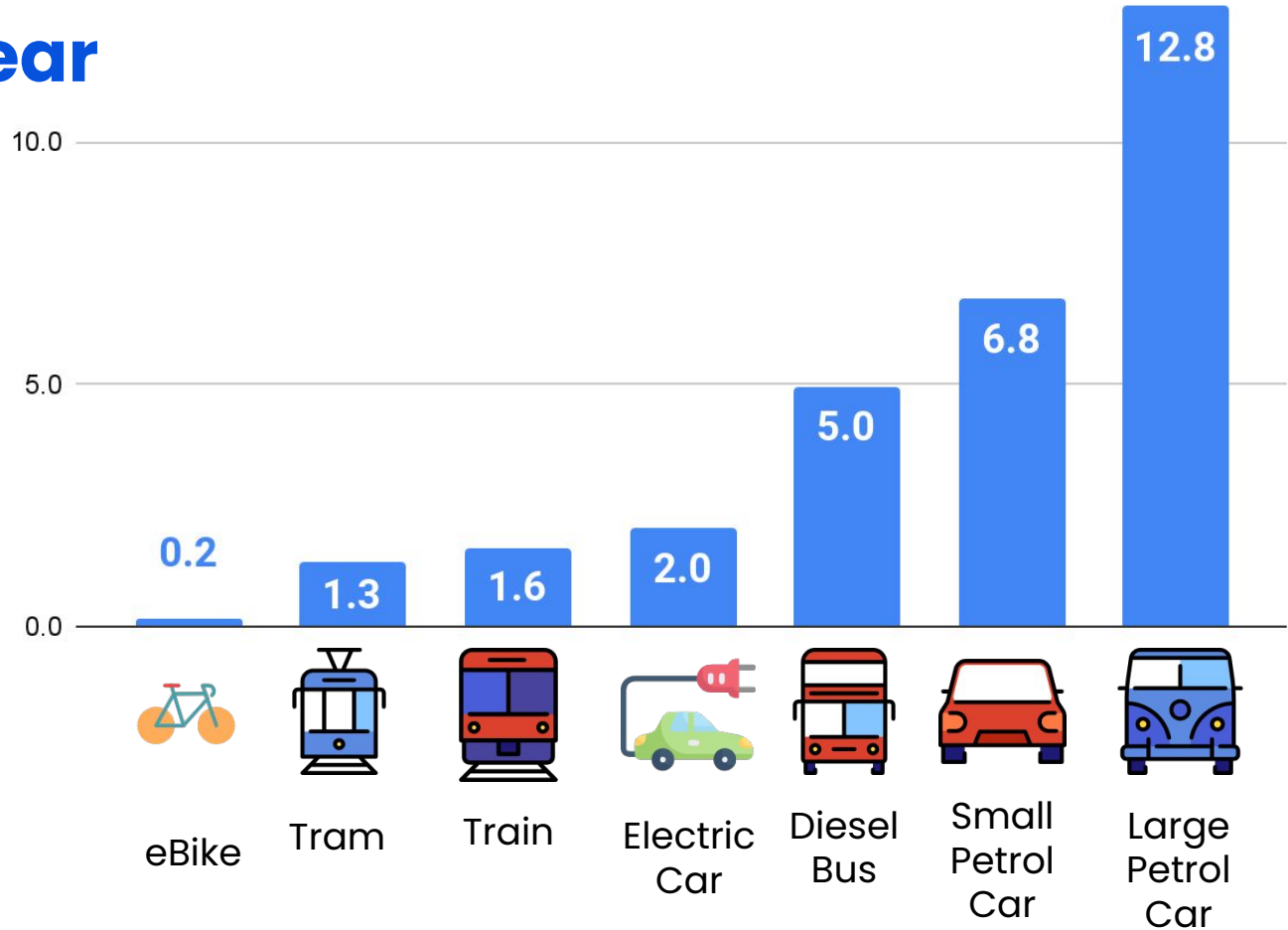
1440 miles x 0.276kg per mile = 314kg

1440 miles x 0.0785kg per mile = 113kg



Tonnes per Year

20 Employees
3 days a week
10 miles a day



Scope 3 Transport: Commuting



Key info for commuting data:

- Miles travelled (8 miles per day average)
- How many days a week
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You'll likely need an internal travel survey to do.

Important to include an aspirational one - how do people **want** to get to work?

Reality

A blend is best

Use data where it's easy to find

Use spend based estimates to fill in games

Be transparent about what you're **not** measuring and why

Quick Overview

- **Small99 Estimator**
 - Data-free entry - very rough but more action than measurement
- **Normative / Ecologi / Sage**
 - All good but require accurate financial data
 - Misses out on Transport
 - Don't allow much flexibility for gap filling
- **Clean Growth UK**
 - Free and is a blend of data and spend
- **Compare Your Footprint**
 - Full-on manual data



Growing climate confidence

This is not only about Net Zero

- Part of organisational mission
- Important to customers and people we support
- Important for staff and board
- We've committed to net zero targets
- It's important for our funders

Why are you interested in climate and net zero?

Are there any actions you've already taken?

- Buildings audit
- Developed an environmental policy
- Installed renewables
- Staff training
- Travel and transport audit
- Created a sustainable supply chain
- Reduced organisational waste
- Committed to net zero action plan

- Funding for implementing actions
- Information on practical steps to take
- Technical support from experts
- Peer to peer learning

What help do you need?

You need a plan that works for you



Engaging and learning



Reducing emissions



Campaigning and social justice.



Adapting

Funding & support

