



# **Impacts, Challenges & Opportunities of becoming Net Zero Carbon**

**Matt Dracup, Net Zero Development Director, ENGIE**

## OUR AMBITION

---

**OUR STRATEGY  
IN ACTION**

**BE WORLD LEADER  
IN THE ZERO-CARBON  
TRANSITION  
“AS A SERVICE”**

Faster growth, higher value, better impact



# Introduction

## The Energy & Carbon Solutions Team

- 30 Team Members
- Chartered Energy Managers
- Chartered Engineers
- Design Engineers
- Carbon Experts
- Technology Specialists
- Certified Measurement and Verification Professionals
- Project Managers
- UK wide locations



# Agenda

1. What does 'Net Zero Carbon' mean?
2. The Case for Net Zero
3. What are the challenges?
4. Benefits of being a Net Zero organisation

# 1

**What does 'Net Zero Carbon' Mean?**



# Define your ambition

- **Zero Carbon?**
- **Net Zero?**
- **Carbon Neutral?**
- **100% Renewable?**



## Define your ambition

**Zero carbon** means that no carbon emissions are being produced from a product/service e.g. zero-carbon electricity could be provided by a 100% renewable energy supplier.

**Carbon neutral** means that while some emissions are still being generated by a building/process these emissions are being offset somewhere else making the overall **net emissions zero**.

# Define your ambition

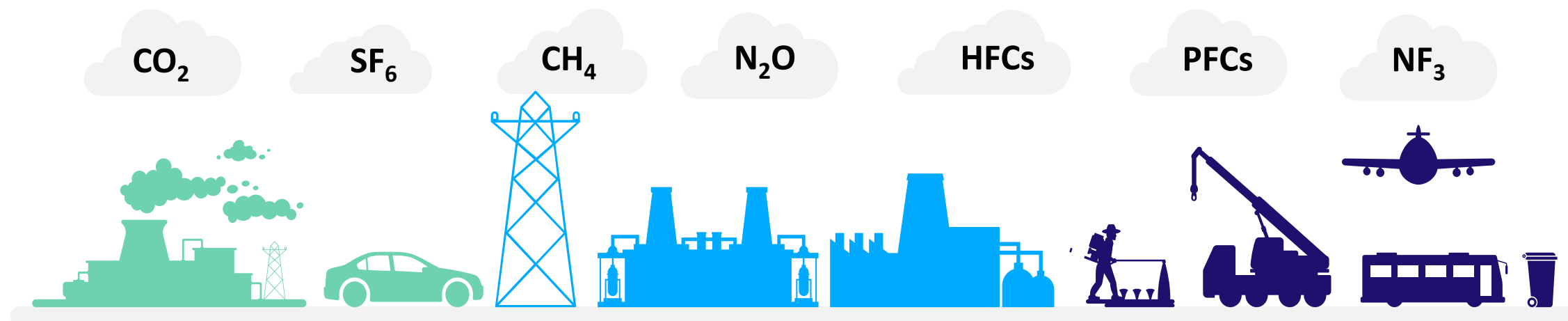
You need to define WHAT you are making Net Zero Carbon/Carbon Neutral

- Building?
- Borough?
- Process?
- Product?
- Business?
- Transport?
- Journey?





# Types of carbon emissions



## SCOPE 1

### Direct emissions

Fuel combustion  
Owned vehicle fleet  
Process/Fugitive emissions

## SCOPE 2

### Energy indirect emissions

Purchased electricity for own use  
Purchased heat, steam, cooling for own use

## SCOPE 3

### Other indirect emissions

Purchased goods and services  
Product use  
Waste disposal  
Transportation and distribution  
Employee business travel

# Certifications & standards

- ISO50001/ESOS
- Science Based Targets
- Carbon Trust – “Carbon Neutral Footprint ”
- Carbon Footprint Standard
- Certified Carbon Neutral
- International Living Future Institute (ILFI)
- Greenhouse Gas Protocol, Corporate Accounting and Reporting Standard
- ISO 14064- International Standard for GHG Emissions Inventories and Verification (CFV)
- Carbon Disclosure Project (CDP)
- ISO 14065 - Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition



Carbon  
Neutral  
PAS 2060



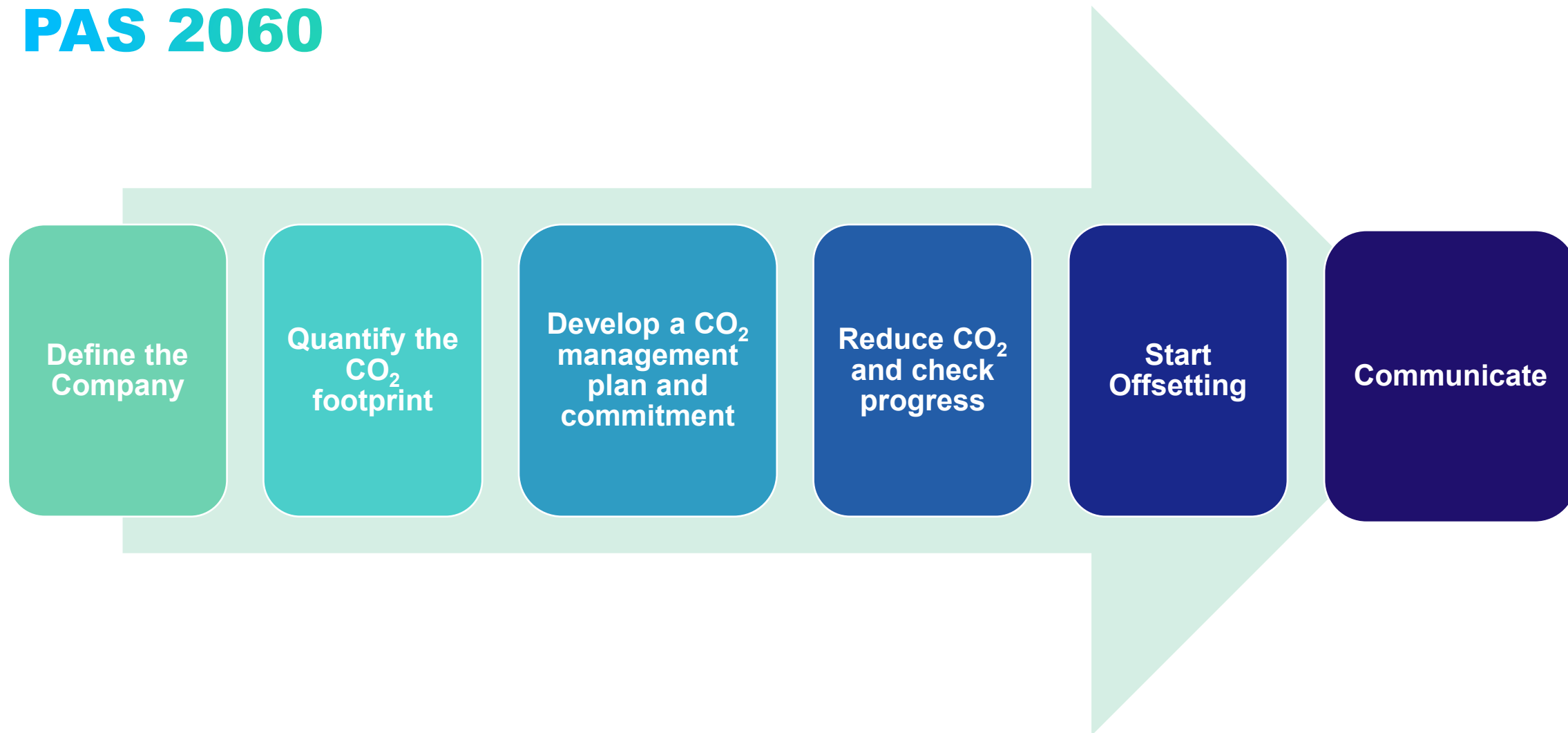
a service of  
NATURAL  
CAPITAL  
PARTNERS



- PAS 2050 – Assessment of life cycle greenhouse gas emissions

**PAS 2060 – Carbon Neutrality Standard**

# The basis for most certification: PAS 2060



# What does Net Zero Carbon mean? – Key points

Zero carbon, net zero and carbon neutral are often used interchangeably but they are different

Zero carbon means that no emissions are generated

Carbon neutral or net zero means that any emissions that are still being generated are being offset

You need to understand what you are making net zero and where your emissions are coming from

Accreditation standards are important – we recommend using PAS2060 (2050)

# 2

## **The Case for Net Zero – Why?**



# Why Net Zero?

Legislation

To win  
contracts

Regulation

To remain  
competitive

Greta  
Thunberg

Reduce Risks

For Profit

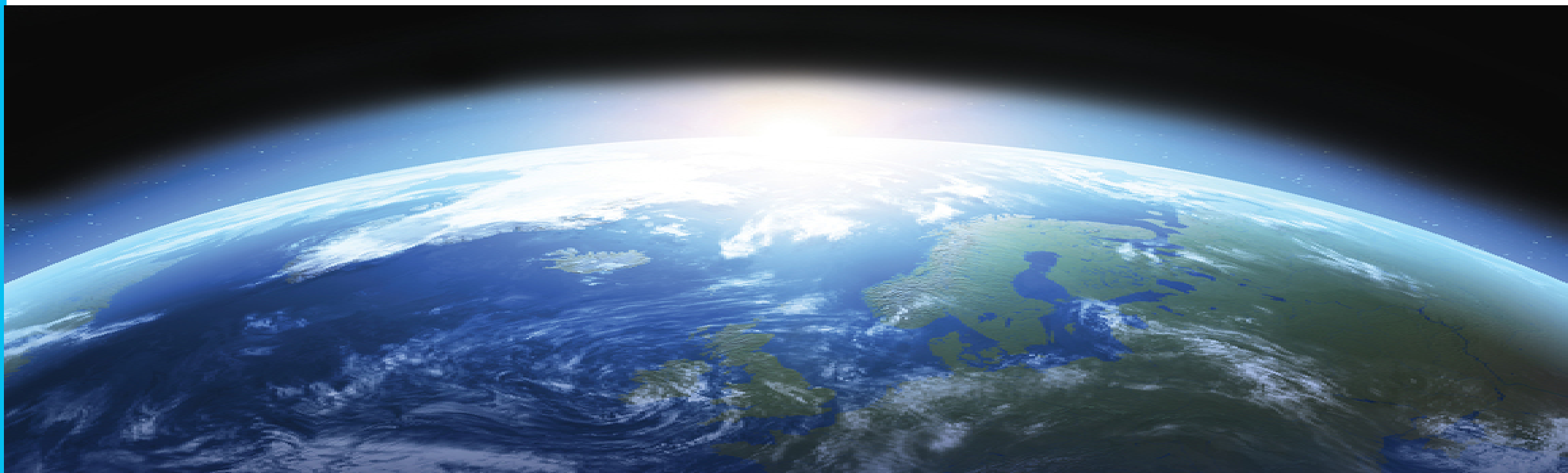
Supply chain

For the  
Planet



# Why Net Zero? - Human

It's not just about cutting emissions. It's also about bringing about a better way of life: cleaner air and water, warmer and healthier homes, cleaner transport, greener spaces, improved livelihoods, and better habitats for our wildlife.



# Why Net Zero? - Business

It's not just about cutting emissions. It's also about improving efficiency, competitiveness, resilience, business sustainability, business image, employee satisfaction, creating jobs and stimulating the economy.



4

**Challenges**

# Obstacles to implementation



**Cost**



**Cash**



**Skills**



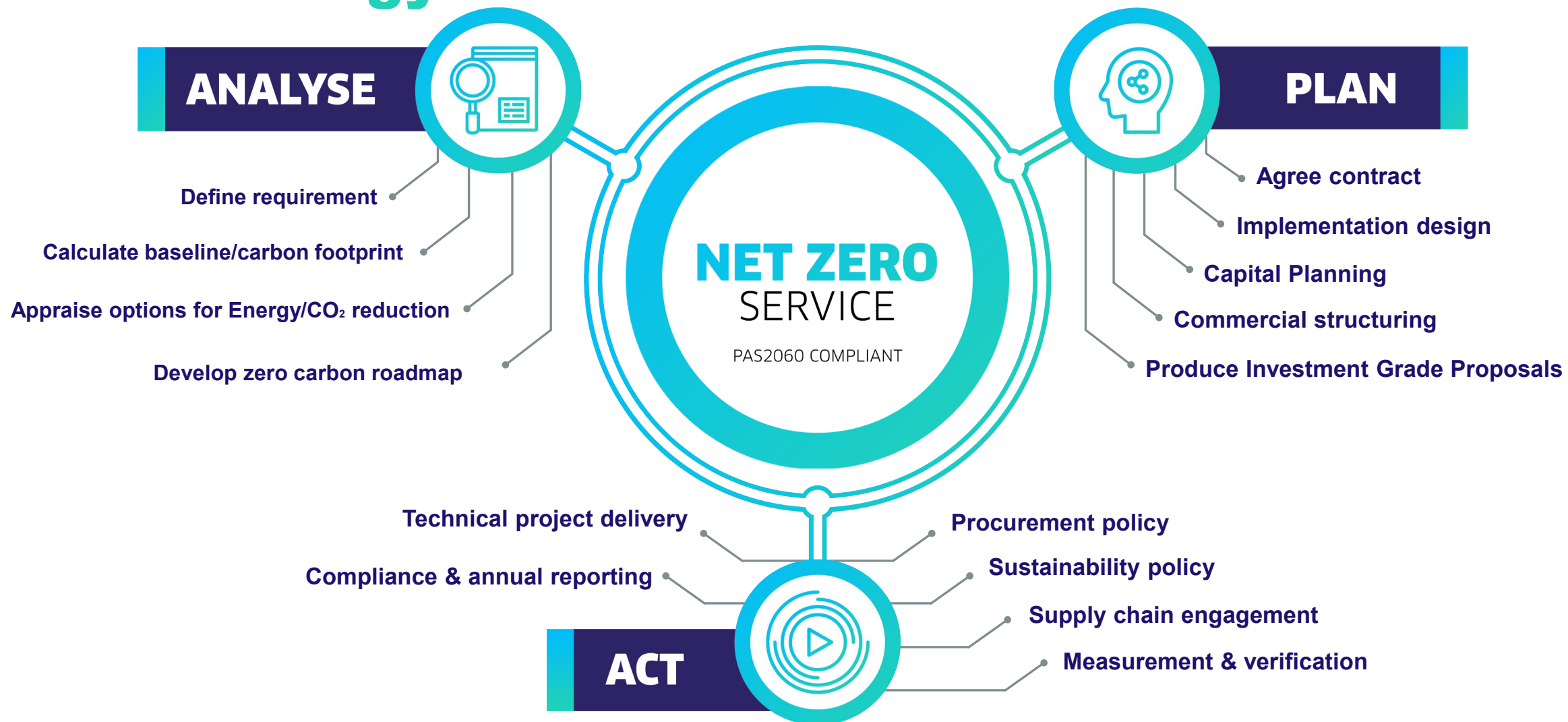
**Resource**

## **Some of the things you need to do:**

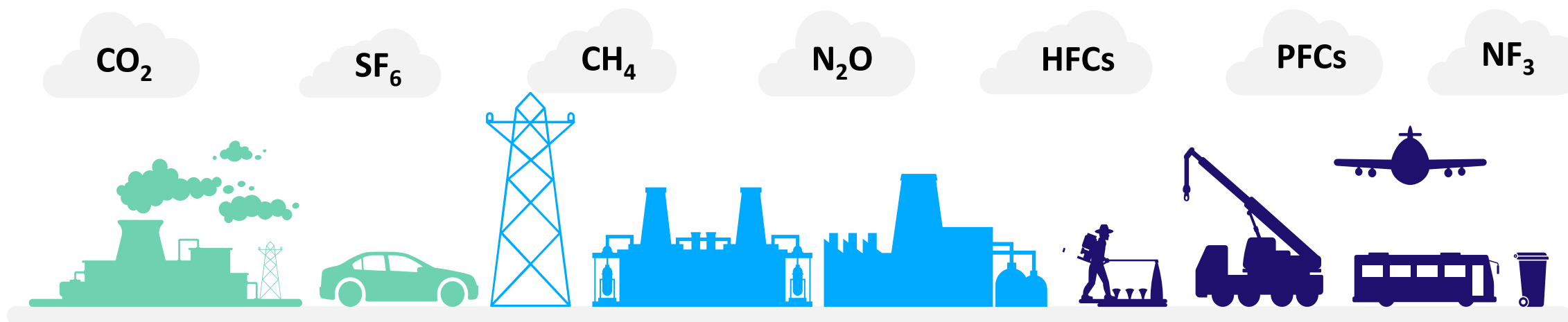
- Data collection, management, analysis & reporting
- Site surveys, engineering design, feasibility studies
- Full life cycle analysis
- Risk mitigation measures
- Project development agreements
- Investment / Energy Performance Contracts
- Energy supply / Power Purchase Agreements
- Business process redesign
- Environmental / sustainability policies
- Procurement policies
- Supply chain engagement
- Value chain engagement
- Employee engagement
- Change management



# Methodology



# Analyse – Quantify emissions



## SCOPE 1

### Direct emissions

- Fuel combustion
- Owned vehicle fleet
- Fugitive emissions

## SCOPE 2

### Energy indirect emissions

- Purchased electricity for own use
- Purchased heat, steam, cooling for own use

## SCOPE 3

### Other indirect emissions

- Purchased goods and services
- Product use
- Waste disposal
- Transportation and distribution
- Employee business travel

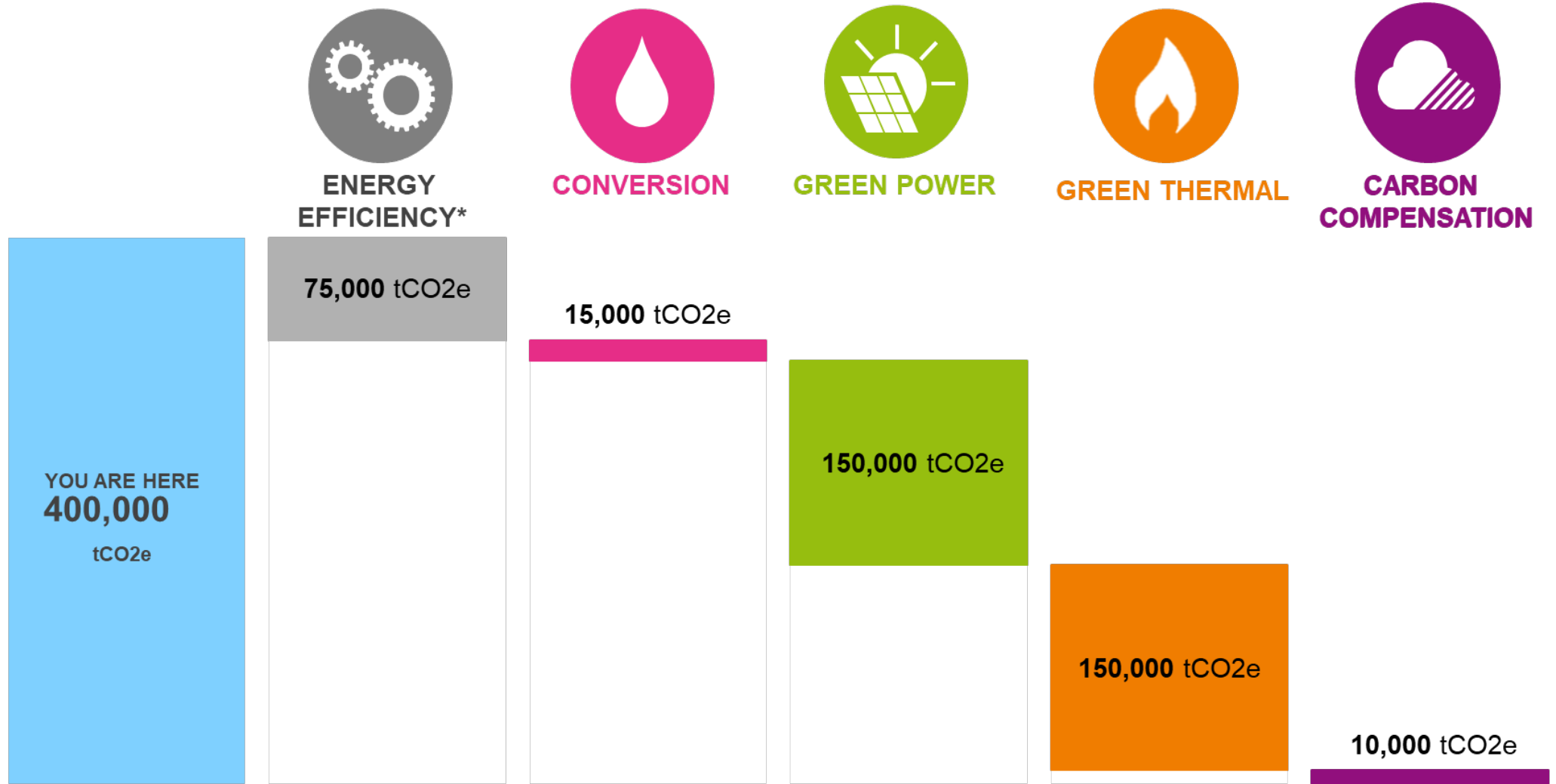
# Plan – Evaluate options

- ISO 50001 Gap Analysis
- Site visits for sample of your organisation
- Assessment of efficiency scope across your organisation
- Assessment of utilities/ heating conversion scope across your organisation
- Assessment of on-site renewables scope across your organisation
- Assessment of offsite renewables/PPA scope across your organisation
- Assessment of routes to offset across your organisation
- Estimation of investment required, potential grants /incentives, funding options
- Estimation of timescales



**Output - Formulation of Zero Carbon  
Roadmap**

# Plan – Carbon waterfall



5

**Net Zero Opportunities**



# Emissions – Measurement

## Benefits of measuring carbon emissions

**For many organisations, the act of identifying, measuring and monitoring greenhouse gas (GHG) emissions can bring significant benefits. By monitoring emissions, organisations can:**

- Assess where the high emissions are in their value chain
- Identify resilience risks in their value chain
- Identify range of supplier and consumer emissions performance
- Identify cost reduction opportunities in their value chain
- Engage suppliers and assist them to implement sustainability initiatives
- Improve the carbon footprint of their products and services
- Positively engage with employees to reduce emissions in business operations
- Improve the company image and create PR/marketing opportunities

# Benefits of Net Zero



**More  
control**



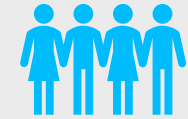
**Identifies  
strengths &  
weaknesses**



**Closer  
supply chain  
management**



**Strengthened  
relationships**



**Happy  
Employees**



**Improved supply  
chain efficiency  
& resilience**



**Potential cost  
reduction**



**Responsible  
business  
goals**



**Corporate Social  
Responsibility  
PR & Marketing**



**Climate Risk  
Mitigation**

## OUR AMBITION

---

**OUR STRATEGY  
IN ACTION**

**BE WORLD LEADER  
IN THE ZERO-CARBON  
TRANSITION  
“AS A SERVICE”**

Faster growth, higher value, better impact





[engie.co.uk](http://engie.co.uk)