



An Introduction To Click-On Logistics Ltd

Carbon Footprint Management in Your Supply Chain



Company Overview

- A niche management consultancy that helps client companies to arrive at business solutions that solve supply chain and logistics problems in a cost effective way
- Established in 2000, we have enjoyed high levels of growth and repeat business
- Achieved ISO 9001 accreditation in 2005, one of the only consultancies in the Logistics and Supply chain specialism to do so
- Background as professional business consultants and senior 3PL management, we look for practical business solutions
- Our client base is predominantly large corporations, rapid growth companies or those undergoing large scale change in both the private and public sectors
- Our foremost concern is to listen to client needs, then to develop a solution to these needs, we do not sell products



Our Experience

By definition, Supply Chain includes a wide range of business processes and business challenges in many sectors. Our delivery capability is organised to meet these challenges both “Top Down” and to address specifics.

Top Down - Strategy & Planning

- Change Management
- Project Implementation

Examples of Specifics

- Lean Operations
- Carbon Footprint Management
- Cost Reduction
- Risk Management
- Warehouse and Transport Ops Improvement
- Outsourcing
- Merger & Acquisition support
 - Due Diligence & Post Implementation
- Ergonomics
- Performance Management
- Systems selection & implementation

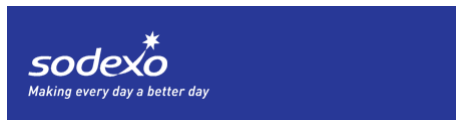



How We Work

- We listen and understand our client's business and its needs, then develop a tailored solution. We do not sell “off the shelf” products.
- Our methodology includes rigorous quality management throughout the project lifecycle and we have ISO 9001 accreditation.
- We actively provide constructive challenge; you should not expect us to track record for repeat business.
- We have the capability to see through any recommendation or strategy, we are always prepared to implement our solutions.



Some of Our Clients



A background image showing a hand holding a globe of the Earth, symbolizing global impact and sustainability.

Carbon Measurement in the Supply Chain – Awareness..... Why Calculate?



Background

- Public awareness of climate change is growing and pressure to act is becoming manifest
- Increased Consumer awareness and impact upon consumer choice for products and services
- Political response with both policies and rhetoric
- Companies will attempt to gain environmental kudos and use carbon emissions (good or bad) as part of the marketing mix
- A certain inevitability regarding Carbon tax?

*It's not going to go away from the business agenda:
it is becoming an enduring management priority*



Macro Situation

50% of FTSE 250 Companies have calculated their CFP
(Data Source Carbon Trust)

Less than 2% of overall UK businesses have calculated their CFP
(Data Source Carbon Trust)

Carbon Disclosure Project now in Year 5: Global Investor Community collaboration;
22 sectors; 144 suppliers

- 96% of Suppliers see GHG Regulation as a potential risk
- 58% report Scope 1 & 2 emissions (own energy, purchased electricity)
- 12% report Scope 3 emissions (generated by others elsewhere)
- 26% have established GHG reduction targets in place

Corporate Sustainability policies are increasingly assisting in defining brand image & *competitive advantage*

Lots of information out there, but little structure to work within, particularly relating to Supply Chain. Biggest barrier to progress is a lack of common standards.

*An evolving situation, with increasing momentum.
We are at an early stage of this journey...*



Impact of Consumerism

“I would change to another Brand or own label if I thought that....”

- | | | |
|---|--|-----|
| → | The alternative product had less packaging | 65% |
| → | The alternative product was in a recycled or recyclable packaging compared to my usual product | 63% |
| → | The company that made it used more locally sourced products or ingredients | 59% |
| → | The company that made it was more environmentally friendly than my usual brand | 46% |
| → | The alternative product had a lower carbon footprint | 42% |

SOURCE: NIELSEN HOMESCAN SURVEY JULY 2007

*Consumers are increasingly influencing
Sustainability in the Supply Chain*



Why Calculate your CFP?

- A central **plank** in any Corporate Sustainability Policy.
- 21st Century strategy assessment criteria.
- Know your current and future change impacts.
- PR input and external communication.
- Pro-active response to (potential) customer request.
- Progressively becoming part of brand definition.
- Tool to influence customer or supplier behaviour.
- Frequently self funding.
- Carbon Reduction or Offsetting planning.

- ***Last & but not least ... a positive environmental impact!***



Orientation / Maturity Scale

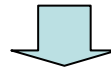
	<u>Awareness</u>	<u>Calculation</u>	<u>Development</u>	<u>Corporate</u>	<u>Supply Chain</u>
Description	<ul style="list-style-type: none"> • Issue awareness. • Desire to reduce impact. 	<ul style="list-style-type: none"> • Measurement of own direct CFP (Process & Service). 	<ul style="list-style-type: none"> • Positive actions and communicated desire to reduce Carbon 	<ul style="list-style-type: none"> • Integration with business decision making. 	<ul style="list-style-type: none"> • Collective impact assessment (suppliers & customers).
Behaviour	<ul style="list-style-type: none"> • General consideration. • No measurement • Desire to develop 	<ul style="list-style-type: none"> • Local Carbon KPIs & targets • Internal communication • Establishing data sources 	<ul style="list-style-type: none"> • Ongoing measurement • Establishing Carbon Reduction programme. 	<ul style="list-style-type: none"> • Setting of carbon goals. • Aligning operational, carbon and financial data. 	<ul style="list-style-type: none"> • Collaborative working • Full supply chain CFP calculation.
Actions	<ul style="list-style-type: none"> • Basic energy conservation. • Recycling 	<ul style="list-style-type: none"> • Raising internal awareness 	<ul style="list-style-type: none"> • Employee and customer feedback. 	<ul style="list-style-type: none"> • Brand protection or development • Reductions • Sourcing 	<ul style="list-style-type: none"> • Behavioural influencer.

Most Companies can find their starting place on such a matrix, it need not be painful



Carbon Management Summary: The Journey from Analysis to Solution

Marketing & Awareness



Measurement Assignment/Opportunity Assessment



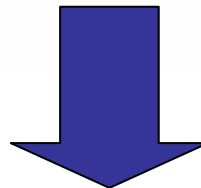
Measurement
all that is reqd
for now

Understood
measures, only
want to take
tactical actions

Understood
measures, want
to consider
strategic options

Desire to use
measures for
PR brand
enhancement
etc

Other
Company
specific
objective



Carbon
Off-setting

Sustainable
Energy
Options

ERP software
Integration
Carbon
Accounting

Supply Chain
Strategy
Re-design

Lean Supply
Chain Process
Development

“Strategic PR”



Carbon Management in the Supply Chain

Calculation Method & Considerations





Carbon Footprint Measurement Process

- 4 Steps:

Step 1:  Scope Definition & Boundaries

Step 2:  Build Supply Chain Process Map

Step 3:  Collect and Analyse Data

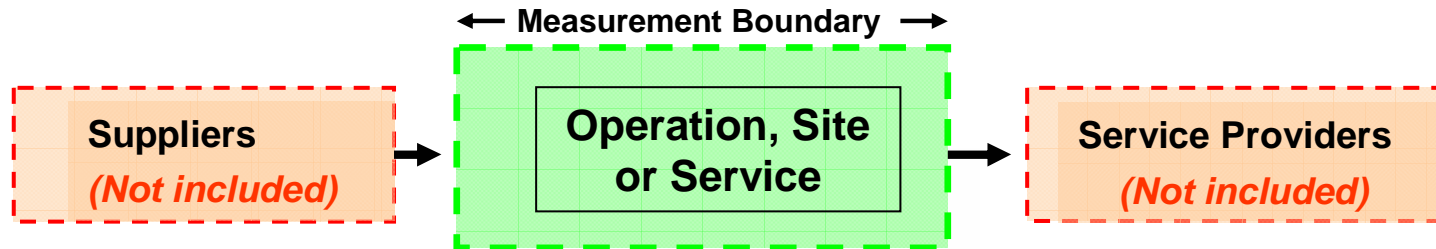
Step 4:  Calculate Carbon Emissions by Product & Process

The measurement process is the first stage of the Carbon Management Journey!

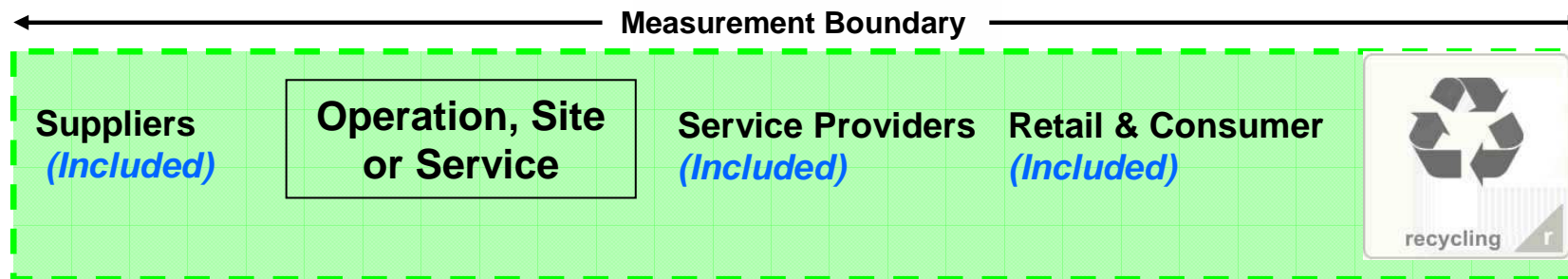


Step 1: Boundaries & Data

Direct Carbon Footprint Measurement:



Total Carbon Footprint – Full Product Cycle:



Measurement can be progressive – decide what you are trying to achieve.



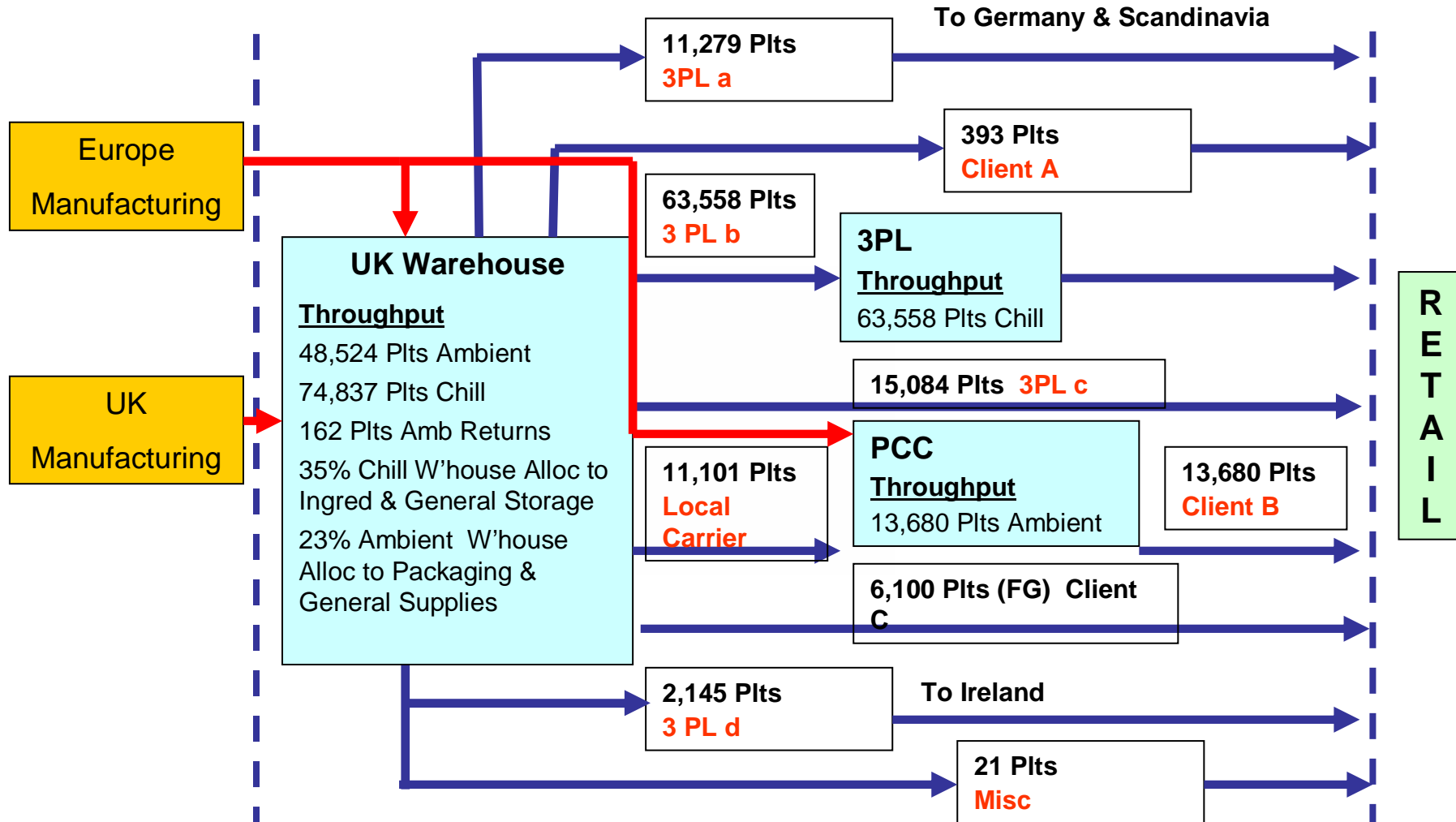
Step 1: Boundaries & Data

- Identify operational boundaries (*process start & finish*).
- Identify boundary conditions (what is to be included): Energy sources over which we have direct or indirect control?
 1. **Direct Business Carbon – include:**
 - Petroleum Fuels, Oils & Lubricant
 - Electricity & Gas
 - Refrigerants & Propellants
 2. **Indirect Business Carbon – includes carbon generated by suppliers, distributors etc which may not apply:**
 - Building Materials
 - Primary Supply
 - Disposal
- Identify data requirements + sources.

It's all about definition and the starting process!



Scope Definition Map - Example





Step 2 – Supply Chain Process Map

Define the Supply Chain process map and identify inputs, outputs and processes.

- The process typically covers the following steps:



Sub Process

Raw Materials	Processes:	Storage	Storage
Inbound Supply	Production	Co-Pack	Retail
	R&D	Picking etc	Consumption
	Sales	Transport	Disposal
	Packaging	Returns	

According to the level of detail required we can produce sub-levels of process detail in iGrafx



Step 3 - Primary & Secondary Data

Collection of data to develop overall business and process CFPs:

- **Data (Directly Measured Scope 1,2)**
 - Preferable as energy emissions can be measured accurately.
 - Examples
 - Electricity (KwHrs)
 - Gas (m³)
 - Diesel and other oils (Litres)
 - Refrigerants & Propellants (m³/Litres)
- **Indirect Data (Scope 3)**
 - Examples
 - Carbon associated with RM & packaging manufacture (Supplier/OEM)
 - Service providers (transport and warehousing)
 - Use of generic coefficients

Indirect data may or may not be used, according to the application



Step 4 – Emission Calculations

- Energy data is manipulated into Kwhours.
- Use of emission coefficients to convert energy/direct gas to Kg of CO₂.
- Fuel emission factors are UK Emission Trading Scheme (ETS) international standards.
- CO₂ emissions scaled to account for any minor processes excluded from analysis.
- Allocation of process to individual product groups.
- On completion of each step CO₂ emissions added together to obtain overall Carbon Foot Print.

The calculation process is not an exact science, and it doesn't need to be – the aim is to reduce emissions against a start point that can be audited



CFP Results

- Business CFP referenced to international carbon coefficients which provide an audit trail
- Discrete CFP calculation & reporting by:
 - Customer Group?
 - Service or Repair?
 - Priority of Service visit?
 - Planned vs Unplanned
 - Geography?
 - Service Category?
- Carbon maps showing by key process and/or product group carbon emission levels
- “Hot Spot” maps can direct us towards areas of biggest benefit

*Ongoing Development Potential / Continuous
Improvement*

A background image showing a hand holding a globe of the Earth. The globe is centered in the frame, and the hand is visible at the bottom, holding the globe from underneath. The text is overlaid on the globe.

Reduction? Sustainable Energy? or Offsetting?

Reduction or Alternatives?

1. Seek to **reduce** or source *alternatives* before offsetting.
2. Reduction = *cost down* (reducing energy consumption). Offsetting, = *cost up* (we pay for what we produce).
3. Reduction initiatives:
 1. Review working processes / consider efficiency schemes / lean logistics
 2. Collaborative or collective working.
 3. Influence customer or supplier behaviours.
 4. Procure or generate energy from renewable sources
4. Sustainable Energy Sources are becoming increasingly popular



Low CO₂ supply chains or processes will be cheaper to operate and more competitive

Offsetting

What is it?

- Compensates for emissions with an equivalent CO₂ saving. It **does not** reduce emissions.

How can you offset ...?

- A number of companies sell offsets. Best Practice code is being established (end of 08), accreditation will result in a Government quality mark.

How much does it cost ...?

- Depends on company, scheme and credibility ranges £8 - £14 tonne
- Unregulated area of much debate & cynicism



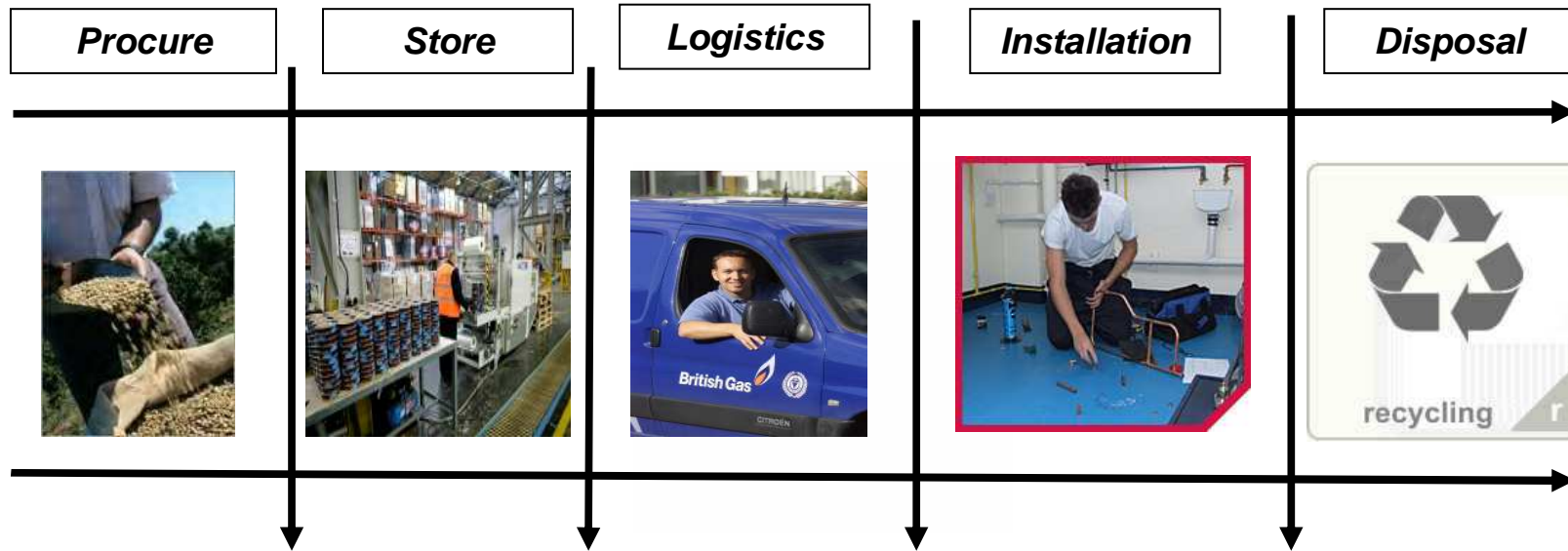
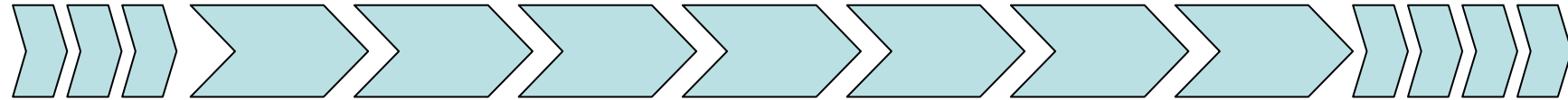
Best seen as a measure of last resort!

A background image showing a hand holding a globe of the Earth, symbolizing global service and management.

Service Management Application & Benefits



Carbon Allocations

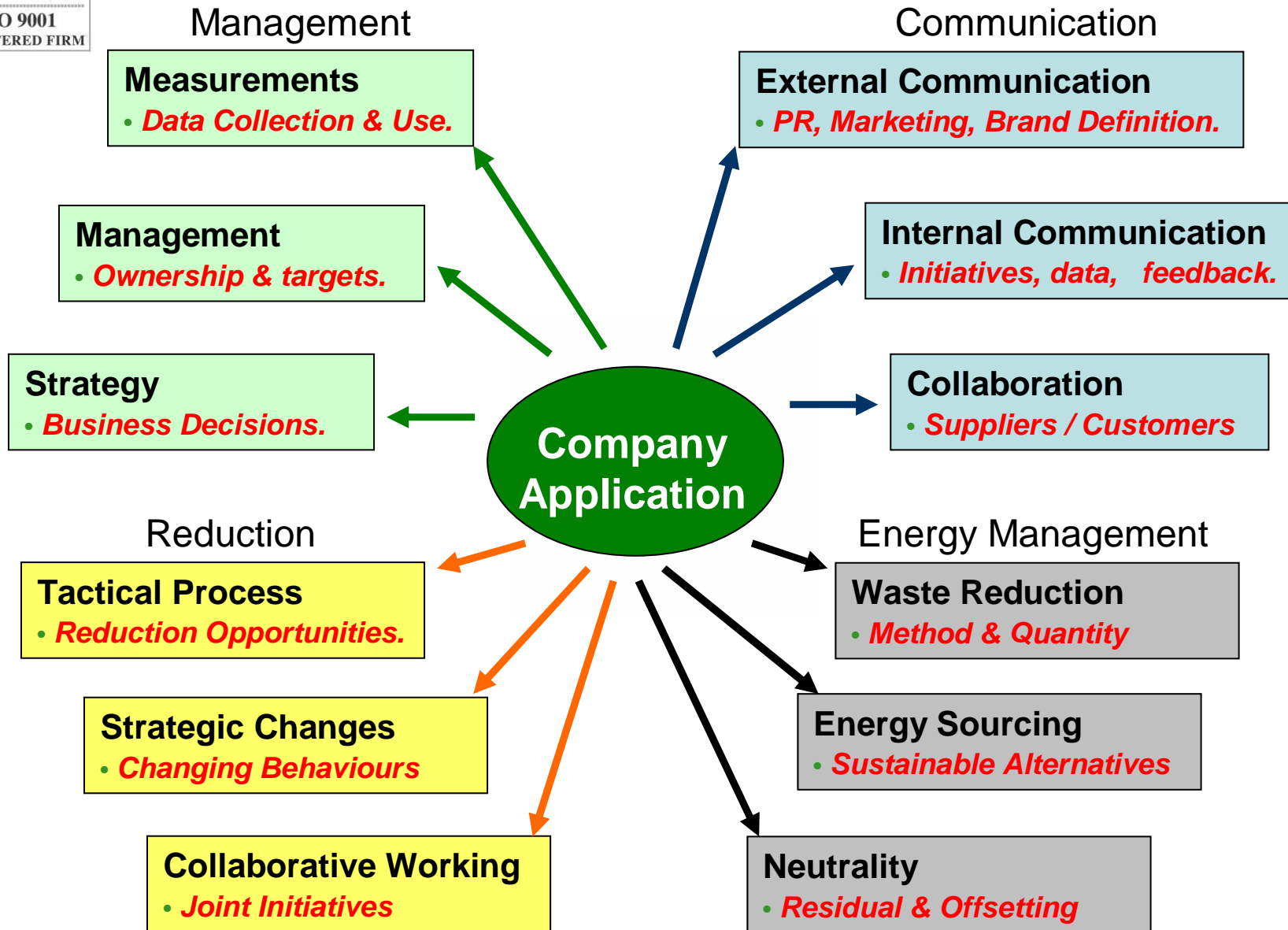


Carbon Measures can be allocated by Supply Chain Element; Service Category; Product Group; Customer Channel; Geography etc to support decision making and to develop action plans

Total of all allocations = Total Carbon Foot Print



Typical Elements of a Carbon Strategy





Benefits

- Brand Leverage
- Opportunity for competitive advantage
- Ahead of the legal requirement to report Carbon emissions
- Potential cost reduction
- Potential to influence customer behaviours
- Attract the customers you want
- Attract the Investors you want
- Genuine environmental well being
- Integrated component of CSR plan
- And many others, business specific



Click-On Logistics Ltd

Case Studies



UDG Case Study

- Multi-User distributors to the Pharma sector, 100+ vehicles, >600k sq ft high security warehousing
- Calculation of *Direct* Carbon Foot Print.
- Scope – Receipt of product, internal processes to customer delivery.
- Calculation of total and individually allocated Client CFPs.
- Identification of Carbon Reduction Initiatives and development of reduction Plan.
- Progressive introduction measurement and of Carbon KPIs.
- Considering next steps





Alpro Soya

- Global Soya milk and associated food product manufacturer
- Marketed as a “green” organisation
- Stated Intention to be Carbon Neutral, working on a strategy to achieve this
- Calculation of Direct CFP
- Development of Carbon Plan
 - Operations & Process
 - Suppliers / Customers
 - Internal Communication
 - Marketing & PR
- Review of optimised carbon strategy
- Sustainable energy sourcing
- Offsetting assessment
- Now considering wider areas, and boundary extension





The Product Based Example



Investment in our eco-distribution centre and energy efficient brewhouse, through to our lightweight bottle and Environmental Action Group Adnams is at the forefront of the environmental agenda

What makes it carbon neutral?

High yielding barley, grown and malted in East Anglia

English Boadicea Hops are naturally aphid-resistant, reducing need for pesticides

Adnams energy efficient brewhouse

Adnams lightweight beer bottle

Tiny amount of remaining CO₂ will be offset.

	HIGH EMISSIONS SCENARIO PRE 2006 gCO ₂ eq per bottle	HIGH EMISSIONS SCENARIO POST 2006 gCO ₂ eq per bottle
Barley production	43g	43g
Malting process	19g	19g
Brewing process	81g	66g
Transport	39g	31g
Bottling process	66g	54g
Bottle Manufacture	334g	219g
TOTAL	583g	432g
tC _e	159gC _e	118gC _e



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