

Carbon Literacy for Automotive

Trainer Manual

Generic Pathway
CC000257
V1

2021

The Carbon Literacy Project

 **AutoTrader**

**Carbon Literacy
Project**





8 minute Recap Documentary Pathway

Please use this Running Order if learners have already watched the hour-long documentary at home.

Ensure you add the 'Break' slides to the correct positions in the Slide Deck.

A 'Break' slide can be found at the end of the Slide Deck and can be copied into the relevant positions.

Module	Topic	Time	Activity Duration
Module 1	Legal Terms and Conditions	09:30	0:02
	Acknowledgements	09:32	0:05
	Housekeeping	09:37	0:02
	What is CL?	09:39	0:04
	All or Nothing Activity	09:43	0:10
	Learning Objectives	09:53	0:02
	8-min David Attenborough Documentary	09:55	0:08
	Post Film Discussion	10:03	0:10
	Weather vs. Climate	10:13	0:05
	The Greenhouse Effect	10:18	0:09
	The Greenhouse Gases	10:27	0:06
	Sources of Greenhouse Gases	10:33	0:02
	Greenhouse Gas Emissions	10:35	0:05
	The Scientific Consensus	10:40	0:05
	Impacts of Climate Change	10:45	0:03
	Local Impacts	10:48	0:03
	What are your experiences?	10:51	0:08
	UK Impacts	10:59	0:03
	Equity and Vulnerability	11:02	0:03
	The Carbon Map	11:05	0:05
	Break	11:10	0:15
	The Carbon Map Feedback	11:25	0:10
	Climate Migration	11:35	0:03
Climate Vulnerability	11:38	0:04	
Air Pollution	11:42	0:02	
Feelings	11:44	0:05	



Module 2	International Policy	11:49	0:06
	UK Policy	11:55	0:04
	Sustainability Disclosure Requirements	11:59	0:04
	Current UK Progress	12:03	0:03
	Transport Sector Emissions	12:06	0:02
	Why Do We Need to Act?	12:08	0:02
	Impacts in the AM Industry	12:10	0:09
	Transport Decarbonisation Plan	12:19	0:03
	TDP Assumptions	12:22	0:01
	Progress of Transport	12:23	0:02
	Break	12:25	0:45
	Co-Benefits Activity	13:10	0:25
	Module 3	What is a Carbon Footprint?	13:35
Your Carbon Footprint		13:36	0:10
The Carbon Footprint of Food		13:46	0:04
GHG Emissions Across the Supply Chain		13:50	0:02
The Carbon Footprint of Travel		13:52	0:03
Energy at Home		13:55	0:04
Resource Consumption		13:59	0:03
Personal Choices		14:02	0:02
Break		14:04	0:15
Automotive Carbon Footprint		14:19	0:20
Business Emissions		14:39	0:08
Creating Business Value		14:47	0:01
Business Strategies		14:48	0:20
Module 4	Current Engagement	15:08	0:15
	Building Your Case	15:23	0:15
	Spheres of Influence	15:38	0:10
	Break	15:48	0:15
	Why are your actions important?	16:03	0:02
	Your Pledges	16:05	0:06
	Individual Actions	16:11	0:12
	Group Actions	16:23	0:10
	Action Feedback	16:33	0:10
	Wrap Up	16:43	0:08
Finish	16:51	0:00	
Total Training Time (M1,2,3&4)			07:21



The Greenhouse Effect

Material: Slides, Activity PDF

Timing: 22 minutes

Purpose of Activity: To check learners' understanding of the science from the documentary. To provide an interactive workspace to recap knowledge.

Preparation: Update the UK GHG emissions infographic if required.

The Greenhouse Effect (2 min)

Feel free to skip this slide if you think the learners have understood this from the film.

A link for the graphic can be found [here](#).

Give a very quick explanation of the greenhouse effect to learners:

1. Energy from the sun reaches Earth.
2. Some energy absorbed by the Earth's surface.
3. Some energy is reflected into atmosphere.
4. Some energy goes through the atmosphere and back into space.
5. Greenhouse gases trap some of the heat energy in the atmosphere – the greenhouse effect.
6. The more greenhouse gases there are, the more heat is trapped - Earth warms
7. A simple explanation is to think of this process as adding extra blankets to the Earth.

What is the Greenhouse Effect? (7 min)

Activity (5 minutes plus 2 mins discussion)

If you are short on time this activity can be missed out.

Split the learners into breakout rooms/groups of 3-4.

Ask one learner from each group to share the Activity PDF (page 4).

Learners should number each statement from 1-7, based on the order which they occur.

Allow the learners 5 minutes maximum to get the order correct.

Feedback the right answers to the group after this time.

This could be made into a competition. You could make it into a race to finish first (and get all the answers correct)!

The correct order is:

1. Sunlight (solar radiation) enters the Earth's atmosphere.
2. Most of the sunlight reaches the Earth's surface and warms it.
3. Some solar radiation is reflected by the Earth and the atmosphere.
4. The warm surface of the Earth emits infrared radiation.



Equity and Vulnerability

Material: Slides, Activity PDF, Video

Timing: 32 minutes

Purpose of Activity: To highlight who is most vulnerable to climate change impacts. To allow the learners to think holistically about the issue.

Preparation: Check graphs and statistics are updated.

Equity and Vulnerability (3 min)

This is a slide that trainers are advised to review to ensure that the scientific and policy content is up to date before course delivery.

The wealthiest 10% of global citizens earn over £27,600 annually and the wealthiest 1% earn over £79,300.

UK emissions are currently approximately 7.9 tons per capita.

To restrict the global temperature rise to 1.5°C above pre-industrial levels, global average per capita emissions must fall to 2.1 tons CO_{2e} by 2030 and 0.7 tons CO_{2e} by 2050.

This study is available at [Climate Outreach](#) and is based on data from [this report](#).

The Carbon Map (5 min)

Activity 5 min

Guide the learners to the following web page:

<https://www.carbonmap.org/>

Ask learners to specifically explore the ‘**People at risk**’ map option with ‘**GDP per person**’ shading to highlight how the wealthiest are least at risk from the impacts of climate change.

Give the learners 5 minutes to explore the map.

It is advised that this activity is conducted before a break so that learners can explore the map during the break if they want.

There is a page in the Activity PDF (page 6) which learners should open to guide them.

They can make notes on the PDF for use in the discussion following the activity.



Personal Carbon Footprint

Material: Slides, Activity PDF

Timing: 28 minutes

Purpose of Activity: To introduce the concept of a carbon footprint. To allow learners to understand their personal footprint and the steps they can take to reduce this in various areas of their life.

Preparation: Ensure learners have access to a device, or that they have completed the WWF carbon footprint calculator **prior to the start of the session**. To save time you can ask learners to complete the footprint calculator in a break.

What is a Carbon Footprint? (1 min)

“A measure of the amount of greenhouse gases released to the atmosphere as a result of our activities.”

We can calculate the carbon footprint of anything - individuals, organisations, events, products, projects, cities, or countries...

Your Carbon Footprint (10 min)

Activity (5 minutes plus 5 minutes discussion)

Use this link for learners to access the WWF carbon footprint calculator:

<https://footprint.wwf.org.uk/>

Ask participants to complete the WWF calculator and make a note of their carbon footprint. **If you are short on time this can be completed in a break. Just ensure the learners make a note of their footprint.**

Open discussion regarding everyone's footprint.

Discussion points:

- Which area of your life is the most carbon intensive? Why?
- Which area of your life is the least carbon intensive? Why?

The Carbon Footprint of Food (4 min)

Activity (2 min plus 2 min discussion)

Ask learners to open their Activity PDF (page 25) and work through the footprint of food activity.



Creating Actions

Material: Slides, Activity PDF

Timing: 40 minutes

Purpose of Activity: To allow learners to think about how they can play their part in making a difference. To give the learners an opportunity to fill in their action pledge forms.

Preparation: Ensure you have the forms ready to send to the learners. Check what date you need to tell the learners to have the forms returned before. Decide which learners will be in each group for the 'Group Action' section. These are likely to be the same as those for the 'Playing your Part' activity as they should consist of individuals with similar roles and spheres of influence.

Why are your actions important? (2 min)

To succeed in lowering our emissions and preventing the catastrophic impacts of climate change, we need global cooperation. Therefore, we must all play our part in the bigger picture. We are lucky enough to have the power to make changes. Therefore, it is essential that we put this to good use.

By changing our actions and attitudes, we can influence those around us to follow suit. This ripple effect is essential in getting more people involved in more climate conscious actions.

To attain your Carbon Literate Certification, you must pledge two actions which you will implement as a result of your training. These actions will be assessed by the Carbon Literacy Project before you are awarded your certificate.

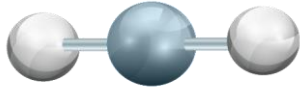
Your Action Plan (6 mins)

Learners will now choose at least one individual and one group action that they can pledge to commit to.

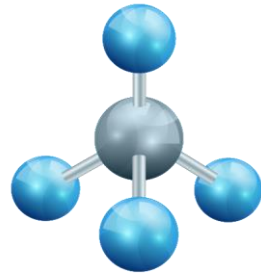
These could be actions which have come up in the session, or they could be different.

- These actions must be **NEW**, not pre-existing actions which you are already carrying out or have been intending to carry out.
- Actions must be significant (i.e., must relate to a worthwhile reduction in emissions) and explained in detail (give detail on how you intend to conduct the action and why this will reduce emissions).
- Actions should be realistic (you aren't expected to single handedly change the world).
- Both actions should relate to your workplace unless an action at home will save more carbon.

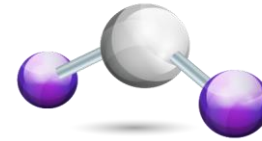
Sources of Greenhouse Gases



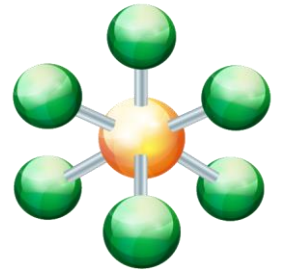
Carbon Dioxide



Methane



Nitrous Oxide



F Gases

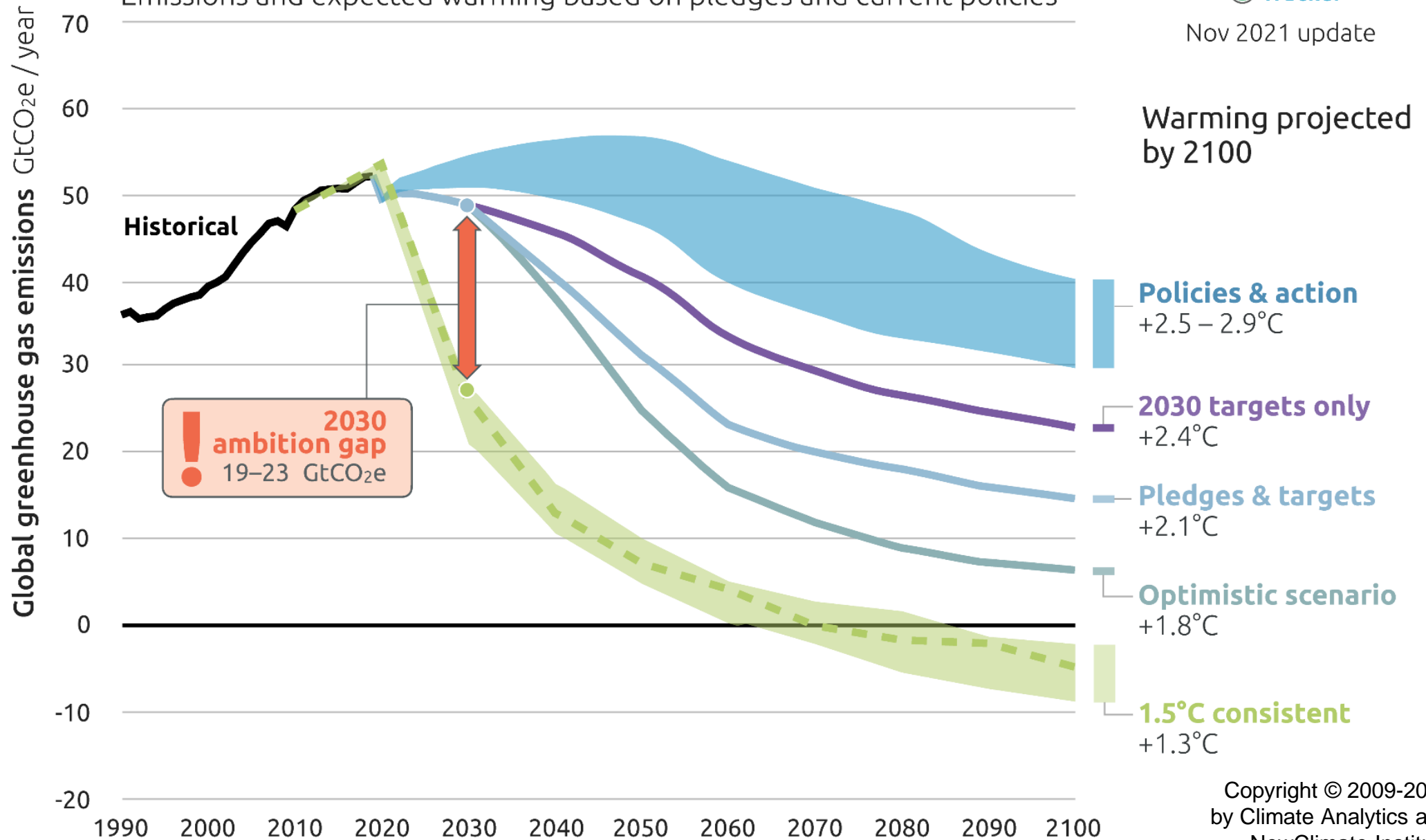


2100 WARMING PROJECTIONS

Emissions and expected warming based on pledges and current policies



Nov 2021 update



Carbon Literacy Project



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The Carbon Map

Which countries emit least emissions but are at highest risk?

How are historical emissions and GDP related?

Where are people least at risk? What is their average GDP?

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Manchester
Metropolitan
University



STUFF

FOOD

YOUR
CARBON
FOOTPRINT

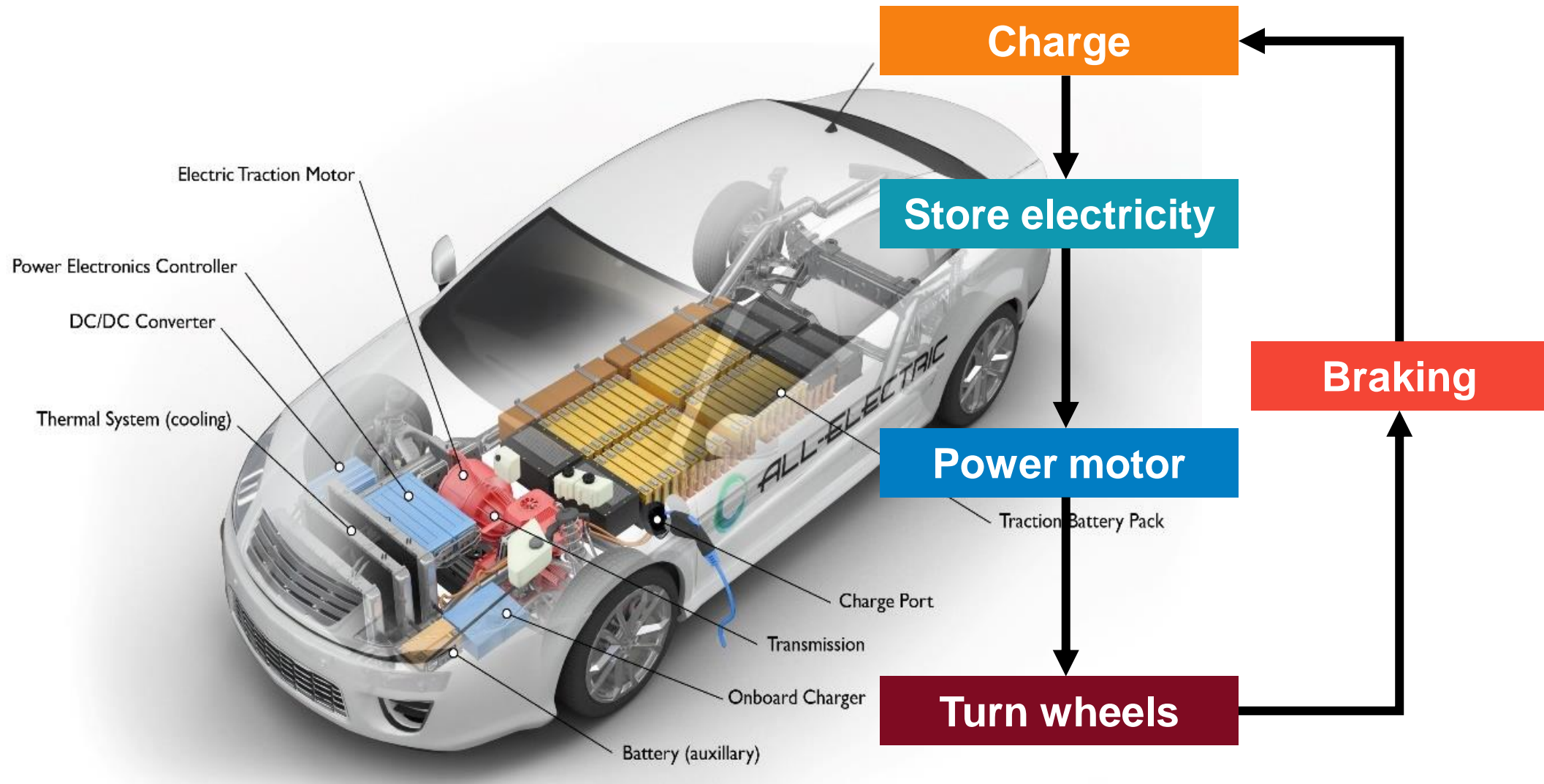
TRAVEL

HOME

Carbon Literacy
Project

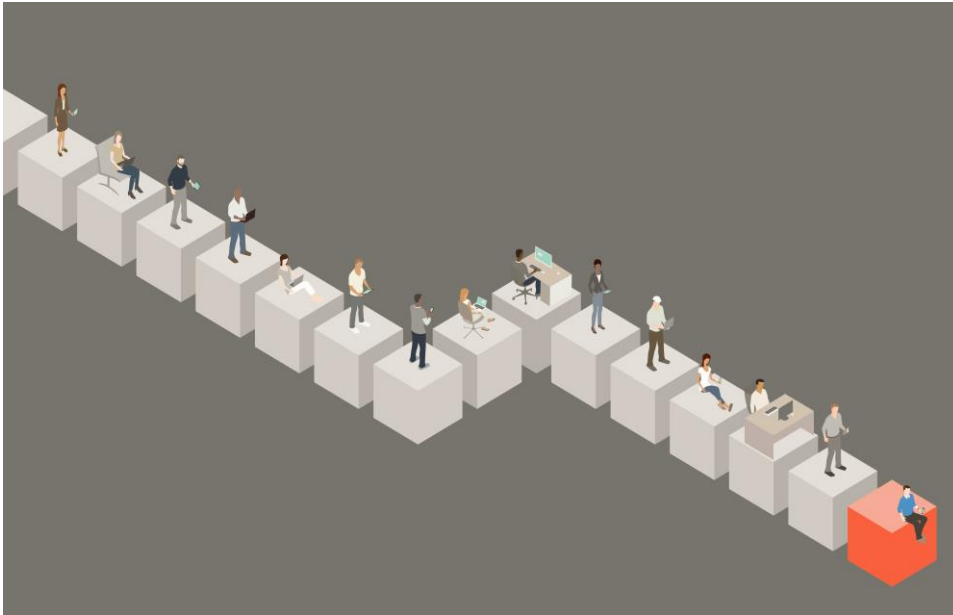


Electric Vehicles



Partnerships and Supply Chain

Supply Chain



Partnerships



How does this impact carbon footprint?

- Shorter supply chain = less travel = less emissions
- Collaboration accelerates technological advancements

Your Action Plan

One Individual Action

One Group Action

Carbon Literacy Project



The focus of Carbon Literacy is about empowering people to take action. To become certified as Carbon Literate you must:

Page 1 – Getting to Carbon Neutral

1. Explain clearly the steps we need to take as a society, to be **carbon neutral by 2038***.

* Edit date to fit with local or organisational zero-carbon target.

Page 2 – Commitments

2. Create at least one significant action **as an individual** to reduce your own carbon footprint. This action where possible should be in the sphere in which the training takes place.
3. Create at least one significant action **involving other people** to reduce the collective footprint of your workplace, community or place of education. This is your **group action**.

The information you write on this form alone will determine whether The Carbon Literacy Project can certify you as Carbon Literate or not.

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