

Sustainability through Education, Accreditation and Innovation

Business Innovation Showcase 2024

Presentation:

Fit for the Future

Part 1 – Calculating your Carbon Footprint

Introduction...



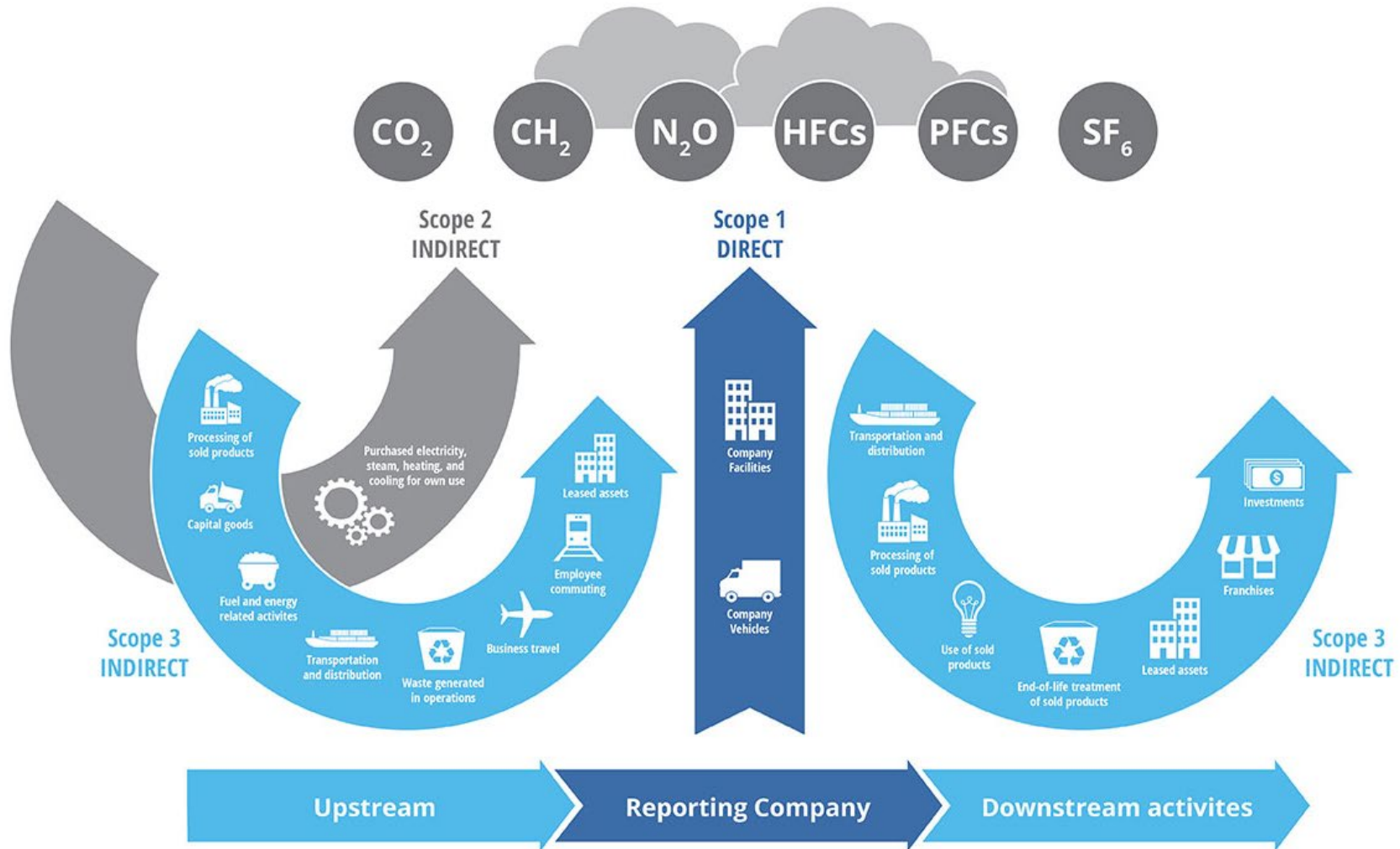
Carbon Reduction Project





Introductions...

What is a carbon footprint?



What is a carbon footprint?



Scope 1 Checklist items:

Any fuel that you are burning on site

Gas, Oil, LPG, Wood,

Refrigeration gases

Fleet or company vehicle fuel (petrol, Diesel)

Scope 2 Checklist:

Someone else's Scope 1

Electricity used on site

Question:

What is Scope 3?

How do you make a difference?

Where do we want to get to?

Sat-Nav: Destination



Question:

Are we trying to go in two directions? - Growth and Reduction?!

Why do you want to produce a carbon footprint?

What will you do with it?

1. Reduce energy carbon and running costs
2. Improve local nature and biodiversity
3. Engage with the local community

Where we are today?

Sat-Nav: Setting your current location



Question:

How do you measure the health of your company or organisation at the moment?

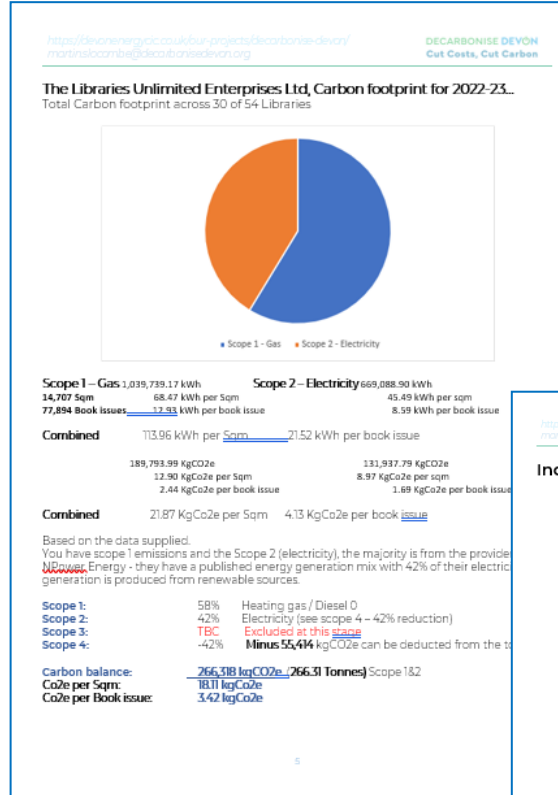
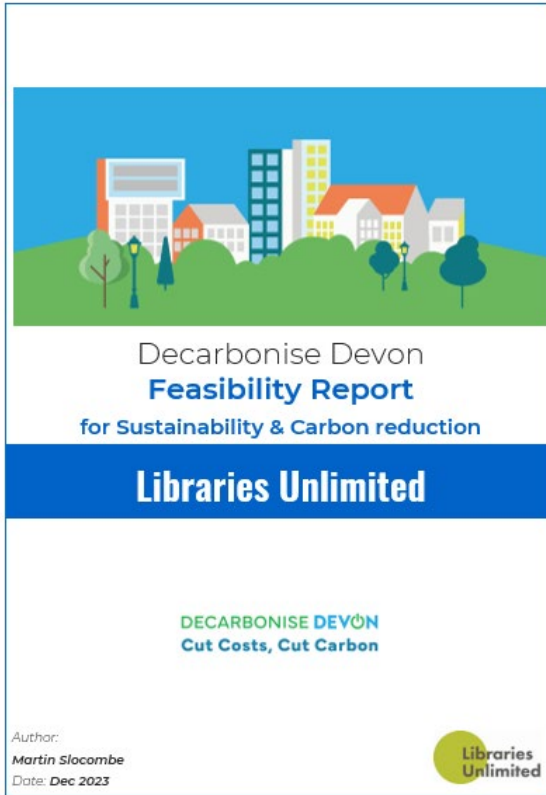
Production?

Turnover?

Profit?

Staff turnover?

Libraries Unlimited...



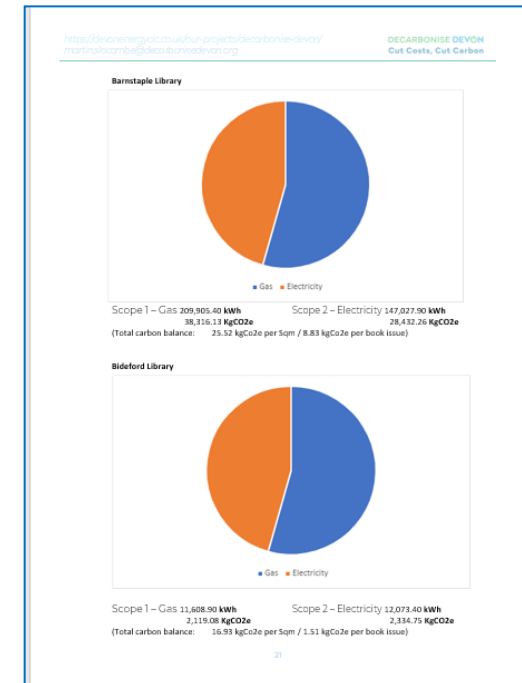
Combined

321.73 Tons Co2e

21.87 KgCo2e per Sqm

4.13 KgCo2e per book issue

From 30 individual libraries



Scope 1 – Gas: 1,039,739.17 kWh
Scope 2 – Electricity: 669,088.90 kWh
Combined 1,708,828.07 kWh
 113.96 kWh per Sqm
 21.52 kWh per book issue

Our Roadmap to 2030 - and carbon reduction to zero

Introduction...

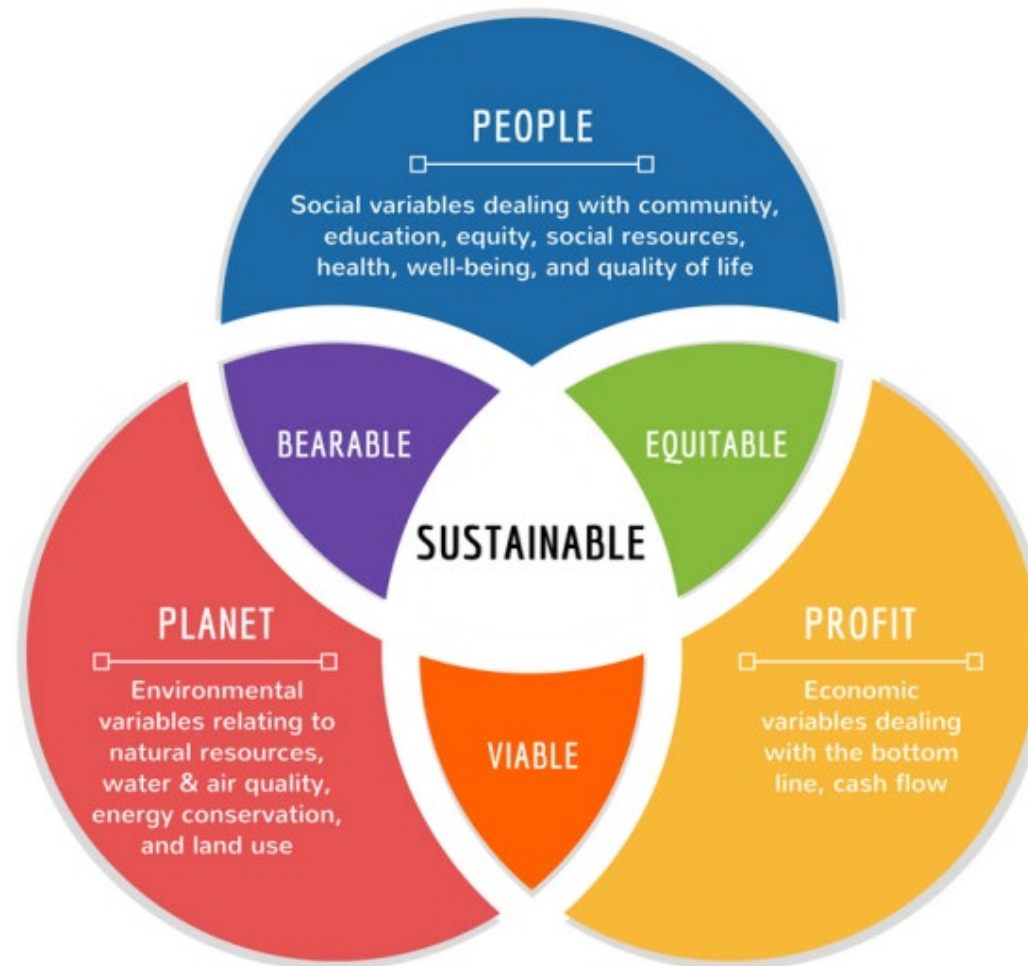
Sustainable Business Resource:

A new one-stop-shop to help your organisation
save energy, money and carbon

What is SUSTAINABILITY?

What we have been taught

A successful company looks like this...



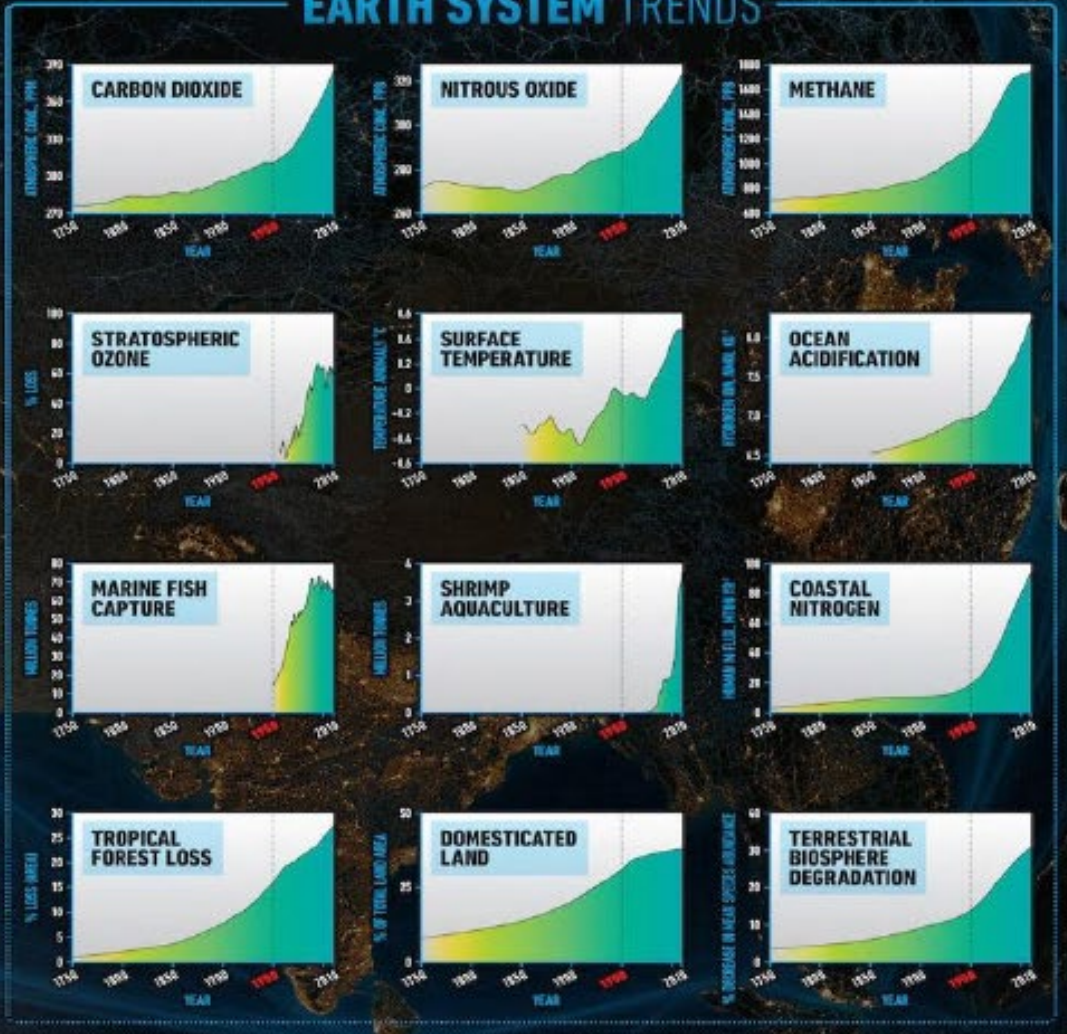
Triple bottom line

Where we are today

SOCIO-ECONOMIC TRENDS



EARTH SYSTEM TRENDS



Country Overshoot Days 2024

When would Earth Overshoot Day land if the world’s population lived like...

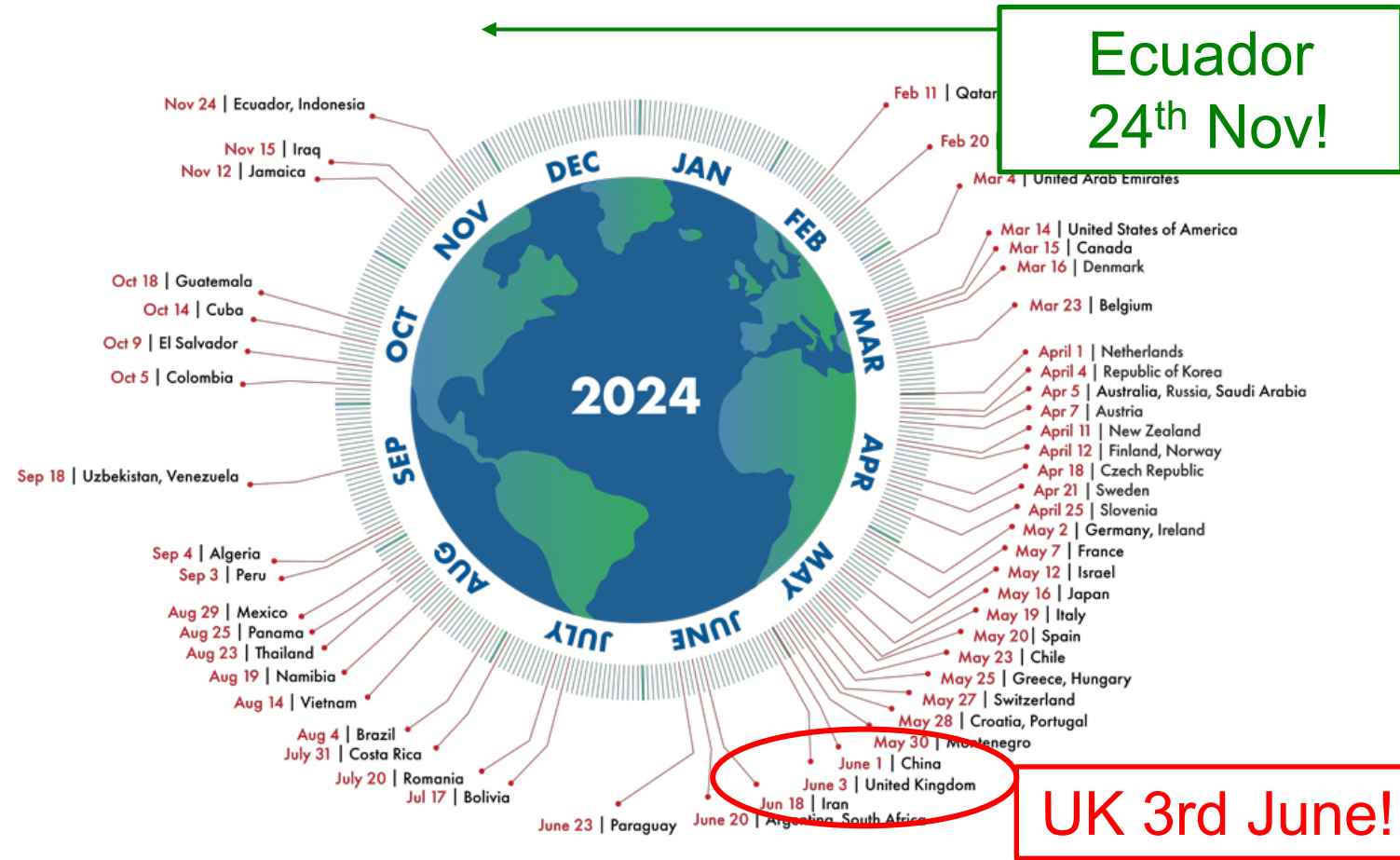
Earth Overshoot Day (EOD), previously known as Ecological Debt Day (EDD), is the calculated illustrative calendar date on which humanity’s resource consumption for the year exceeds Earth’s capacity to regenerate those resources that year.

Actual Overshoot days - UK

- 1970 – **29 December**
- 2000 – **23 September**
- 2018 – **1 August**

If the World lived like the **United Kingdom**

- 2020 – 16 May**
- 2021 – 29 July (c-19)**



For a full list of countries, visit overshootday.org/country-overshoot-days.



EARTH OVERSHOOT DAY

Source: National Footprint and Biocapacity Accounts, 2023 Edition
data.footprintnetwork.org



Global Footprint Network
Advancing the Science of Sustainability

Our Roadmap to 2030

Sat-Nav: What is the next section of the journey?



Aspirations for the next 6 months?

Question:

How do you plan to achieve this?

Science vs. Human nature...

*“I used to think that top environmental problems were biodiversity loss, ecosystem collapse and climate change. I thought that **thirty years** of good science could address these problems.... I was wrong.*

The top environmental problems are...

***selfishness, greed and apathy**, and to deal with these we need a cultural and spiritual transformation...*

And we scientists don't know how to do that”

James Gus Speth,

Veteran of the environmental movement as a co-founder of the NRDC,
Founder of the World Resources Institute,
CEO of the UN Development Programme
President Carter's Chair of the Council on Environmental Quality.

SUSTAINABLE DEVELOPMENT GOALS

Which ones apply to your Business?

<p>1 - 6</p> <p>Basic Human Rights</p>	<p>1 NO POVERTY</p> 	<p>2 ZERO HUNGER</p> 	<p>3 GOOD HEALTH AND WELL-BEING</p> 	<p>4 QUALITY EDUCATION</p> 	<p>5 GENDER EQUALITY</p> 	<p>6 CLEAN WATER AND SANITATION</p> 
<p>7 - 12</p> <p>Business & Community (Foundations)</p>	<p>7 AFFORDABLE AND CLEAN ENERGY</p> 	<p>8 DECENT WORK AND ECONOMIC GROWTH</p> 	<p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p> 	<p>10 REDUCED INEQUALITIES</p> 	<p>11 SUSTAINABLE CITIES AND COMMUNITIES</p> 	<p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p> 
<p>13 - 17</p> <p>Government Legislation (Opportunity)</p>	<p>13 CLIMATE ACTION</p> 	<p>14 LIFE BELOW WATER</p> 	<p>15 LIFE ON LAND</p> 	<p>16 PEACE AND JUSTICE STRONG INSTITUTIONS</p> 	<p>17 PARTNERSHIPS FOR THE GOALS</p> 	 <p>THE GLOBAL GOALS For Sustainable Development</p>



How can business respond to these issues?



Defensively
(Shareholder Value)

“We’re already contributing to the SDGs because we create jobs, we’re reducing year-on-year emissions, etc.”

Selectively
(Shared Value)

“We’re positively impacting SDG 3 because we sell drugs / SDG 12 because we sell consumer goods / etc.”

Holistically
(System Value)

“We’re transforming our business to solve a key SDG challenge, while working to ensure we’re not slowing down progress elsewhere.”








SUSTAINABLE DEVELOPMENT GOALS

Which ones could your organisation contribute to directly?

1 - 6
Basic Human Rights

7 - 12
Business & Community (Foundations)

13 - 17
Government Legislation (Opportunity)

<p>7 AFFORDABLE AND CLEAN ENERGY</p> 	<p>8 DECENT WORK AND ECONOMIC GROWTH</p> 	<p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p> 	<p>10 REDUCED INEQUALITIES</p> 	<p>11 SUSTAINABLE CITIES AND COMMUNITIES</p> 	<p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p> 
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Built Environment Goals

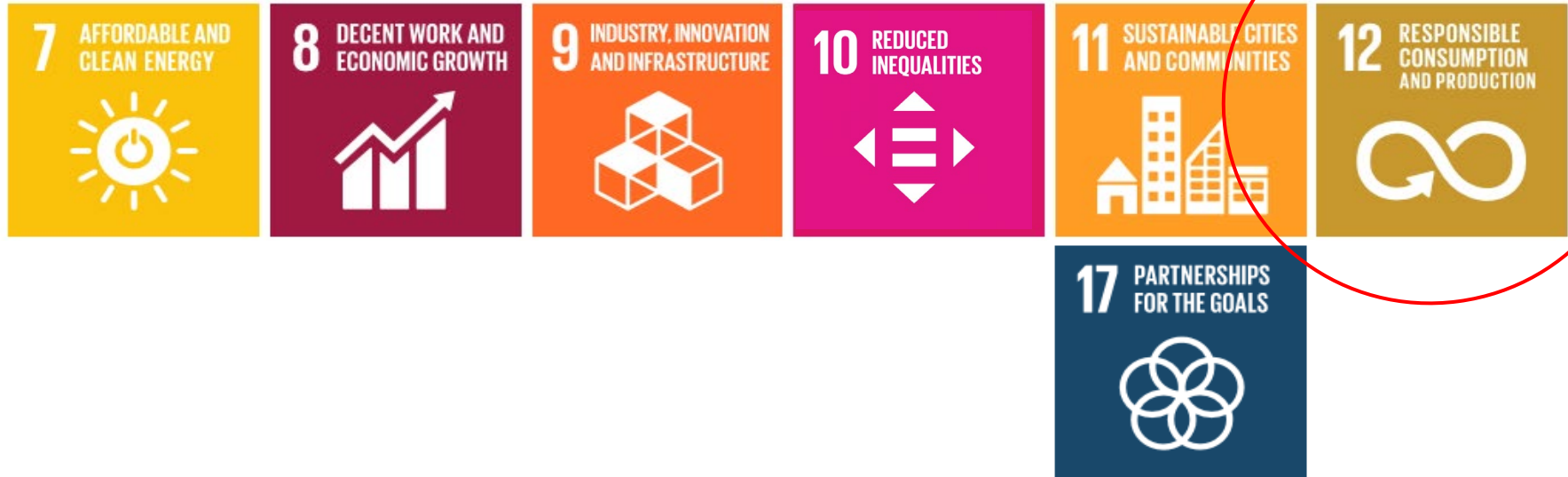
SUSTAINABLE DEVELOPMENT GOALS

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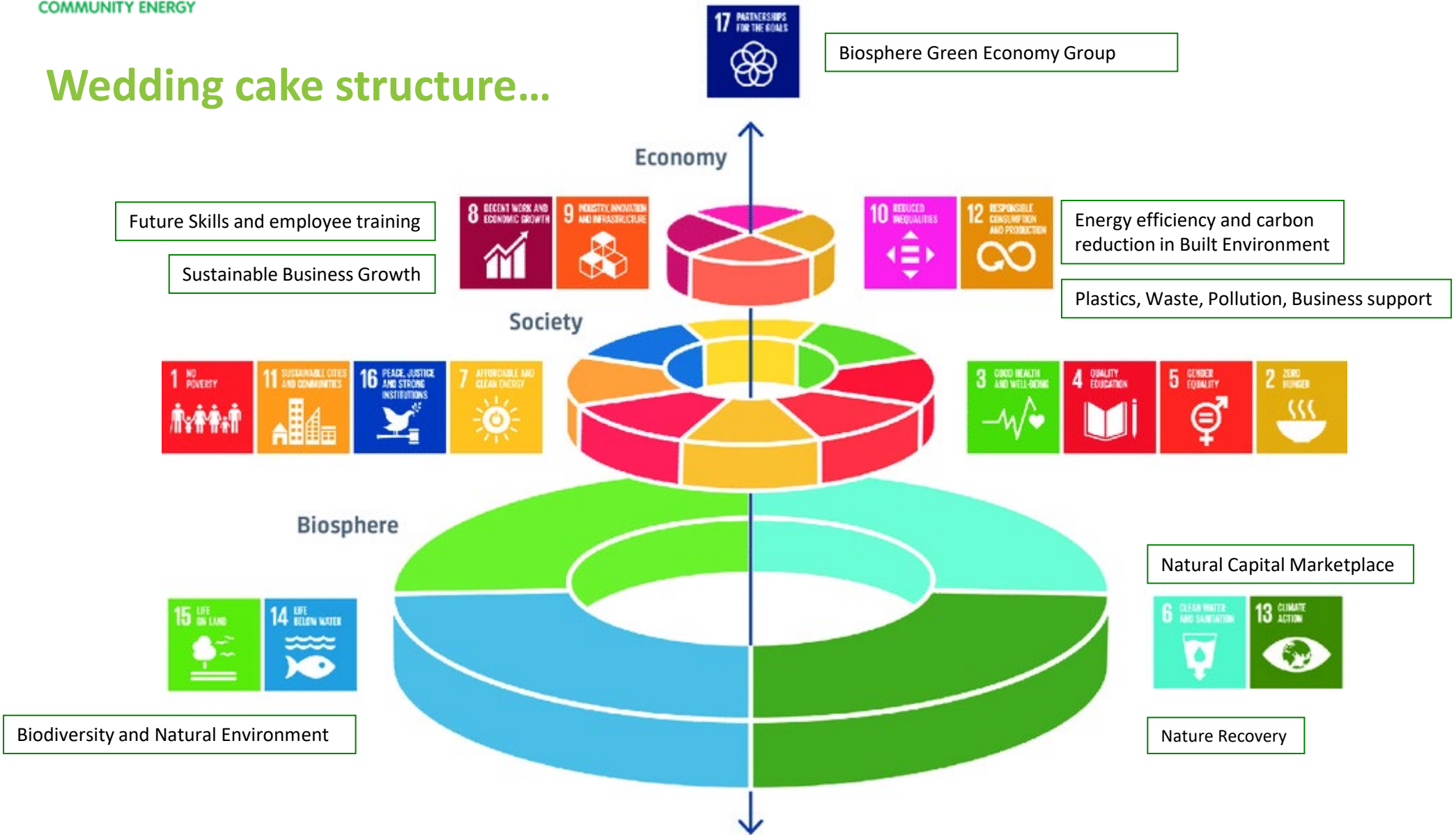
SUSTAINABLE DEVELOPMENT GOALS

They ALL do!

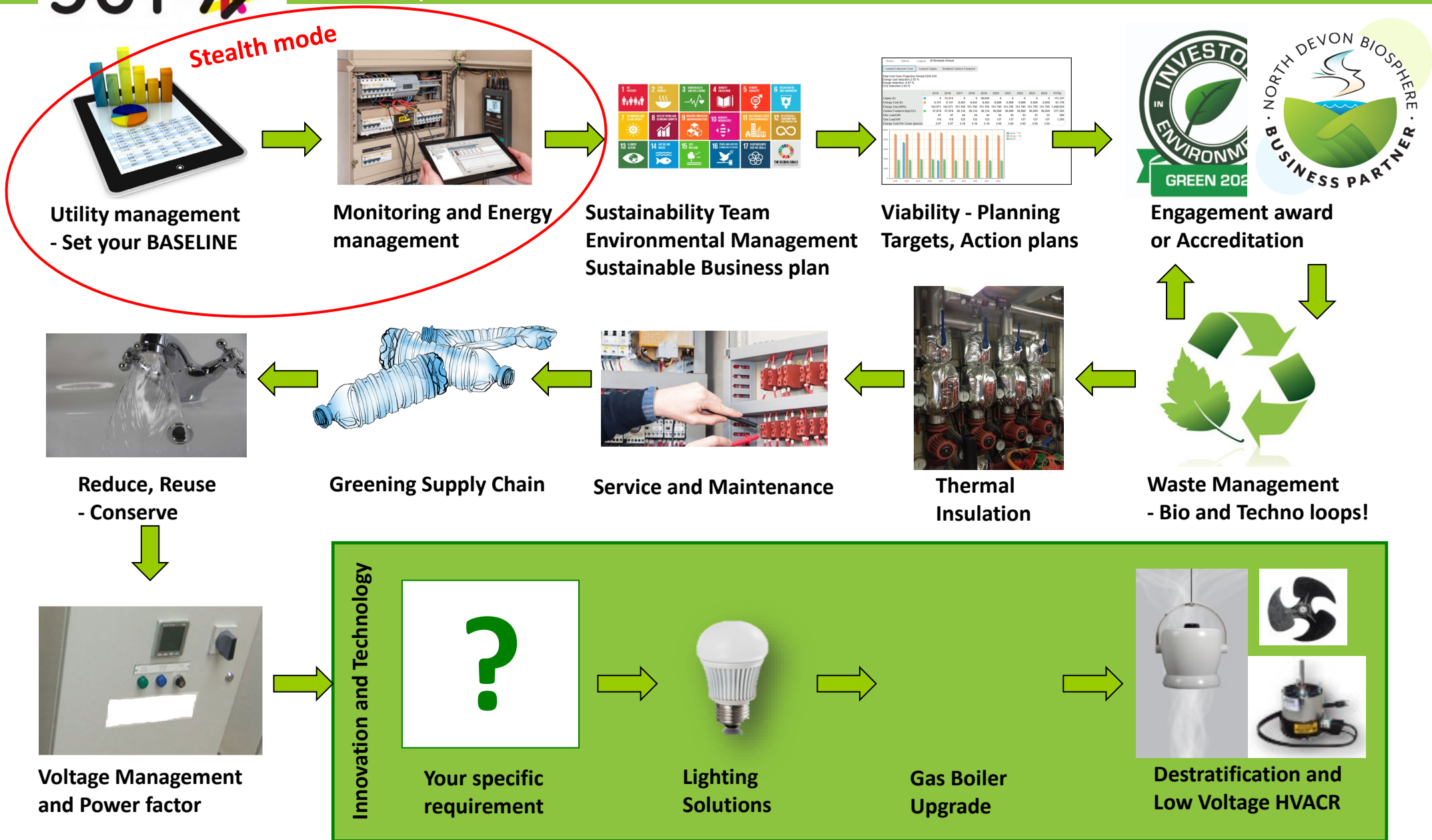
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More information available at:
sdgcompass.org / measurewhatmatters.info / gapframe.org / sdgacademy.org
https://www.ted.com/talks/michael_green_how_we_can_make_the_world_a_better_place_by_2030

Wedding cake structure...



Sequence for QUICK SAVINGS – Cash Positive route



What do we need to do first?

Sat-Nav: Have you got what you need for the journey?



Checklist items:

Carbon footprint

Baselines of all natural resources

Question:

How do we do that?

Collate the last 12 months of utility bills

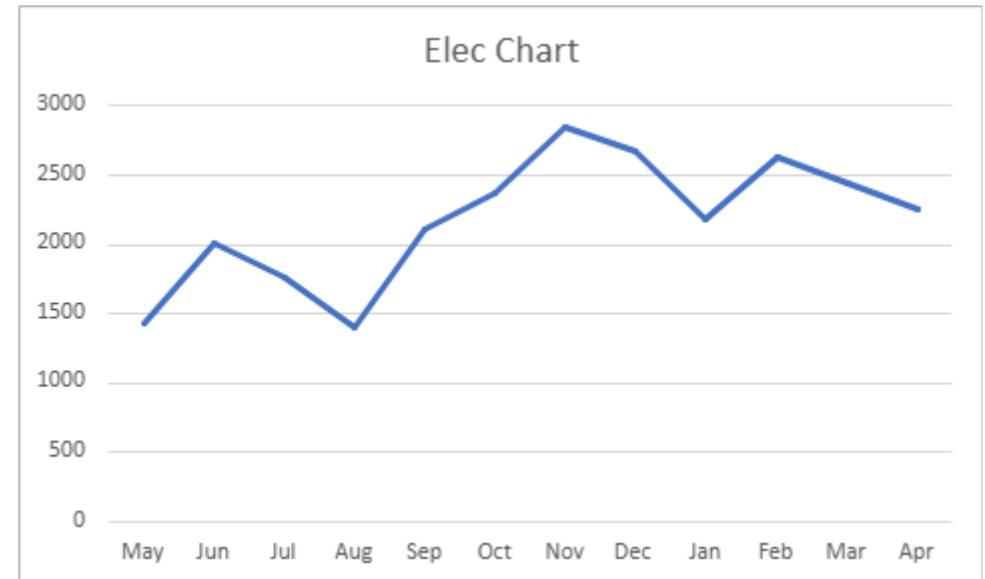
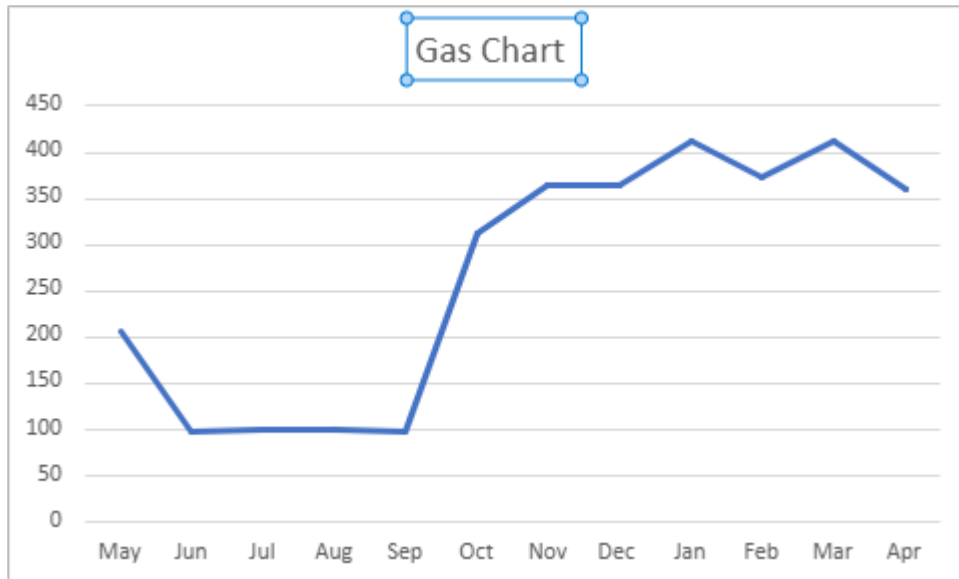
Review – chart them

Seasonal energy use

Half – Hour data?

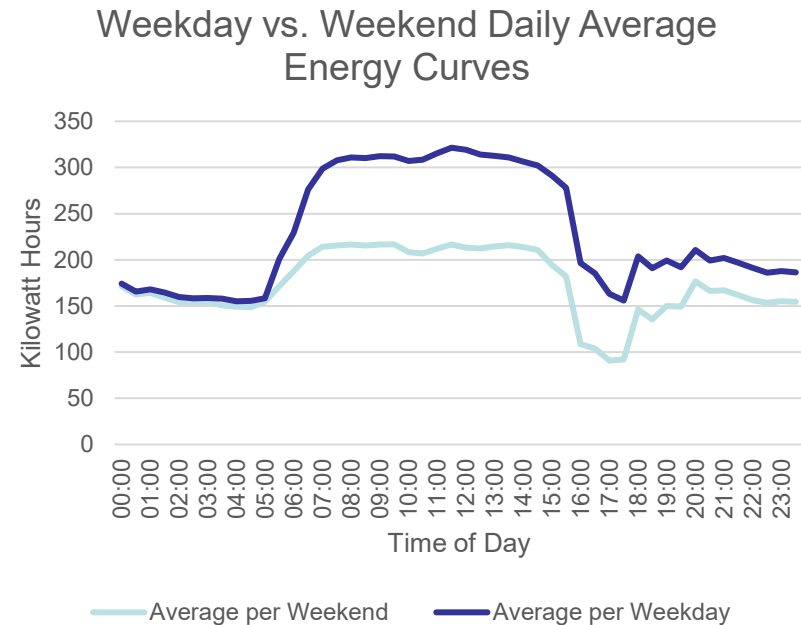
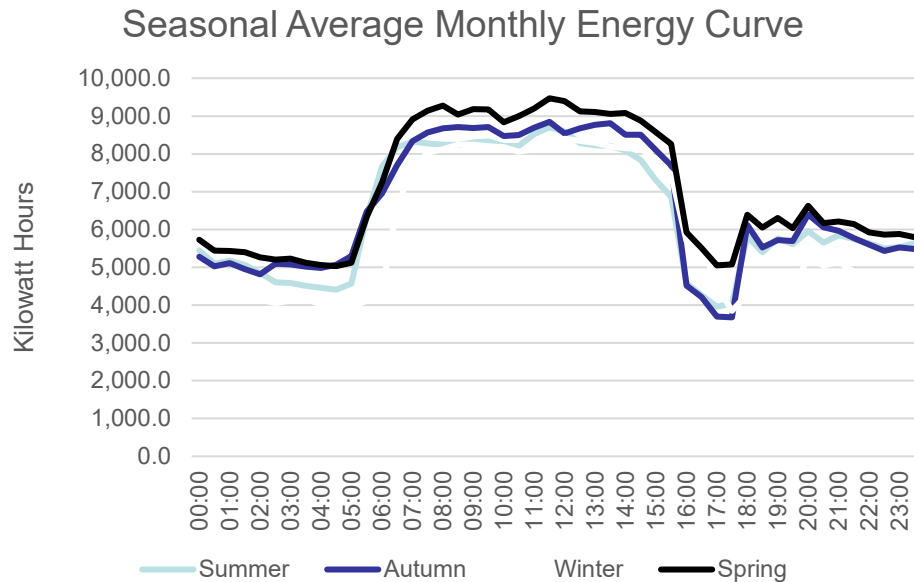
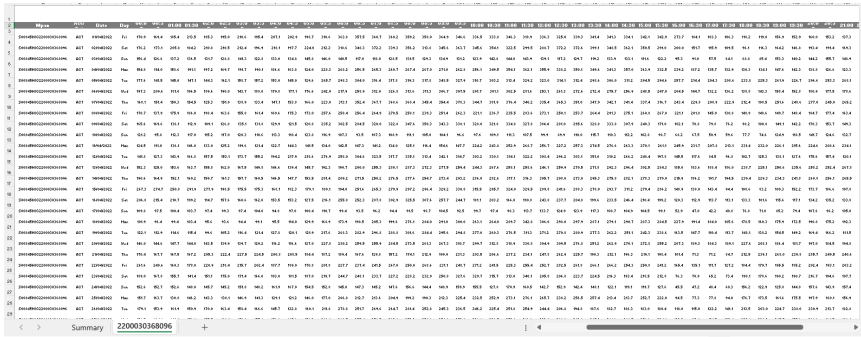
Seasonal chart

When can we make a difference



24 hour period chart

What happens when no one is here?



Building Energy Efficiency Survey

Roadmap to 2030 (zero) carbon reduction targets



Full building efficiency survey

Target Energy Performance level D-G

Recommendations for improvements

Cost effective retrofit technologies

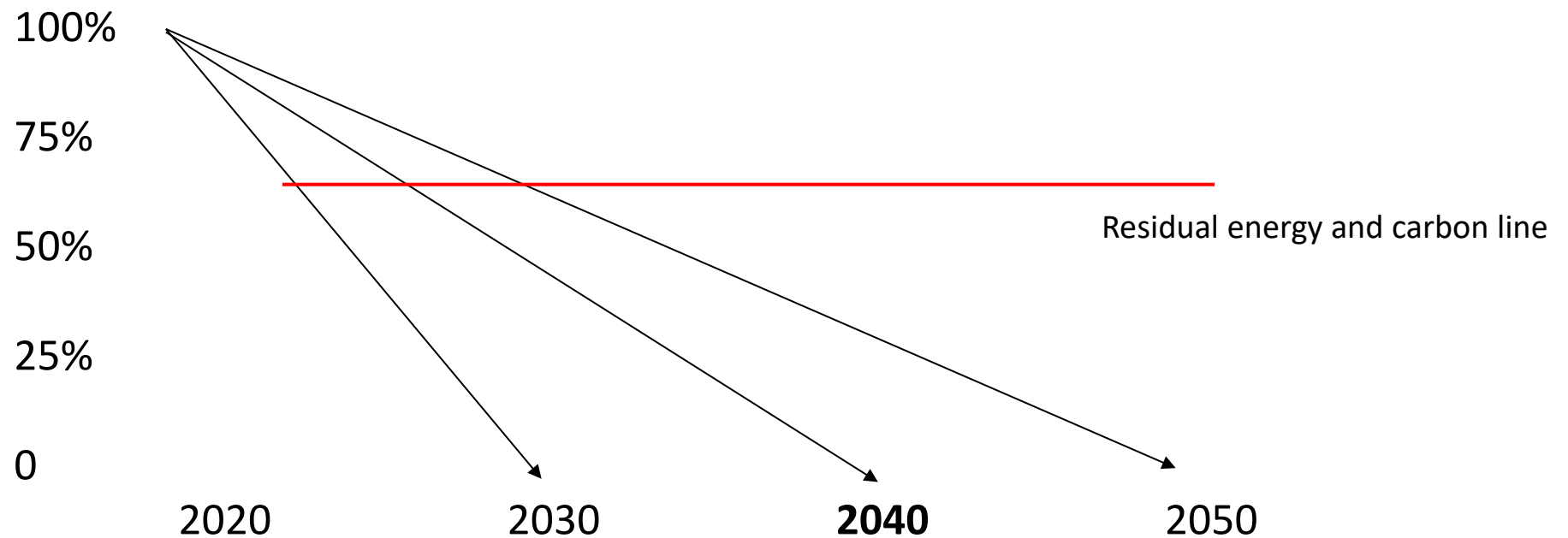
Funding options – VCSE

Renewable energy possibilities – Community solar

Monitoring, Targets and Reduction Action plans

Carbon Reduction each decade

Roadmap to 2050 (zero) carbon



To reduce waste to optimal residual energy

2030	Reduce by 8%	per year from 2024 – 2030
2040	Reduce by 2.6%	per year from 2024 – 2040
2050	Reduce by just 1.6%	per year from 2024 – 2050

To reduce energy to optimal net zero inc offsetting or insetting

2030	Reduce by 20%	per year from 2024 – 2030	5 x 20%
2040	Reduce by 6.66%	per year from 2024 – 2040	15 x 6.66%
2050	Reduce by just 4%	per year from 2024 – 2050	25 x 4%

Our Roadmap to 2030

Imagining the future



Question:

What will your organisation look like in 2030?

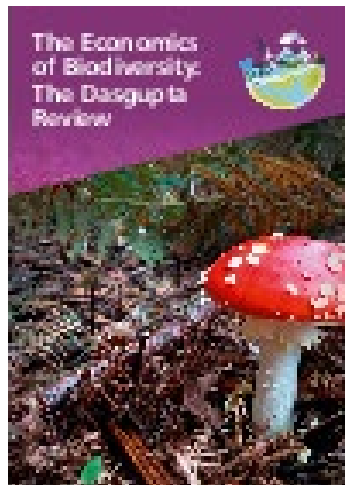
Just 5 years...

Future Generations...

“The solution is right in front of us...
... change the way we think...
and then act...”

Project everyone - Accountability

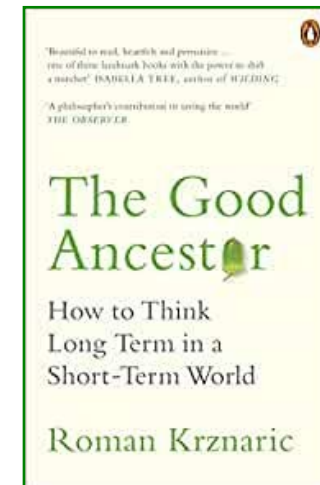
Further Reading or viewing



The Economics
of Biodiversity
The Dasgupta Review

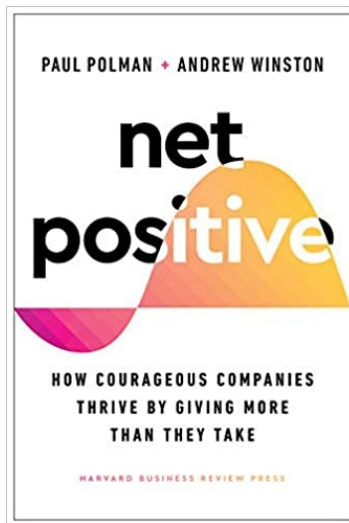


Just have a think
YouTube channel
Dave Borlace



The Good Ancestor
Rowan Krznaric

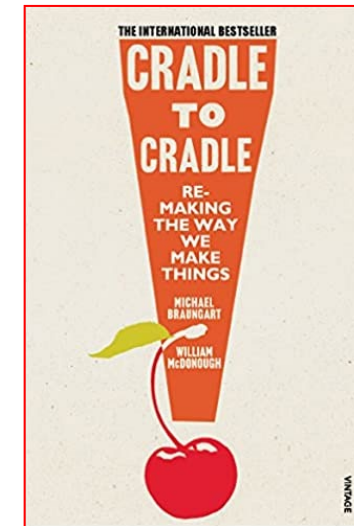
Further Reading or viewing



Net Positive
By Paul Polman



Just have a think
YouTube channel
By Dave Borlace



Cradle to Cradle.
**Remaking the way we
make things**
By Michael Braungart
& William McDonough

Fit for the Future

Questions & Comments

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Sustainable Business Resource
Decarbonise Devon
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07807 906853

**SORRY, KID,
BUT THANKS TO
MY SELFISHNESS, YOU
WILL FACE UNSPEAKABLE
SUFFERING FROM
CLIMATE CHANGE
DURING YOUR
LIFETIME.**

**IS THERE
ANY GOOD
NEWS?**

**YEAH.
I'LL BE
DEAD BY
THEN.**

© 2011
LOWE
TRIBUNE
CONTENT
AGY.



What makes up a carbon footprint?



Scope 3 (Supply chain) Checklist items: (Indirect)

Purchased goods & Services (ingredients of your product/service)
Capital goods & equipment
Fuel & Energy related activities
Transportation & Distribution
Waste generated in operations
Business Travel
Employee commuting
Leased Assets

“Upstream...”

Scope 3 (Sold chain) Checklist items: (Indirect)

Transportation & Distribution
Processing of sold product
Use of sold products
End-of-life treatment of sold product
Lease assets, Franchises, distributors, Investments

“Downstream...”

What makes up a carbon footprint?

Scope 4 Checklist items: (Sequestration)

All the carbon that you are capturing

Soil

Hedgerow

Fields – Crop, wild, grassland, meadow

Woodland

Forest

Carbon capture...

Carbon Balance figure...

Carbon Offsetting or
Carbon Credit



Built Environment vs. Natural Environment

Built environment

A complex system of buildings, infrastructure, services and spaces, the purpose of which is to support to wellbeing of people and communities. It sits within the wider context of the natural environment, drawing resources and services from it and having various impacts on it.

Natural environment

A complex system of climate, geology, ecosystems and other processes, which arise organically, but is in part managed by humans to provide services and resources to society. It touches every part of the built environment and is impacted by it.

The BIG picture

The built environment relies heavily on nature – for materials, air, water, food, recreation – and in turn has a tremendous impact on it – including filling the atmosphere with carbon dioxide faster than it can be absorbed by existing plant matter and soils. From tree cover, to hydrology, to greenhouse gas emissions, to animal behaviour, our built systems are changing the planet more rapidly than nature can adapt. ***If we fail to bring the built and natural environment into better alignment, undoing some of the damage humans have caused during the Anthropocene Era, we will not be able to leave a liveable world to future generations.***¹

¹ Dasgupta, P. (2021) The Economics of Biodiversity: The Dasgupta Review. HM Treasury. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962785/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf

Well Being...



Reconnect with nature
and natural cycles