

PP:D4M

S1. schedule

key learning objective : understand the context of design for manufacture

1. Sustainable Development
2. Drivers of Innovation
3. Life Cycle Thinking
4. GD – EcoDesign
5. GD – Re-Think
6. GD – Assess
7. GD – Design
8. GD – Communicate
9. Environmental Product Policy

1. sustainable development

key learning objective : understand sustainable development

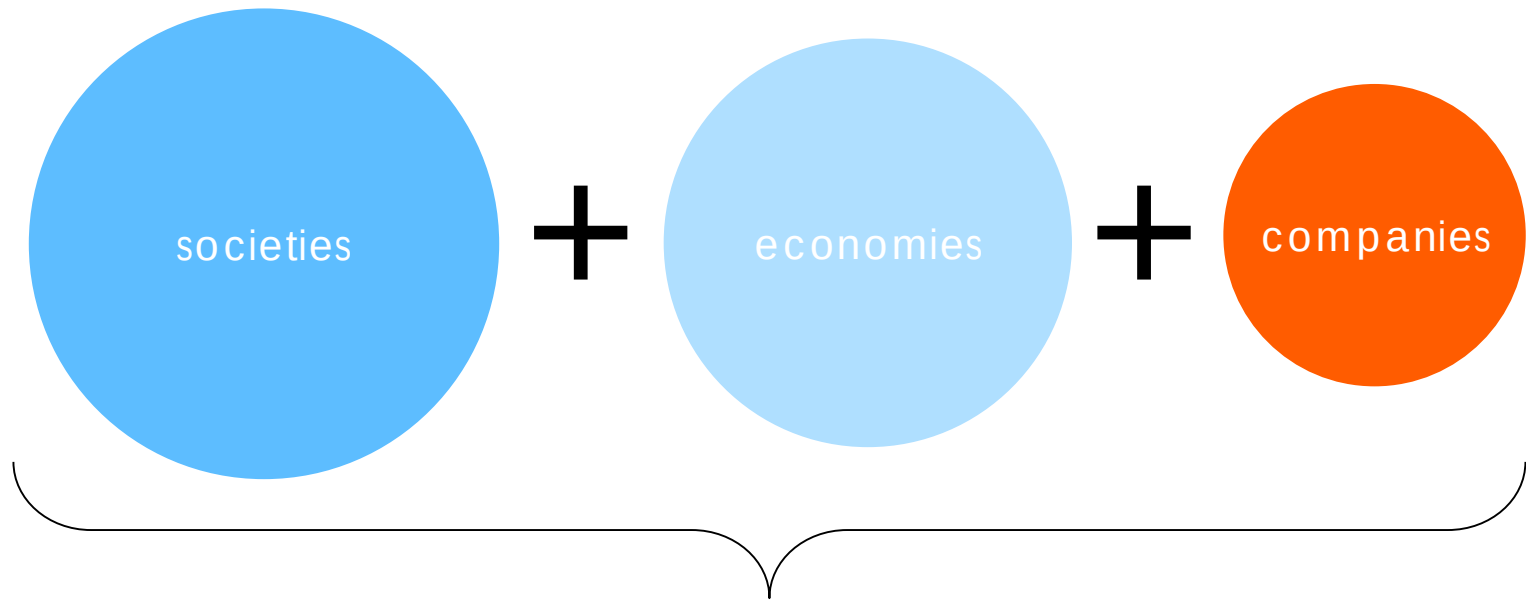
- definitions
- why it is important

what is sustainable development?

“ Development which meets the **needs of the present** without compromising the ability of **future generations** to meet their own needs ”

Brundtland Report, 1987

it is about developing



that can be sustained on **social**, **economic** and **environmental** terms

sustainable development is about

social progress

which recognises the needs of everyone

sustainable development is about

environmental

protection being at the centre of everything we do

sustainable development is about ensuring

employment

and economic security for everyone

sustainable development is about the

prudent use

of the earth's natural resources

“ Sustainability proves the point of design thinking in that it suggests that one consider the materials, processes, and practices that a business employs. It is essential that business is able to see the layers of value that are created and the layers of waste. Design is the tool to analyze this. ”

James P. Hackett, president and CEO of Steelcase Inc. , 2007

WHY IS SUSTAINABLE
DEVELOPMENT
IMPORTANT?

reason no.1

we live in an unequal
world

over 800 million people
live on less than \$1.25 a
day

over 748 million people do
not have access to clean
drinking water

a shocking 892 million
people still practised open
defecation in 2015

80% of all disease in
developing countries is
caused by consumption
of contaminated water

Worldwide, 11 children
under age 5 die every
minute, and 33 mothers
die every hour

reason no.2

the ecological systems
of the world are under
stress

global resource extraction
grew from 40 billion tons in
1980 to
55 billion tons in 2005
(45% growth rate)

global resource extraction,
2005–2030, could grow to
100 billion tons in 2030
almost doubling the
extraction from 2005

In 2018 air pollution killed
approx. 7 million people
mostly in poor countries

26,000 species, are under threat of extinction

https://www.worldwildlife.org/species/directory?direction=desc&sort=extinction_status

More than 1 in 10 wildlife
species become extinct
each year in the UK,
because their habitats are
changing or being
destroyed.

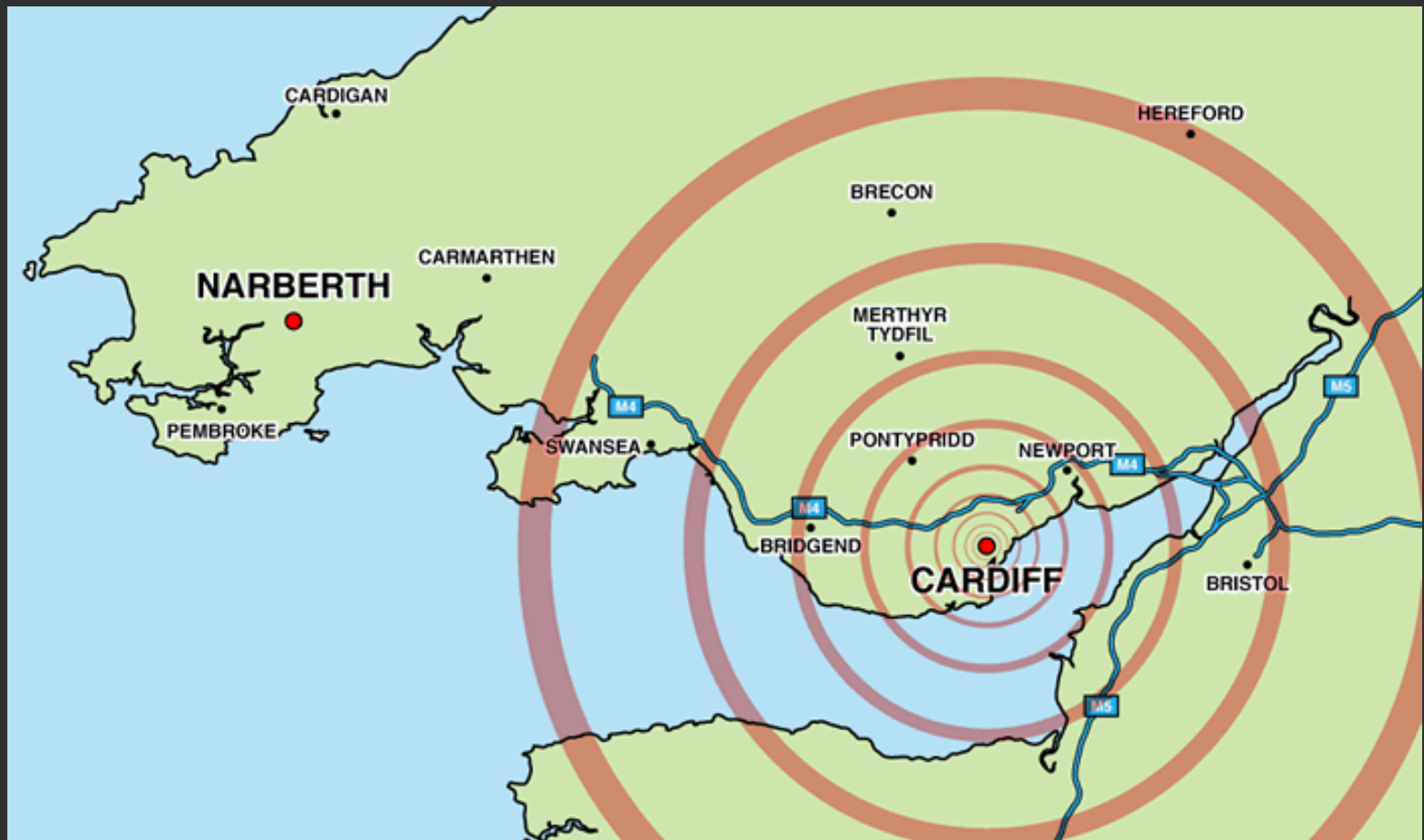
what about
the UK?





“If everyone in the world were to consume natural resources and generate carbon dioxide (CO₂) at the rate we do in the UK, we'd need three planets to support us”

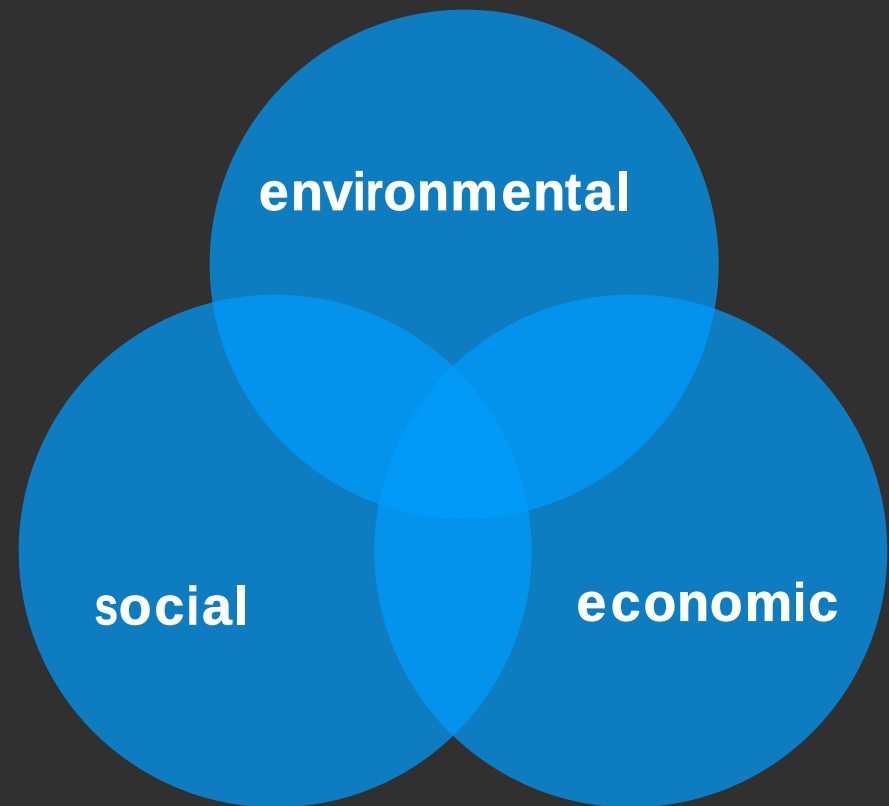
The ecological footprint of Cardiff, is 125 times the city's area.





sustainable development is about moving towards
‘one planet living’

we become more sustainable
when we balance environmental,
social and economic concerns



“ The only businesses around in 20 years time will be green and sustainable businesses **”**

Richard Branson, Virgin, 2008