



# Local Environment and Economic Development Toolkit (LEED)

Level 1 Workshop - TVCA



# Purpose of the LEED toolkit

The toolkit will support the Combined Authority to **make operational sense of complex environmental information**, so that it can **support vision development** through feeding in to **SWOT analysis**.

Internal	External	
Strength	Opportunities	Positive
Weaknesses	Threats	Negative

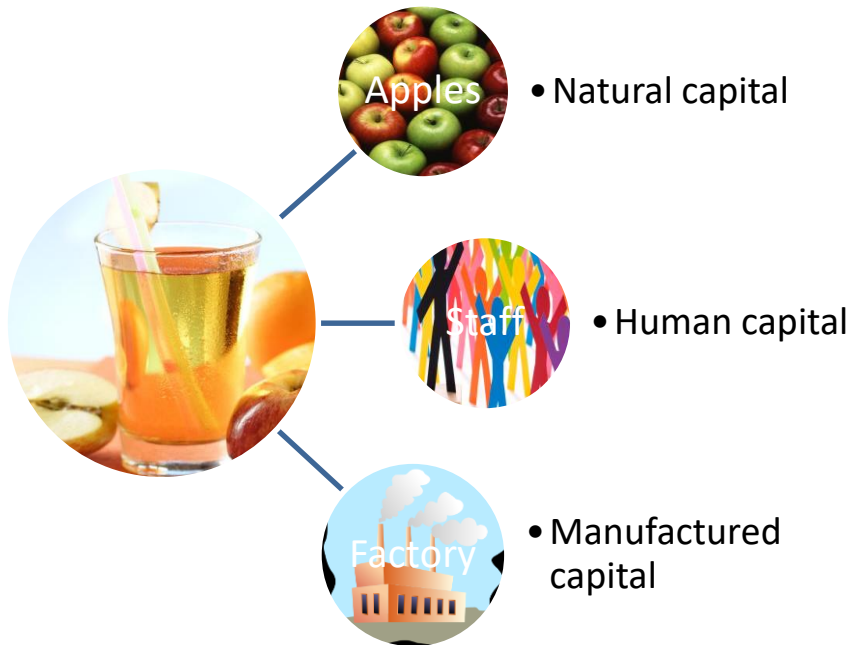


# Level 1 Workshop objectives

- 1) Understand that the economy is dependent on the environment
- 2) Map environment/economy relationships
- 3) Produce an interim list of
  - opportunities and threats **to** economic growth
  - **from** dependencies on the environment
- 4) Shared understanding, contacts and networking



# Ecosystem Services



- Producing goods and services requires natural capital as well as human and manufactured capital
- As well as direct products – such as apples for cider - nature offers many less tangible, but equally important services

# UK NEA Ecosystem Goods & Services (for people)

**Provisioning services:** the products we obtain from ecosystems such as food, fibre and fresh water.

**Regulating services:** the benefits we obtain from the regulation of ecosystem processes such as regulation of pollination, the climate, noise and water.

**Cultural services:** the non-material benefits we obtain from ecosystems, for example through spiritual or religious enrichment, cultural heritage, recreation and tourism or aesthetic experience.

**Supporting services:** ecosystem functions that are necessary for the production of all other ecosystem services such as soil formation and the cycling of nutrients and water.

## Provisioning



Provision of timber

## Regulating



Regulation of climate

## Cultural



Recreation and tourism

## Supporting



Cycling of nutrients

**Wetlands contribution to water quality worth 1.5billion/year**



Functional  
gradients

Carbon sequestration  
Floodwater detention

Floodplain modified for agriculture.

'Natural' river channel with levees.

Wooded river marginal (floodplain) wetlands.

Nutrient & contaminant transformation

Marshland with drainage channels.

Food chain  
support

Groundwater-fed slope wetlands.

Upland  
peat bogs.

Deepwater  
lake.

In-filled  
lake.

Depressional  
(bottomland)  
wetlands in  
floodplain.

Reservoir

Lowland  
raised mire.

Shallow lake  
occupying  
depression.

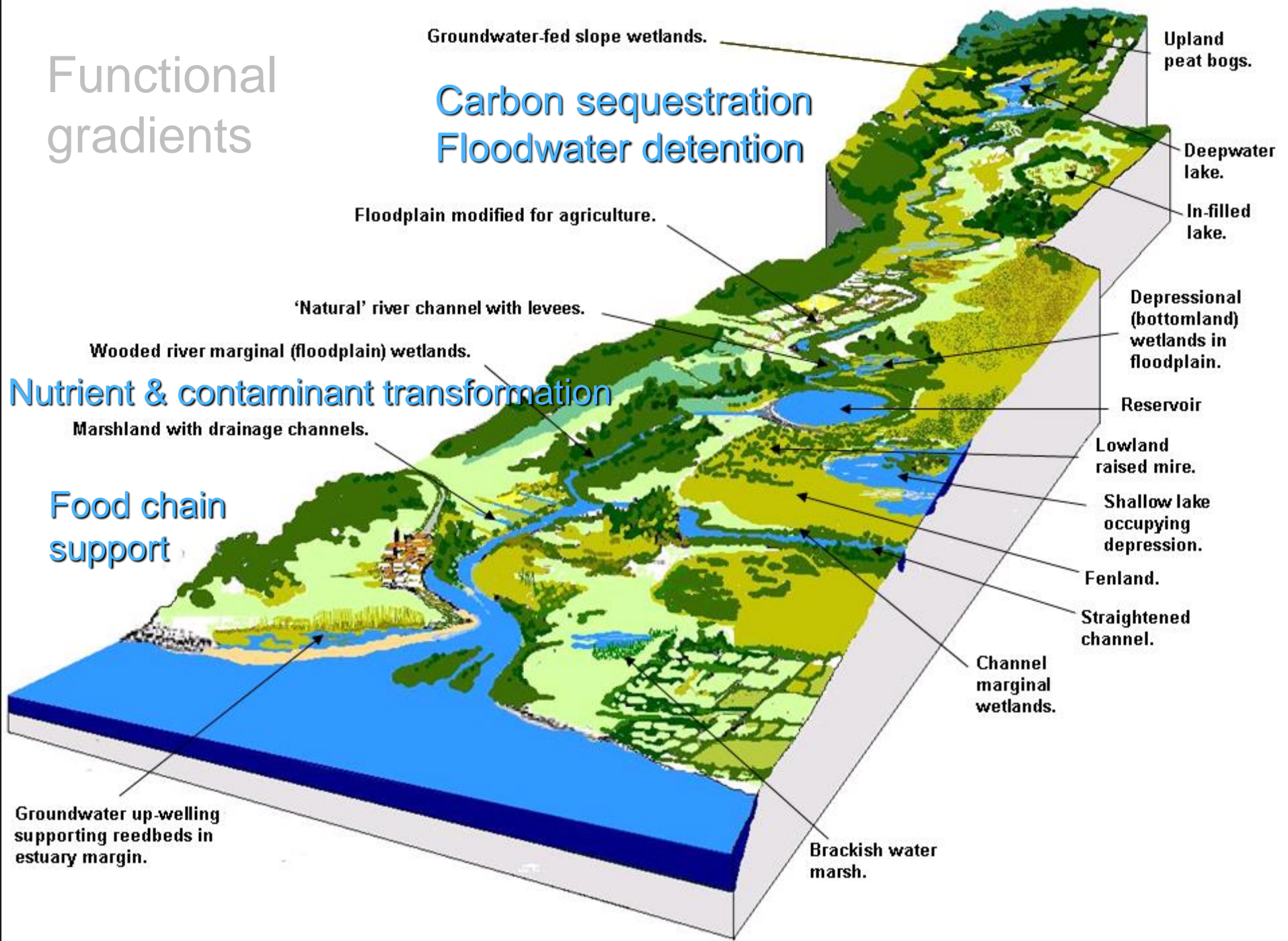
Fenland.

Straightened  
channel.

Channel  
marginal  
wetlands.

Brackish water  
marsh.

Groundwater up-welling  
supporting reedbeds in  
estuary margin.



# Wetland values

Insh marshes, Spey valley (1 100 ha floodplain)

- Flood defense worth £83k p.a.
- Other economic, recreational, educational and cultural values not yet quantified (NEA, 2011)

£10 million investment in wetland restoration and management could save £650 million in treating nutrient and topsoil-laden water over 30 year period  
(SouthWest Water)

# UK Human Health Dimensions

- Direct economic costs obesity: 6.4 billion
- Wider related costs: 27.0 billion by 2015  
*Forsight Report (2012)*
- Mental illness costs: 22.8% total disability burden
- Wider economic costs: 105.2 billion  
*Dept. Health (2010)*
- Our Natural Health Service. 'Walking our way to health'  
*Natural England (2009)*  
access = 2.1 billion / year      savings to NHS = 2.3% costs
- 'physical activity in natural environments is associated with a reduction in the risk of poor mental health'  
*Mitchell, Soc. Sci. Med. (2013)*
- Enhances well-being e.g. - property values  
- community coherence



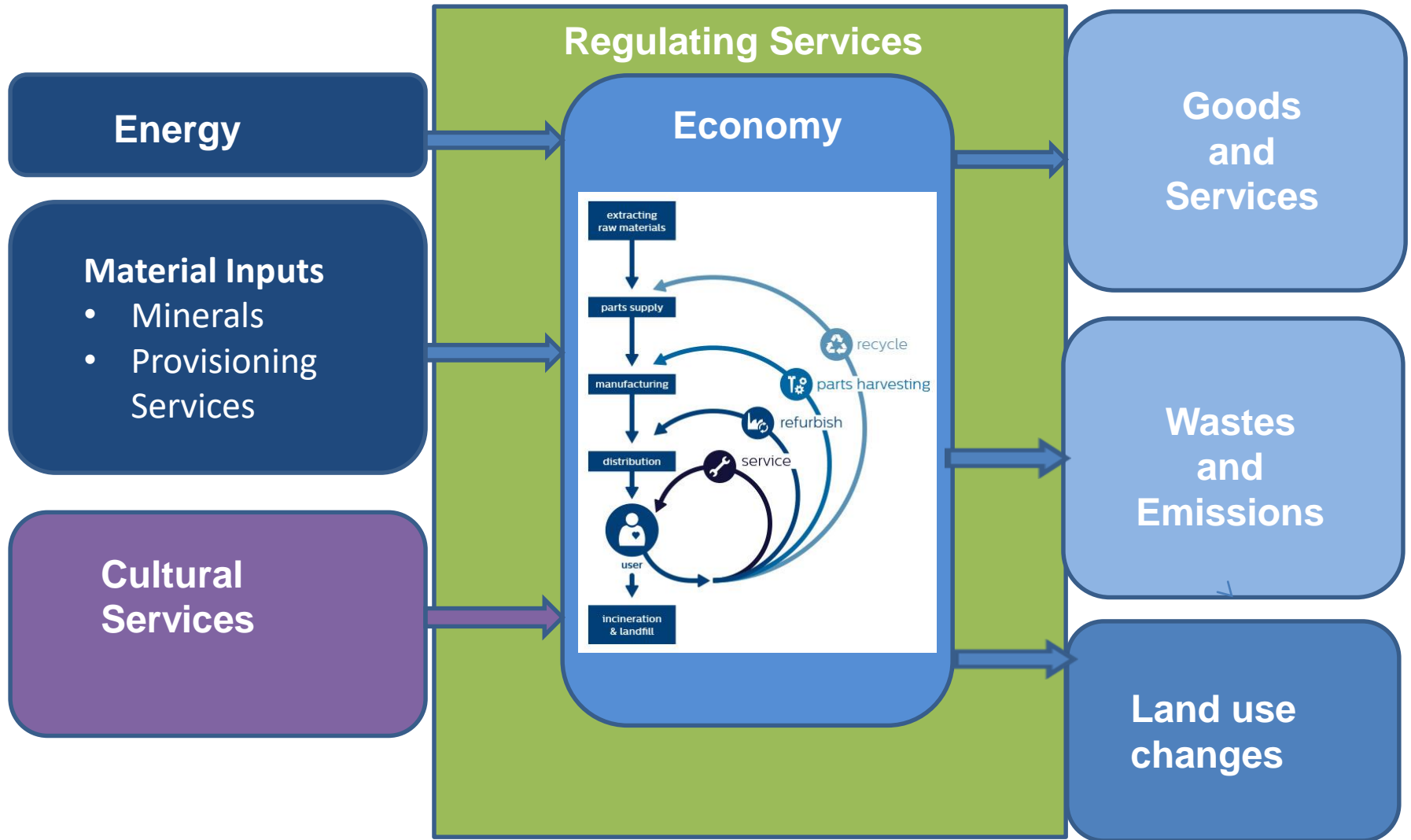
# Responding to the challenges

Economic analysis demonstrates that:

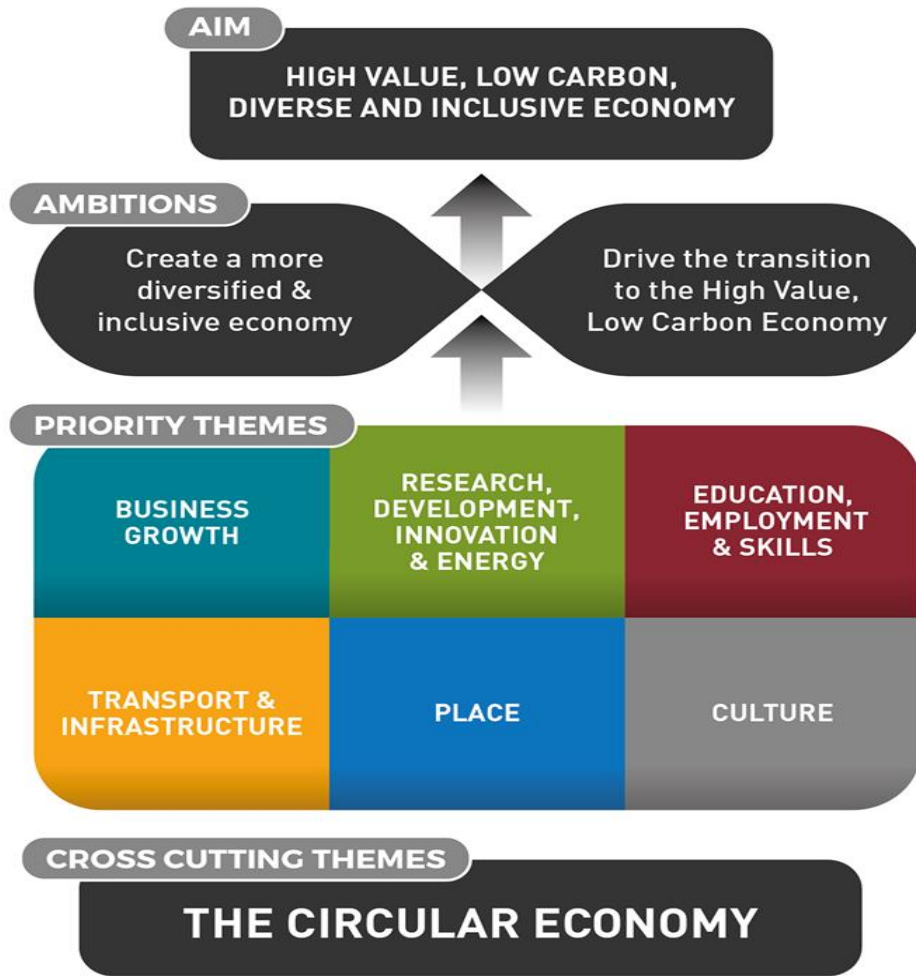
- Failure to include valuation of non-market goods in decision making leads to poor resource management
- Value of ecosystem services varies spatially

If recognise the value of ecosystem services, UK can move towards a more sustainable future and services that are equitably distributed

# Inputs and outputs to the economy

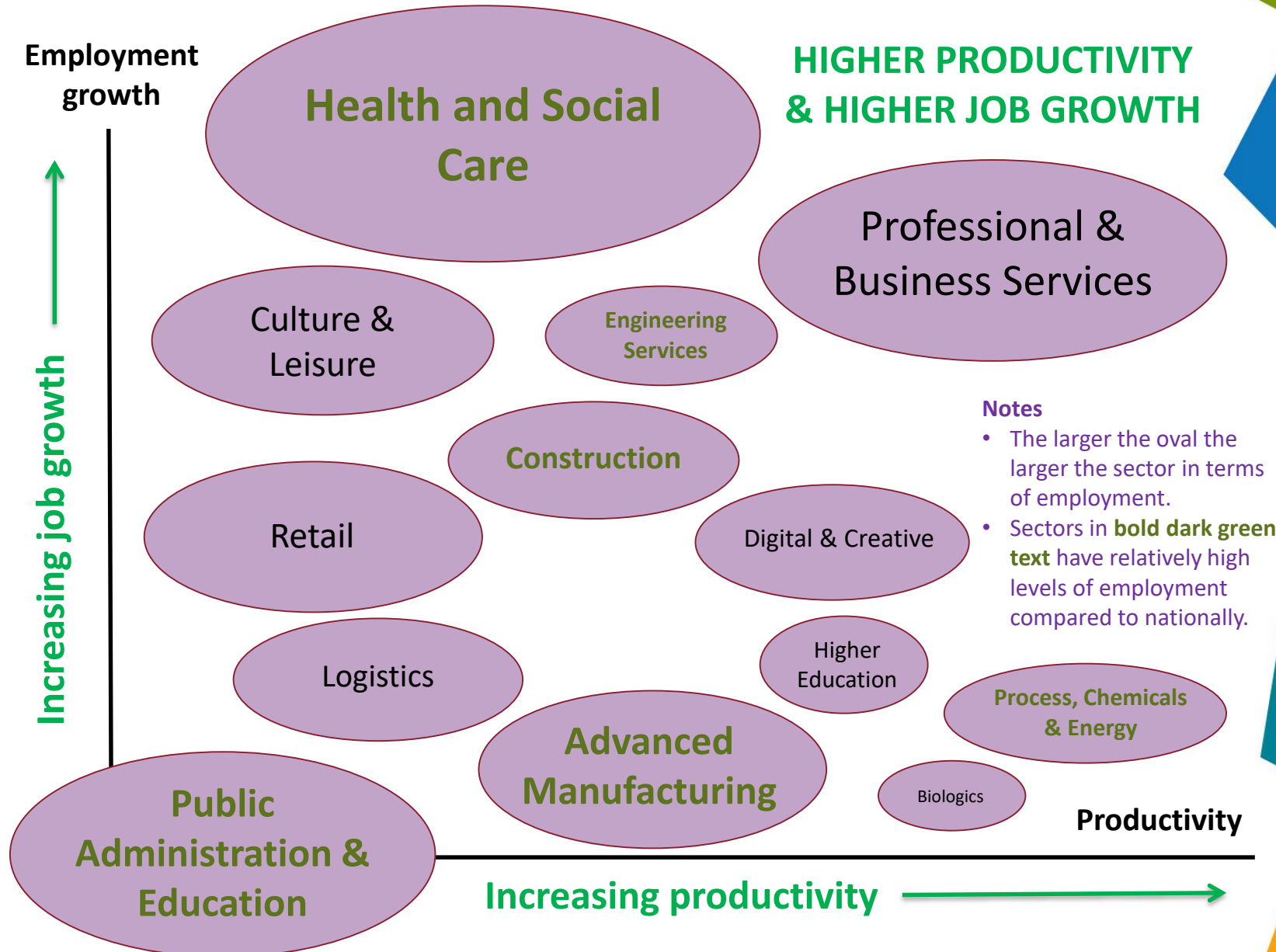


# 1:0: REFRESHED STRATEGIC ECONOMIC PLAN



- Enhance productivity in those high growth firms (scalable) which have the greatest potential to create jobs; and
- Improve lifetime opportunities, particularly in relation to post primary education and links to business
- Cross Cutting Themes:
  - Circular Economy (including sustainability);
  - Social inclusion;
  - Digital inclusion

# 2:0 KEY SECTORS: EMERGING PRIORITIES



## 3.0: KEY GEOGRAPHIES

Key Geographies*	Key Sectors
<ul style="list-style-type: none"><li>• Belasis Business Park;</li><li>• Kirkleatham Business Park;</li><li>• Teesside Advanced Manufacturing Park;</li><li>• Queen's Meadow Business Park;</li><li>• Hartlepool Port Estates;</li><li>• New and Renewable Energy Park;</li><li>• South Bank Wharf;</li><li>• Wilton International;</li><li>• Central Park Northshore;</li><li>• Oakesway Industrial Estate; and</li><li>• Middlesbrough Historic Quarter.</li></ul>	<ul style="list-style-type: none"><li>• Advanced Manufacturing;</li><li>• Process, chemicals and energy;</li><li>• Logistics;</li><li>• Health &amp; Biologics;</li><li>• Digital &amp; Creative;</li><li>• Culture and leisure; and</li><li>• Business &amp; professional services.</li></ul>

\* Also five main town centres

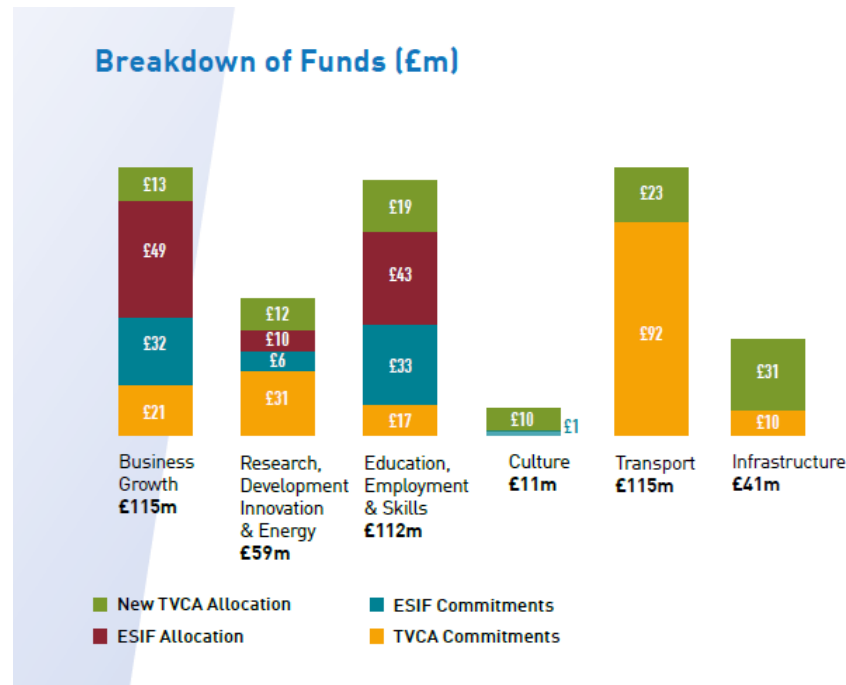


## 4.0: THE INVESTMENT PLAN

Brings together for the first time all funding sources into a 'single pot'

### Total £464 million

- £244 million committed
- £103 million European Funds available
- £117 million Combined Authority resources available
- Broken down into indicative allocations across themes
- £11m is allocated to support Project Development, Flexible Delivery and Evaluation
- The "Place" objective applies across all our programmes



# How does it work?



# Outputs

- an assessment of the opportunities and threats to the LEPs plans for increasing local Gross Value Added (GVA),
- based on the economy's dependencies upon the environment

- Solutions which require a change in the economic plan (strategic solutions)
- or*
- Solutions which do not require a change in the economic plan, and can be addressed through specific programmes of projects (tactical solutions)

# Decision-making under uncertainty

- Gaps in evidence or uncertainty need to be highlighted
- But important to avoid assuming that recommendations cannot be made based on the lack of evidence
- Important to ensure decisions are as fully informed as possible - evidence-informed exploration
- Subjectivity is inevitable – transparency is needed for outcomes to be relevant to TVCA/LA planning needs
- Outputs from the LEED should be seen as an exploration of possibilities, not policy statements



# Exercise 2: Opportunities and Threats

- **Objective = To build on the relationships and dependencies outputs to (1) draw out the key opportunities and key threats (2) rank their importance / urgency**
- **Output:**
  - List of key opportunities and threats
  - Ranking on importance / urgency





# Opportunities identified 1 - 3



## OA: River catchment/estuary

- Large underused natural asset, Natural resources that need enhancing, Rare/transitional habitats, bottleneck – all migratory fish must pass through.
- Asset to support economic growth – water frontage, tourism, views, habitat creation & connectivity.



## OB: Green Infrastructure (GI)

- Increase investment in existing GI and improve in new developments.
- Govt requirement for new housing means urban infill and more pressure on existing GI. Opportunity to improve the quality of GI and connect existing network.



## OC: Phytoremediation & sustainable urban carbon capture

- Large areas of contaminated land exist across the area. Use vegetation to decontaminate and remediate land and engineer soils to capture carbon.
- Create temporary habitats whilst awaiting development, improve the offer to developers, create positive image of the area.

# Opportunities identified 4 - 5



## OD: Industrial Archaeology

- Use the extensive industrial archaeology of the area to support tourism and leisure activities
- Create a better tourism offer and sense of place, destination points along river/coast e.g. Redcar blast furnace



## OE: Improving access

- Improve the network of PROW and cycle paths linking economic development opportunities.
- Better tourism offer link into new England coast path and long-distance footpath the Teesdale Way.



# Opportunities identified 6 - 8



## OF: Managing flood risk

- Flood risk is increasing with climate change. Increasing housing and commercial development across the area. Need to improve management of surface water.
- Co-ordinated approach across the TV to alleviate risk and provide wider environmental benefits.



## OG: TV Centre of excellence for renewable energy (RMM!)

- Build on emerging renewables sector to integrate renewables into local new developments.
- Create demonstration projects, generate a local market & support this sector, tourism possibility?



## OH: Decommission oil rigs

- Become the centre for 'greener' decommissioning using the principal of the circular economy
- Market opportunity, re-use and recycle materials from the rigs to be used in local heavy industries and new developments.

# Opportunities identified 9 - 10



## OI: Improving access II

- Increase safe and easy access to green spaces and increase opportunities for social prescribing.
- TV has some of most socially deprived areas in the country. Work smarter with health sector to promote, and make better use of GI



## OJ: Hydrogen as alternative fuel source

- Opportunity to repurpose existing infrastructure and storage for fuel production.
- TV has largest air separation units in Europe (now redundant?).



## Level 1

- **One day workshop focussed on identifying opportunities threats and potential solutions**
- 2.5 days (1 to set up, 1 to run, 0.5 to write up)

## Level 2

- **Initial consideration of environmental relationships for opportunities and threats**
- Meeting with key experts and representatives for each environmental relationship (0.5 days per relationship)
- Final workshop (2.5 days - 1 to set up, 1 to run, 0.5 to write up)
- Another 25 days work - approx £10K if using consultants

## Level 3

- **Detailed consideration of environmental relationships for opportunities and threats**
- Detailed data collection and analysis on environmental relationships (3 days per relationship)
- Ranking of opportunities and threats
- Final workshop (2.5 days - 1 to set up, 1 to run, 0.5 to write up)
- Up to another 50 days work - up to another £20K if using consultants