

---

**Report to:** Green Economy Panel

**Date:** 29 January 2019

**Subject:** **Clean growth and knowledge exchange**

---

**Director:** Alan Reiss, Director Policy, Strategy and Communications

**Author(s):** Kiran Parmar, James Brass, Jonathan Busch

---

## **1 Purpose of this report**

- 1.1. To support the development of the Local Inclusive Industrial Strategy (LIIS) this paper updates the Panel on the knowledge exchange to Graz and summarises a new proposal for a clean growth audit that will form a robust evidence base to help embed clean growth into the LIIS. The paper seeks endorsement for this approach.

## **2. Information**

### **Industrial Strategies**

- 2.1. The Panel has heard previously about the LEP's work to develop a Local Inclusive Industrial Strategy (LIIS). Sitting at the heart of a new, long-term strategic policy framework, the emerging LIIS will focus on bold steps aimed at driving inclusive growth, boosting productivity and improving living standards for a post-2030 economy. The Industrial Strategy is expected to be published in Spring 2020. The latest version of the Policy Framework, which now includes Carbon Reduction as a "Golden Thread", is in Appendix 1.
- 2.2. The need for leadership, coordination and convening powers, stated within the UK Industrial Strategy, signals an increasing role for government in industrial development.
- 2.3. The Government's guidance emphasises a bottom up approach to industrial strategies, encouraging the production of an evidence base to draw out strengths and weaknesses. Local officers have begun work on the evidence base, looking at sector strengths in health and social sciences, and in advanced manufacturing and a growing expertise in technology.
- 2.4. Turning to clean growth, whilst this is cited as one of four 'Grand Challenges' within the UK Industrial Strategy and recognised as a global economic opportunity, it remains unclear where existing strengths and weaknesses lie in the private sector and in innovation activities within the Leeds City Region economic area.

## **Clean Growth**

- 2.5. Of the four 'Grand Challenges' set out by Government, Clean Growth is globally significant, given the urgent need to tackle both climate change adaptation, mitigation and clean development. As the signatories to the Paris Climate Change Agreement implement decarbonisation plans, and global funds are mobilised, there will be an ever-greater need for low carbon capabilities and expertise. Trillions of dollars of investment in global energy solutions alone will be needed, highlighting the opportunity for UK business exports.
- 2.6. Work has already been done to identify the environmental and economic benefits of clean growth in the City Region. For example, the opportunity to transform the City Region's energy system has been quantified in the Leeds City Region Energy Strategy, approved by the Combined Authority and the LEP in late-2018, which identifies a potential increase of £11 billion GVA resulting in 100,000 new jobs. Similarly, the IPPR's Northern Energy Strategy marks energy as a key growth sector, highlighting strengths in advanced manufacturing and skills base, alongside world class university research.
- 2.7. Opportunities for the UK to lead the transition to clean growth will arise from competitive advantage. The Government's Clean Growth Strategy points towards:
  - the UK science base and capacity for innovation;
  - High value services in finance, law, consultancy, software and data;
  - Excellence in design and manufacture of products and advanced technologies;
  - policy and regulatory environment.
- 2.8. Capturing the global opportunity, while committing to decarbonisation, could produce growth rates of over 10 percent for the UK low carbon economy into the 2020s with between £60 and £170 billion in global export value. This underlines the clean growth challenge set out in the Industrial Strategy.

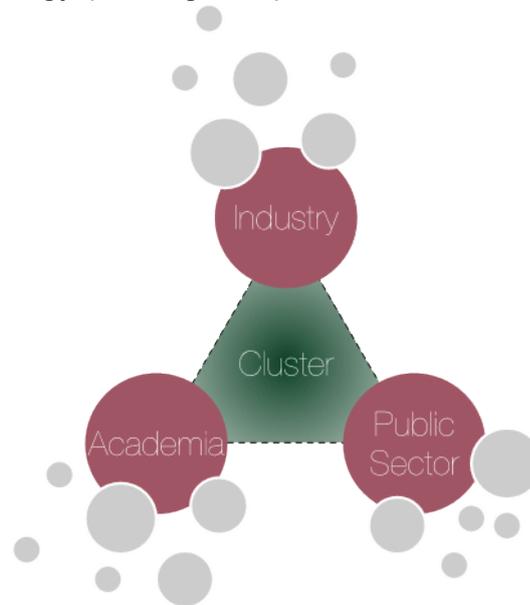
## **Knowledge exchange**

- 2.9. In July 2018, officers of the West Yorkshire Combined Authority and Leeds City Region Local Enterprise Partnership (LEP), including the Chair of this Panel, and a team from Leeds University, travelled to Austria to learn about the Green Tech Cluster in the region of Styria (one of 9 Austrian states). The aim was to investigate 1) how clean growth, in this case a clean-tech cluster, has driven economic growth and is a core component of their functioning economy 2) learn and integrate findings to support clean growth opportunities into the forthcoming LIIS
- 2.10. Members of the delegation collaborated with partners at the University of Leeds, the Styrian Regional Government and the Green Tech Cluster in Graz on a knowledge exchange workshop. The workshop focused on the development and functioning of industry clusters in Styria, exchanging ideas, and reflecting on the implications for UK industrial strategies and the need to tackle climate change.
- 2.11. Styria is an interesting comparison for the Leeds City Region as it has a history of successfully managing decline of heavy and dirtier industries whilst

maintaining advanced manufacturing industries and developing new internationally competitive green technology industries.

- 2.12. Styria has a total population of around 1.2 million compared to three million in the Leeds City Region. Its Gross Domestic Product (GDP) per capita is 114.8 percent of the European Union (EU) average compared to the Leeds City Region's 90.5 percent, and a research and development index (R&D) of 4.87 percent of GDP compared to the Leeds City Region's 1.07 percent. The UK Industrial Strategy aims to narrow this deficit by increasing the UK R&D investment rate to 2.4 percent by 2027.
- 2.13. The workshop explored the history and dynamics behind Styria's high rate of R&D investment and successful Green Tech Cluster. The Green Tech Cluster is an intermediary organisation part owned by the Styrian Regional Development Agency, the City of Graz and a local industry partner. It is funded by contributions from over 200 member companies who are active in Green Tech. The Green Tech Cluster organisation performs a number of functions that are valuable for its members:
- "Green Tech Radar" to inform members on new developments in green technology, and on the state of the global market;
  - Branding and internationalisation to build awareness of Styria as a leading centre for green tech innovation and facilitate investment in, and export by, member companies;
  - Business networking to facilitate knowledge exchange and cooperation amongst the local business community;
  - Management of a Green Tech Hub which provides space and mentoring for start-ups, with links to 12 hubs in international locations including Cape Town, Brussels and Montreal;
  - Innovation support, providing small – medium enterprises (SMEs) with targeted support for new innovation projects.
- 2.14. Subsequent analysis of the workshop outputs identified four key points of learning that should help shape the development of a local industrial strategy in the Leeds City Region. These are:
- 1) Build on local culture – Styria has a long history of innovation built on open collaboration between Universities and local industry.
  - 2) Harness Institutions and intermediaries – Industry, Civic Leadership and Public Sector Organisations all have important resources and capabilities to contribute to regional industrial development.
  - 3) Develop local missions – a clear vision for regional development with missions promoted by Civic Leaders that address social and economic challenges is valuable in multiple ways.
  - 4) Work with appropriate geographies – the geography of Yorkshire is much more fragmented than Styria and this must be recognised in local strategies. Visions and missions should be developed for appropriate geographies.
- 2.15. The learning from the knowledge exchange project (see appendix 2), and wider research on industry clusters for regional development, point to the formation of industrial clusters, to accelerate innovation and sector growth.

- 2.16. Industry clusters have been a key part of the European Union Smart Specialisation programme for almost two decades, based on the principle that regional specialisation can create competitive advantages to promote economic development.
- 2.17. The cluster approach is favoured in recent policy by the Government, as reflected in the Strength in Places programme, Industrial Strategy Challenge Fund programmes and the Defra Resources and Waste Strategy which calls for the creation of Resource Efficiency Clusters.
- 2.18. Technology clusters can take a number of forms, and evolve to change form through their lifecycle. The Styrian Green Tech Cluster started with the presence of a strong industry anchor organisation, but has since become more decentralised with a bigger proportion of SME members.
- 2.19. Clusters are usually managed on the basis of a “Triple Helix” approach, which focuses on creating a creative space for innovation between government, industry and research institutions. An intermediary organisation is a useful body to realise such a strategy (see Figure 1).



*Figure 1 The Triple Helix approach to cluster management, which creates an intermediary organisation that harnesses the strengths of Civic Leadership, Industry and research institutions to foster innovation.*

- 2.20. The Styrian Green Tech Cluster offers an approach that could be replicated in the Leeds City Region. However, a greater level of sector intelligence is firstly needed to ascertain the conditions for industrial clusters, and, in the case of green-tech; current and future sector strengths and innovation activities. The Clean Growth Audit proposed below will address this.
- 2.21. The learning from the knowledge exchange has informed development of the LIIS evidence base; in particular, though the design of a clean growth audit (see below). For example; the Styrian approach involved a ‘top-down’ and ‘bottom-up,’ strategy in order to address specific challenges while supporting grass-roots innovation. This suggests a need to balance the urgency of a low carbon transition, with sufficient scope for local strengths to emerge.

### 3. Clean growth audit

3.1. The Local Inclusive Industrial Strategy (LIIS) must choose a set of strategic priorities for Clean Growth. To support development and implementation of the LIIS, an evidence base is needed that:

- Shows developments consistent with the Clean Growth Strategy and global industry trends driven by the Paris Agreement.
- Identifies existing local industrial strengths.
- Incorporates the findings from the knowledge exchange and builds on these.

3.2. Building on the work above, and to begin the creation of a robust evidence base for Clean Growth in the LIIS, a clean growth audit is proposed.

This will:

- Create an evidence base on the location and type of industrial activities that are the highest users of energy (energy intensives) and emit the greatest greenhouse gas emissions (carbon intensives).
- Map where and who are currently operating in the low carbon and sustainability service sectors.
- Identify current and future opportunities including existing or future cluster networks such as a green or clean technology (Cleantech) cluster (but not limited to this) and building on the findings of the Knowledge Exchange.

3.3. Four stages are proposed to capture this information (Figure 2).

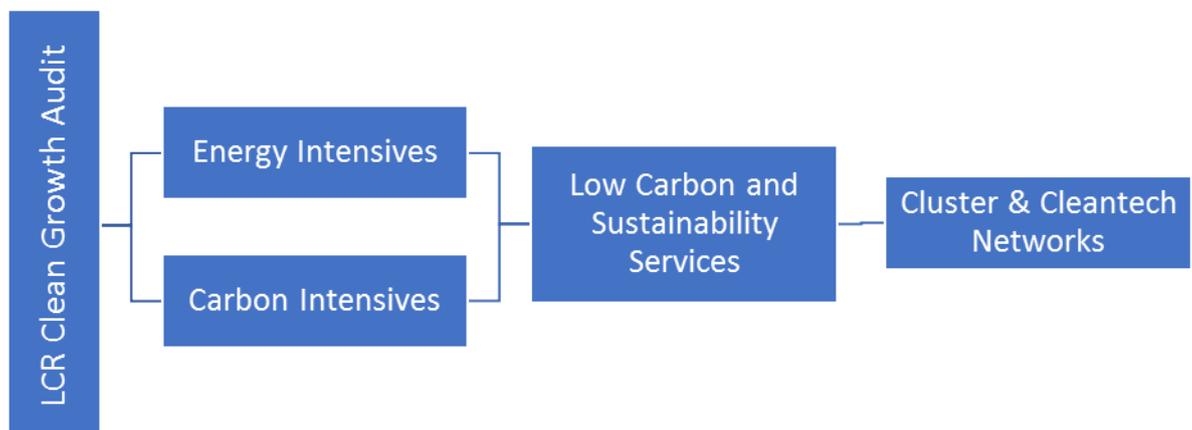


Figure 2 Clean Growth Audit proposal

A mixture of top down and bottom up approaches will be used, with support from the University of Leeds Sustainable Research Institute over the next five months.

3.8 Figure 3 below describes how the Knowledge exchange and clean audit will support the LIIS and identify new opportunities to potentially be developed

through the LIIS, this may include clean-tech cluster development and other opportunities identified in the evidence from the Clean Growth Audit.

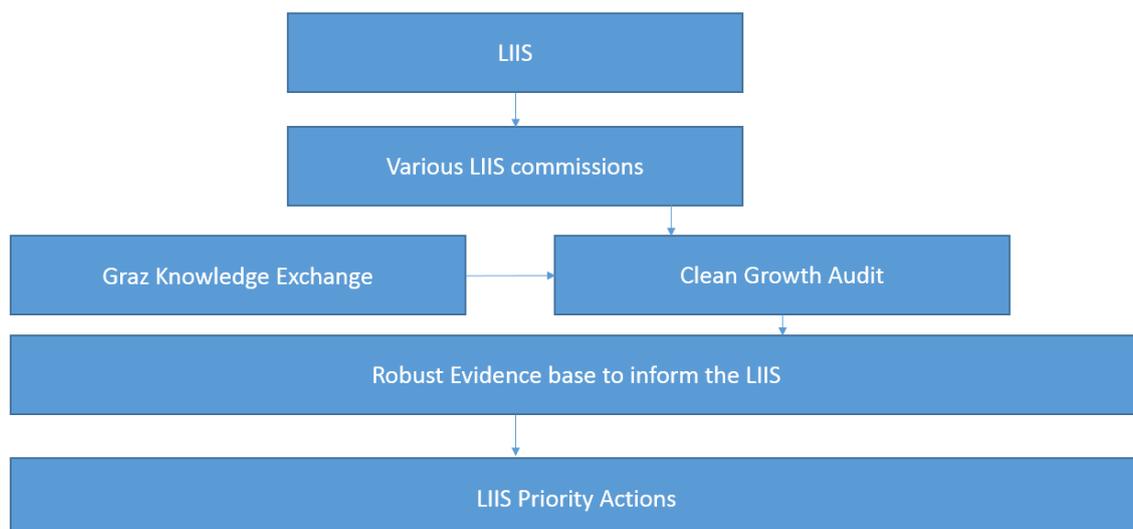


Figure 3 Local Inclusive Industrial Strategy evidence Base

#### 4. Next Steps

Action	Timescale
1. Commission Clean Growth Audit	January 2019
2. Complete Audit	May 2019
3. Integrate opportunities identified in the Audit into the LIIS	May – September 2019

#### 5. Financial Implications

5.1. Activities supporting development of the Industrial Strategy evidence base are financed by internal budgets. Purchasing of supporting services - for example market analyses, will be subject to internal procurement, budgetary control and delegated approvals.

#### 6. Legal implications

6.1. No legal and compliance implications have been identified

#### 7. Staffing implications

7.1. Additional support will be available from Jonathan Busch from Leeds University's Sustainable Research Institute, who will be supporting this work over the next 6 months through the Knowledge Exchange project.

## **8. External consultees**

- 8.1. The University of Leeds Sustainable Research Institute will be the partner organisation working alongside Combined Authority Officers in development of activities in Section 3 and 4.

## **9. Recommendations**

- 9.1. The Panel are recommended to note the contents of the report and provide comments on the emerging findings, especially in relation to the information outlined in Sections 3 and 4.

## **10. Background documents**

- 10.1. UK Government Industrial Strategy
- 10.2. UK Government Clean Growth Strategy

## **11. Appendices**

- 11.1 Appendix 1 - Policy Framework

Appendix 2 – Local Inclusive Industrial Strategy: Decision Theatre Final Report: A Knowledge Exchange event between the Leeds City Region and Styria.