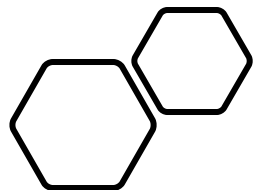




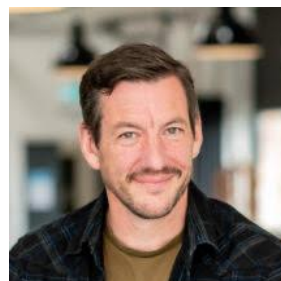
Five hard truths about the 'Road to Net Zero'





Introductions – today's presenters

- Alex Craven – Co-founder & CEO
The Data City
- Joe Ahern – Head of Policy
Consulting WPI Economics



Five hard truths about the 'Road to Net Zero'

The green transition will have an impact across a wide range of jobs and sectors.

The impacts will be complex, the hope is that the combination of stimulus created by investment, the efficiencies created by saving energy and low carbon technologies will result in a net increase in employment overall.

But will the growth in green sectors offset the reductions in employment in nongreen sectors?





Five hard truths about the 'Road to Net Zero'

1. The path to Net Zero will place many jobs at risk of change – or cause them to disappear completely
2. To meet the objective the sector must grow by..
3. There is no single definition of the key concepts such as
 - Green jobs & Skills
 - What are Net Zero / Green Sectors
4. Every local authority faces different challenges
5. The entire supply chain needs certainty to invest in education/skills & innovation to stimulate industrial sectors and supply chain development

1. 11% of employment is in high carbon sectors – many of which will change significantly, or are at risk

- Even in central London where only 4% of jobs are in high carbon sectors this represents 137,000 jobs.
- However, there is likely to be a net increase in jobs overall.



2. To meet the objective the sector must grow by 8% per year from now to 2030 in London*

.. and then continue to grow to 2050

This reflects double the rate of growth for the digital sector in the decade leading to the pandemic.

*This will be a similar rate across the country.



3. There is no single definition of the key concepts

Such as:

- Green jobs & Skills
- What are Net Zero / Green Sectors

So:

- How do we track emissions?
- How do we track progress?
- How do we predict and manage the transition?



4. Every local authority faces different challenges

- % of employment in high carbon sectors differs greatly 4% in Central London vs National averages between 9%-12%
- Growth of green jobs not geographically aligned to decline of high carbon jobs & skills – high carbon jobs and green sectors can both be clustered.



5. The entire supply chain needs certainty

Each sector and its stakeholders need certainty to invest in education/skills & innovation to stimulate industrial sectors and supply chain development

E.g. which direction on low carbon heating





Finding the 'Road to Net Zero'



Key questions

- What is a green job and what are green skills?
- How many green jobs are there in a geography?
- How many will there be in the future?
- What skills are needed for these jobs?
- What jobs are at risk from decarbonisation?
- Implications for employment and skills provision





What is the green economy / green jobs?

- Range of definitions of the **environmental** or **low-carbon** sectors available but these tend to be technocratic
- However, no definition of the terms **green jobs** or the **green economy** that is divorced from policy goals
- We therefore recommended a practical “mission-based” definition:
 - **Green jobs are those jobs that facilitate meeting net zero and broader environmental goals**
- For analytical purposes we split this into policy areas such as “Homes and Buildings” and “Climate Change Research and Development”



Case Study 'London Boroughs'



datacity



institute for
employment
studies



ECONOMICS



Estimated green jobs in Central London Forward sub-region, 2020

Sector	Central London Forward		
	Numbers of jobs	% total employment	% of green jobs
Homes and Buildings	30,700	1.0%	21%
Low Carbon Transport	8700	0.3%	6%
Power	42,700	1.4%	29%
Industrial decarbonisation, hydrogen and carbon capture	400	0.01%	0.3%
Green finance	50,100	1.6%	34%
Climate change Research and Development	1,800	0.1%	1%
Climate change strategy, policy, monitoring and planning	2,300	0.1%	2%
Climate adaptation, green infrastructure and reducing localised pollution	3800	0.1 %	3%
Reduce, reuse, recycle	6,400	0.2%	4%
All green jobs	147,000	4.7%	100.00%

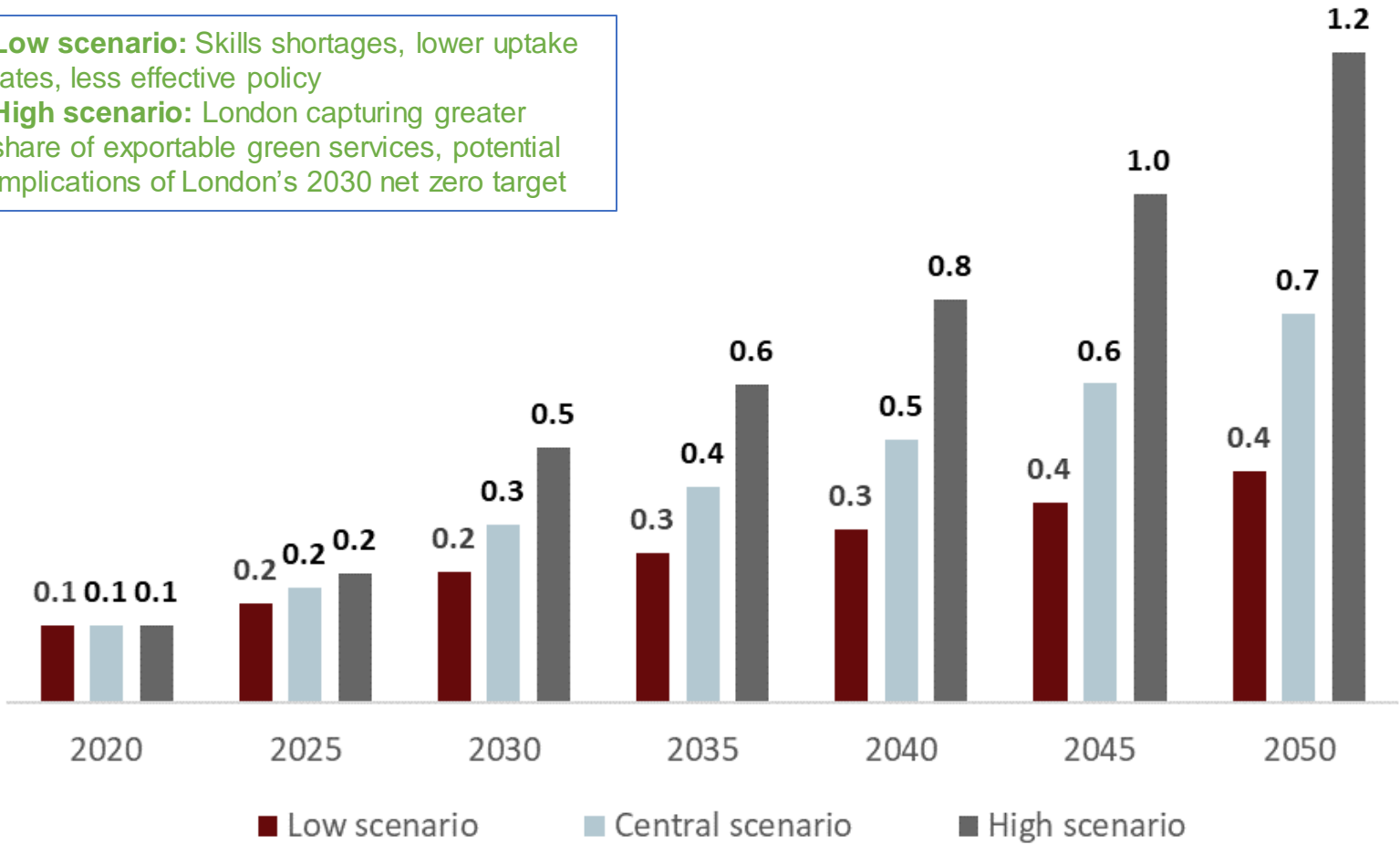
Source: WPI Economics calculations based on data supplied by kMatrix on their Low Carbon Environmental Goods and Services methodology and The Data City, and ONS Business Register and Employment Survey for total employment by sub-region



Skills and demographic analysis of current green jobs

- **Three quarters of green jobs in central London are in high level managerial, professional and associate professional occupations**, above the proportions for the whole of London and the UK (70% and 53% respectively)
- Jobs in the power and green finance/consultancy sectors are predominantly professional and associate professional jobs, while in the homes, buildings and infrastructure, and reduce, reuse, recycle sectors, the largest occupational group is skilled craft workers (eg electricians, plumbers etc.)
- **Three quarters of central London residents in green jobs have degrees** (above proportion of graduates in all jobs in central London of 70%, and double the proportion of graduates in green jobs across the UK as a whole of 38%). **The vast majority of workers in power and green finance/consultancy sectors are graduates**, as are half of those in homes, buildings and infrastructure.
- There are around **14,000 learners in FE (over 19) and in apprenticeships** in relevant subject areas to green jobs.

Low scenario: Skills shortages, lower uptake rates, less effective policy
High scenario: London capturing greater share of exportable green services, potential implications of London's 2030 net zero target





Skills supply considerations

- Under the central scenario, the fastest growth rate is projected for skilled craft workers (145% increase to 2030).
- However, the largest increase in numbers of workers is projected among associate professional workers (52,000 increase, or 113%).
- In addition to the growth in numbers, there will be a need to replace workers who retire or leave the labour market. It is estimated that this replacement demand represents one third of the current employment level.



And slight positive overall impact on jobs

Total employments, 2019							
Estimated jobs in central London, 2030				Estimated jobs in central London, 2050			
Area	Latest data	Based on current policies	With net zero Policies	Change due to net zero policies	Based on current policies	With net zero Policies	Change due to net zero policies
Central London	3,167,000	3,492,000	3,517,000	25,500	3,911,000	3,921,000	9,800
Whole of London	5,368,000	5,853,000	5,900,000	47,200	6,443,000	6,462,000	19,400



However, some jobs will go

- We define carbon intensive sectors as ones that either have emissions over 100tCO₂e per job or which contribute more than 2% of annual total UK emissions.
- Based on this definition, we identify **137,000 of Central London's 3.2 million jobs in these sectors.**
- This represents 4% of employment, which is a significantly lower proportion than other sub-regions of London which vary between 9-12% of employment in these sectors.
- The high proportion of service sector jobs in Central London explains this difference, as these tend to be less carbon intensive.



Summary





Key points

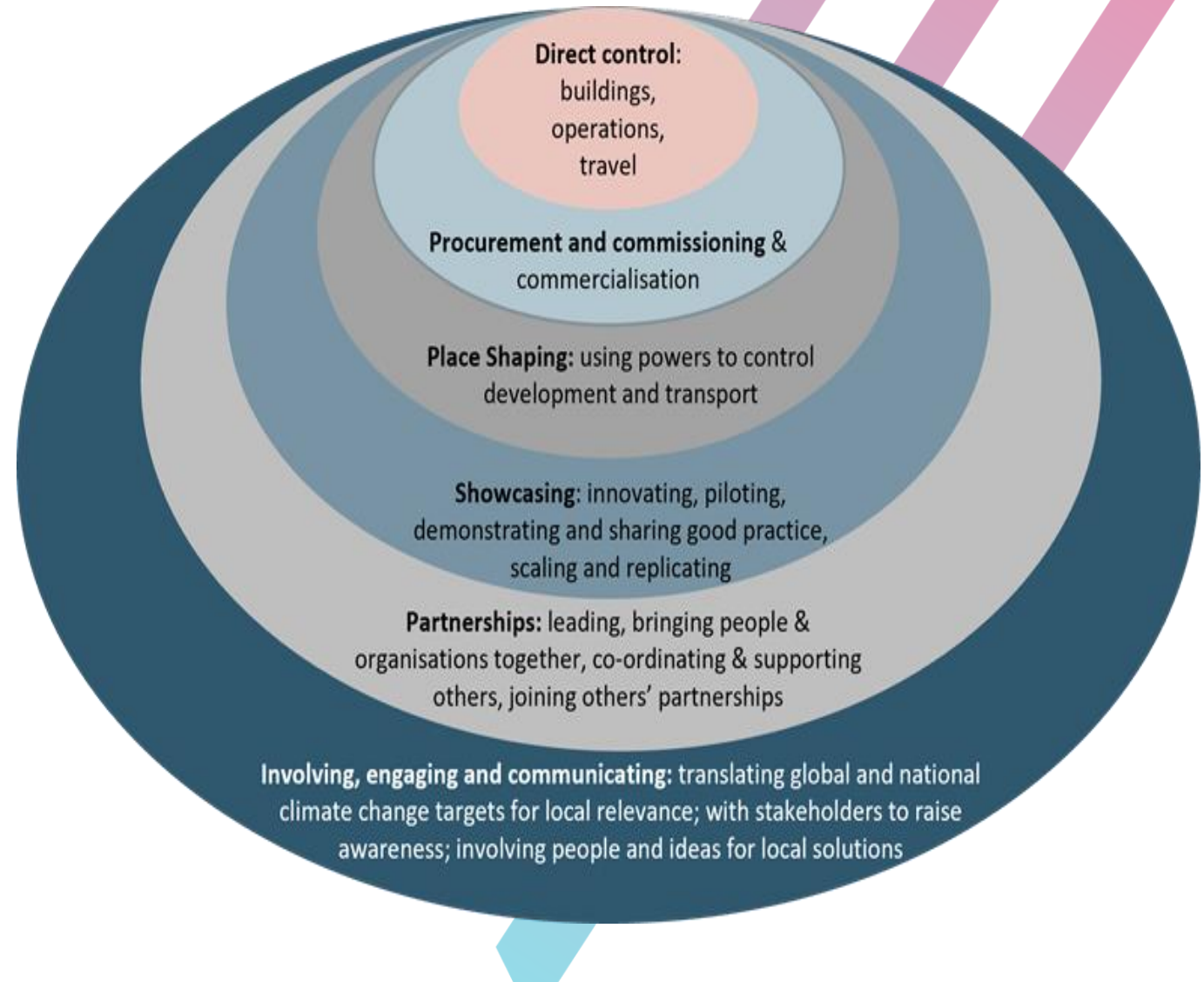
- There will be a significant rise in green jobs, but some people will lose their jobs.
- Net zero policies likely to have a small positive impact on overall number of jobs.
- Represents a significant shift in skills needs – which current provision will not meet.
- This provides an opportunity to ensure delivery of inclusive growth. Giving people they need to take advantage of future jobs will ensure inequalities do not deepen and could reverse inequalities of the past.
- This means there is an urgent need to:
 - (a) increase education provision in relevant subjects and courses,
 - (b) increase the proportion of those taking relevant courses who progress to green employment, and,
 - (c) increase the flows from other sectors into green sectors, including through re-skilling training.
- Overall, ensuring long term policy clarity and certainty is essential to support boroughs, employers and providers.

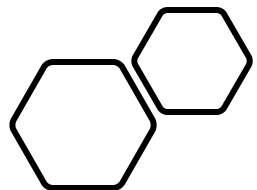
What can Local Government do now?

Prepare your evidence base:

- how many green jobs do you have
- how many carbon intensive jobs are at likely to be lost?
- map your Net Zero sectors & supply chain
- how many and what type of green jobs will be created in your geography?
- how 'green skills ready' is your labour force?

Local authorities will play a central role in getting us to net zero and adapting to climate change (diagram right)





Thank you!

If you have any questions please contact us

- Alex Craven – alex.craven@thedatacity.com
- Joe Ahern – joe.ahern@wpieconomics.com

