The State of the Humber 2026

The Art of Regeneration

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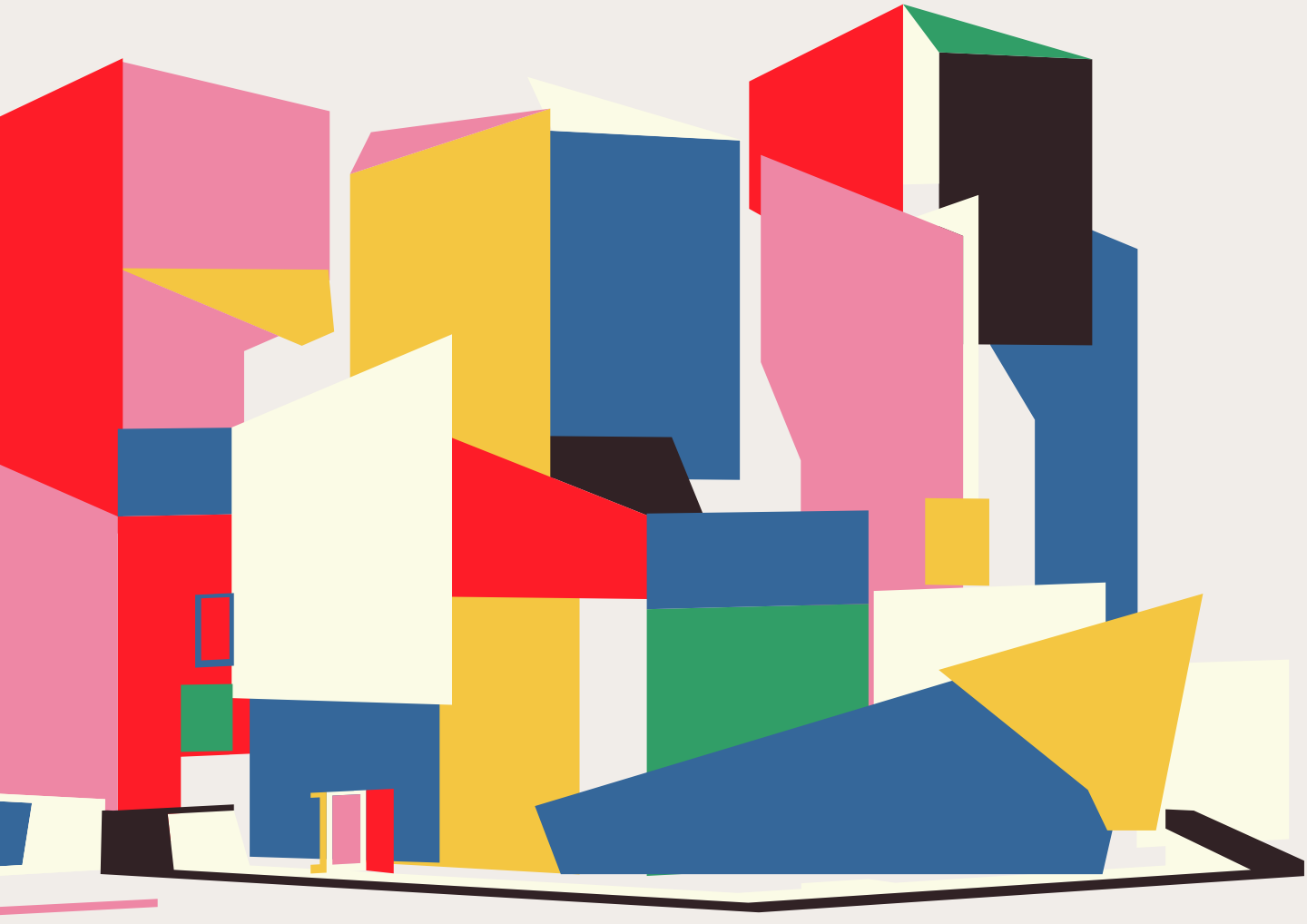
THE NORTHERN POWERHOUSE PARTNERSHIP



ARUP

Catherine Darby-Roberts
Humber Growth leader
humber@arup.com

THE NORTHERN POWERHOUSE PARTNERSHIP

Andrew McPhillips
Chief Economist
info@northernpowerhousepartnership.co.uk

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Foreword

Lord Stockwood
Minister for Investment

The State of the Humber matters to me.

I grew up here, and I have seen the path of decline in the past. But it is clear to me based on the evidence presented here by the Northern Powerhouse Partnership that the path for the future of our communities is bright if we together grasp the opportunities which face us.

As Investment Minister my job is persuading global investors to invest here in the UK, and it is not just our communities who are sitting up and taking notice of the places here on the Humber and the wider North of England.

The region has spent more than a decade re-positioning itself as one of the UK's leading centres for clean energy and modern industry. That has not happened by accident. Governments of different political colours have backed this direction because the economic logic is clear. From the Siemens Mobility Rail Village in Goole to the National Grid investment into the transmission system here on the Humber and beyond to support decarbonising our economy the investment keeps on coming.

The Humber remains one of the most important industrial regions in the United Kingdom. It generates almost a fifth of the nation's electricity, produces a third of its refinery output and handles a significant share of Britain's gas imports. It is also the largest emitter of carbon dioxide in the country.

We need to avoid those who critique Net Zero on ideological grounds turning away opportunities like Carbon Capture and Storage which is critical to many of our largest current employers keeping their jobs here in the UK. In addition, thousands of construction jobs would follow as pipelines and storage facilities are built. Thousands more long-term roles would emerge across engineering, operations and logistics.

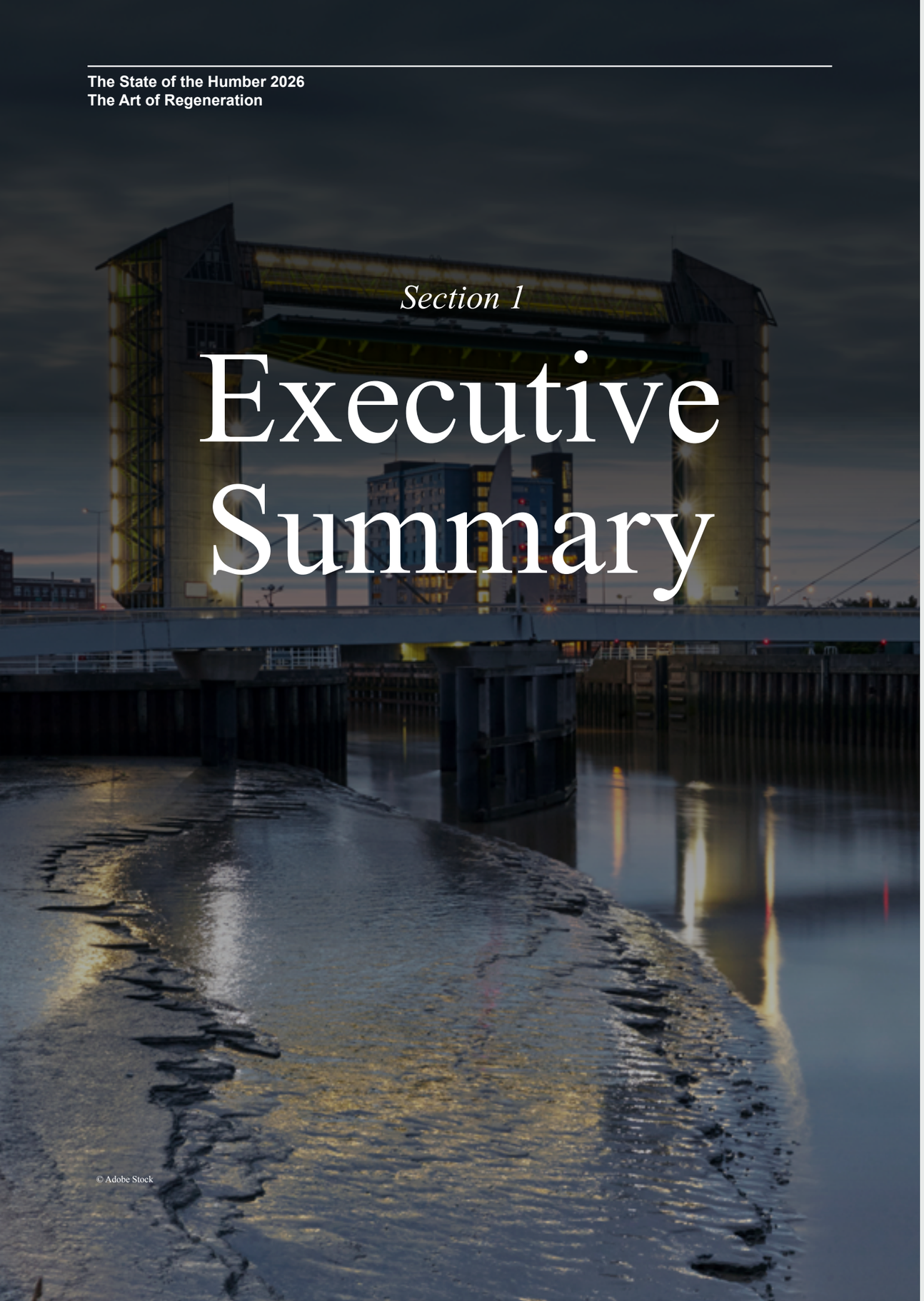
Alongside this, colleges and training providers across the region will need to scale up, developing the skills pipeline for the future so that young people growing up in Hull, Grimsby, Scunthorpe and the surrounding towns can access high quality industrial careers. Heavy industries such as refining, chemicals and advanced manufacturing remain central to Britain's economy. But they are also major emitters. Carbon capture offers a practical way to keep those industries productive while dramatically reducing their emissions by storing carbon beneath the North Sea. The Viking project, linking industrial sites around Immingham to storage off the Lincolnshire coast, would be a world leading example of how that transition can work.

I have had positive and pragmatic conversations with regional leaders across the Humber. We broadly agree that prioritising jobs, skills and long term industrial opportunity must come first. If we are serious about creating well paid jobs and long term prosperity in places like Hull, Grimsby and Immingham, we need practical plans for how existing industrial infrastructure evolves in a lower carbon world.

For a region that has spent years building momentum around clean energy and industrial investment, the suggestion that we should walk away from that opportunity would simply be turning our backs on the future.

Section 1

Executive Summary



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The Humber is already one of the UK's most important industrial regions. The question is no longer whether it has potential, but whether it can deliver that potential at pace.

Over the past decade, the region has repositioned itself as a nationally significant centre for clean energy and modern industry. It combines strategic assets — major ports, energy infrastructure and manufacturing capability — with a growing ecosystem spanning offshore wind, hydrogen and carbon capture.

This report sets out a clear argument: the Humber has the assets, intent and governance to lead the UK's industrial transition but delivery will determine whether that opportunity is realised.

Clean energy is already the region's most productive sector, while established industries such as chemicals and advanced manufacturing remain vital economic anchors. However, productivity gaps persist across several large sectors, and addressing these will be critical to long-term, inclusive growth.

Five enabling conditions will determine success:

- Empowered and coordinated local leadership
- Accelerated grid infrastructure
- Secure and sustainable water supply
- Reformed environmental and planning systems
- Investment in resilient coastal infrastructure

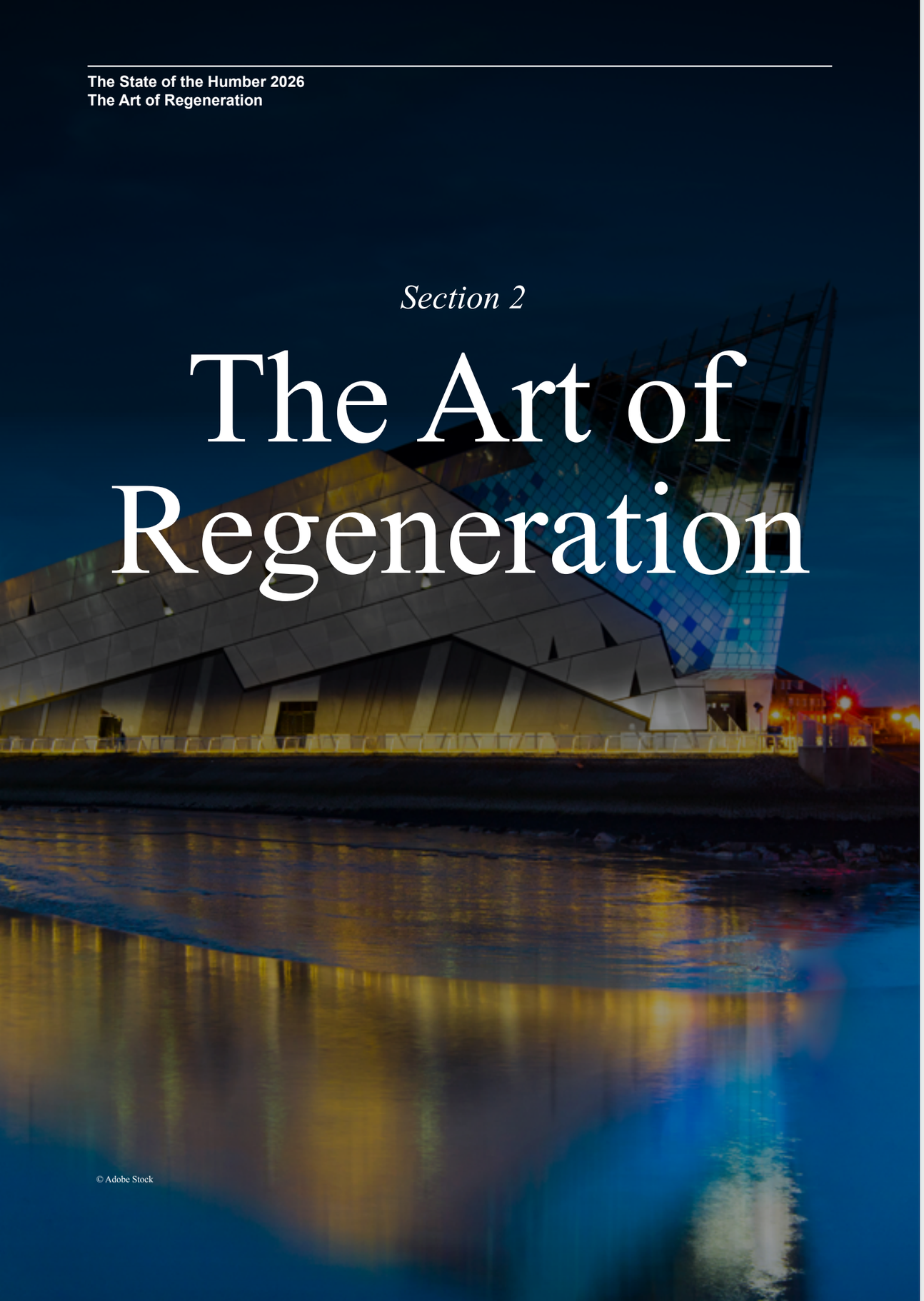
These are not abstract challenges, they are the practical constraints that will shape whether investment can be unlocked.

The data is clear: growth will not be constrained by ambition, but by delivery.

If these conditions are addressed, the Humber will not only benefit from the UK's transition to net zero, but help drive it to create jobs, increase productivity and act as a national model for place-based regeneration.

Section 2

The Art of Regeneration



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Regeneration in the Humber is entering a new phase.

Over the past decade, the region has built strong momentum, establishing itself as a leading centre for clean energy and modern industry. The challenge now is not defining the opportunity but delivering it.

This next phase will be shaped by how effectively the region can align infrastructure, policy, investment and skills to support long-term growth. Achieving this requires more than collaboration; it demands coordination across sectors, institutions and geographies, grounded in a shared understanding of both the barriers to progress and the levers for change.

Regeneration in this context is not simply about attracting investment. It is about creating the conditions in which investment can succeed, enabling growth, supporting industrial decarbonisation, and delivering meaningful outcomes for communities.

Arup's work in the region has focused on identifying the barriers and opportunities that will shape this next phase. Through this, we have developed a strong understanding of the Humber's strengths and challenges, and a clear confidence that the region has the right ingredients for success supported by engaged stakeholders with a shared ambition to deliver it.

The following focus areas set out key conditions for delivery that will determine whether the Humber can translate its momentum into sustained, inclusive economic growth.

The Art of Regeneration Arup event

Empowered Local Government

The Humber Economic Strategy (August 2025) outlines a pan-Humber vision for economic transformation across the region over the next decade. This shared plan provides a strategic framework for attracting investment and highlights opportunities that will require an Estuary-wide approach: Energy Security and Resilience; Freeport, Ports and Logistics; and Environment and Natural Capital.

With the establishment of the Hull and East Yorkshire Combined Authority (HEYCA) and the Greater Lincolnshire Combined County Authority (GLCCA) in 2025, the region now has the institutional scale needed to convert long-held potential into sustained growth. The two elected Mayors provide visible leadership while existing partnerships across the Humber continue to enhance national influence.

Through their respective devolution deals, HEYCA and GLCCA acknowledge that maximising the Humber's opportunity relies on continued collaboration between public and private sectors on both sides of the Estuary, in partnership with the Humber Energy Board, Humber Freeport, and Government support. Efforts are underway to streamline governance and coordinate decisions that benefit from a unified pan-Humber approach to estuary management.

Economic plans across the Humber are rightly focused on energy, ports and logistics, agrifood innovation and advanced manufacturing as growth sectors. The forthcoming HEYCA and GLCCA Local Growth Plans will outline respective ambitions for targeted investment and acceleration in priority areas. The intention is that the Local Growth Plans will further include shared Humber priorities and the investments needed to deliver them, coming together with partners.

The primary challenge is delivering these strategies and converting devolved funding into robust programmes that boost productivity, attract talent and investment, and foster inclusive outcomes.

Arup's Principles for Effective Delivery points to several priorities for what comes next. In particular, the importance of holistic, place-based programmes that integrate interventions across policy areas around clear economic missions. Additionally, a clear market-facing narrative that presents a single, compelling investment proposition and reflects functional economic geographies rather than administrative boundaries - something the Humber Economic Strategy intends to address.

With ongoing collaboration, HEYCA and GLCCA can position the Humber not just a recipient of growth, but a national engine of it.

The Humber Economic Strategy

Grid acceleration

Upgrading the electricity grid is central to delivering the UK's energy transition and unlocking economic and social benefits at scale - locally and nationally. Grid unlocked, Arup's recent macroeconomic study, sets out the scale of this opportunity, exploring how different levels of grid investment and electrification could shape jobs, growth and energy security across the UK.

The findings are compelling. Sustained, ambitious investment in the electricity grid to 2040 could support an additional 92,000 jobs each year, unlock £194bn in gross value added, and deliver a 4:1 return on investment from around £34bn of grid spend. Benefits would be felt across the economy, from services and construction to property and agriculture, alongside improved energy security and reduced exposure to volatile global gas markets.

For the Humber, grid acceleration is particularly critical. As one of the UK's most energy intensive industrial regions - home to major ports, renewable generation, and emerging hydrogen and industrial decarbonisation projects - the pace of grid delivery will directly shape what can be built, connected and scaled. Grid constraints risk slowing investment, while timely upgrades can unlock regional growth, high-value jobs and a just transition for local communities.

Grid unlocked makes clear that grid investment alone is not enough. Unlocking value at pace requires a programmatic, whole system approach - aligning generation, transmission, distribution, storage and demand side flexibility, alongside digital systems, policy, finance, supply chains and early community engagement.

Accelerating the grid in this joined up way gives regions like the Humber the opportunity to unlock local benefits while contributing to national energy security and prosperity.

Water security

Rising industrial demand, decarbonisation ambitions, and environmental constraints are reshaping water needs across England, with the Humber region a clear example of this growing pressure. Industrial clusters supporting hydrogen production are expected to expand rapidly, driving substantial increases in non-domestic water requirements. However, water availability across England, especially in the east and northeast, is already under severe strain due to population and industrial growth, alongside tightening environmental requirements that are reducing abstraction rights. Water companies are at or near capacity, and major water resource schemes are 10 to 15 years away from supply. This combination of rising demand and constrained supply underpins the national water scarcity challenge and the urgency for coordinated action.

To ensure water is available for investment, major projects, and industrial clusters, the government is advancing several reforms and strategic initiatives. Central to this effort is the DEFRA Water Delivery Taskforce, a ministerial group established to strengthen delivery assurance and remove barriers to economic growth. Its role includes unblocking infrastructure projects previously stalled by unsustainable abstraction, demonstrating its capacity to convene agencies such as Natural England and the Environment Agency to enable development.

Government policy is also being reshaped through the DEFRA-led white paper proposals and wider water resources reform agenda. These include moving abstraction and impoundment regulation into the Environmental Permitting Regulations, a significant shift intended to address unsustainable abstraction and improve the national management of water resources. A further consultation by the Environment Agency, specifically on reserving water abstraction rights for NSIPs and major projects, closed in February 2026, with the outcomes expected later in 2026. This is an important step in providing certainty to developers and nationally significant projects.

Alongside these regulatory reforms, the government is progressing a more integrated regional water planning framework to better coordinate supply across sectors, and supporting the uptake of water reuse, NAVs, and other alternative supply solutions. These measures are set out in the recently published White Paper and, together, reflect a more proactive, system-wide approach designed to ensure that water availability enables rather than constrains industrial growth and national investment priorities.

In the Humber, the Humber Energy Board and Mayor of Greater Lincolnshire have established task groups to collaborate and work with central government to support the reform and secure water for the region.

Environmental reform

Wider environmental reform, including improved approaches to air quality and noise, is needed to ensure that low carbon developments are fully supported and that sufficient environmental capacity exists for the projects set out in the Humber Industrial Cluster Plan.

Current environmental permitting systems can act as a barrier to coordinated development. In industrial clusters, a first come, first served permitting model can restrict later CCUS and hydrogen projects from accessing the necessary headroom. Existing operators often retain unused permitted emissions, with no routine mechanism to release or reassign this capacity. Baseline environmental data is also inconsistent, monitoring requirements vary, and operators are frequently required to develop their own evidence bases. New technologies face precautionary emission assumptions, and evolving standards, further constraining available headroom.

Despite these challenges, there is an important opportunity to reform how environmental metrics are assessed and to develop more strategic approaches. A leading example is the collaboration between VPI and Arup, working with the Environment Agency to secure the UK's first environmental permit allowing the use of proprietary amine solvents for carbon capture at VPI's Immingham CHP plant. This first of its kind approval set an important precedent for proprietary licensors and is considered best in class for CCUS.

The Humber
How to unlock economic growth across the region


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Nature reform

The Planning and Infrastructure Act 2025 marks an important evolution in how environmental constraints are managed in growth regions like the Humber. The introduction of Environmental Delivery Plans (EDPs) is designed to move certain cumulative pressures away from repeated project-by-project assessment and towards a more strategic, outcome-focused consents process. In a place where internationally important estuarine habitats and ambitious industrial investment sit side by side, that shift has the potential to be significant.

EDPs aim to provide greater clarity and predictability for investors by addressing clearly defined impacts at scale. Where an EDP is in force and levy commitments are secured, specified impacts should be managed strategically, offering an alternative, more transparent, route through HRA and other environmental consenting regimes. Importantly, this is not about lowering environmental standards but increasing environmental outcomes and reducing consenting uncertainty. EDPs are intended to be grounded in robust ecological evidence and to maintain site integrity, aligning growth with long-term nature recovery.

Natural England are developing the first tranche of EDPs which will be focused on nutrient pollution and will be consulted on in Spring and Summer 2026. Following publications of these and further guidance, we expect Natural England will focus on EDPs development to support major infrastructure hubs such as the Humber to enable the transition to net zero.

For the Humber, this strategic approach could enable a transition from reactive constraint management to proactive environmental delivery. Done well, it should support investment in ports, energy, grid and water infrastructure while strengthening the resilience of internationally designated sites. In our view, that combination of environmental confidence and strategic ambition is what positions the Humber as a leading location for sustainable infrastructure and clean growth.

Coastal community growth

The Humber estuary is vulnerable to tidal flooding from the North Sea at a time when all civil linear infrastructure systems in the UK, including flood defence, water and wastewater, and transport networks, are reaching the end of their serviceable lives. Each remarkable event can have consequences for the regions' economic resilience and the communities that both depend on it and drive its transformation and growth. The flooding of industrial sites, ports, or key transport links and utilities would not only interrupt local operations but also disrupt supply chains and logistics far beyond the region.

When communities are flooded, it is often those living in poverty or on low incomes that are disproportionately impacted. They are more likely to live in higher flood risk areas, less able to make their homes more flood resilient or afford repairs, and less likely to have friends or relatives able to offer support.

Billions of pounds of investment will be needed in the next few decades to manage tidal flood risk in the region. Only by reframing this challenge, by moving away from a narrow focus on flood defence to a multisectoral, place-based and value-driven approach, can these communities hope to secure the investment they need to safeguard future generations.

The Environment Agency are committed to providing growth and a safe environment through the Humber 2100 programme. By taking a holistic view, working hand in hand with the industrial growth in the region, they seek to build a credible case for investment in long-term flood resilience and inclusive growth for the regions' future coastal communities, this is an exciting chapter of economic transformation and the natural environment.

Urban community empowerment

Arup is proud to work with both private and public sector clients on transformational projects that deliver regeneration across the UK. But for this work to really respond to the nuanced needs of the local communities and leave a lasting legacy that improves health and wellbeing, advances social equity and increases resilience, we need to work hand in hand with civic society.

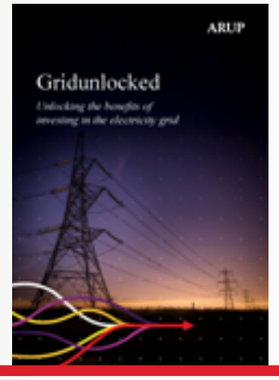
Grass roots community groups, local charities and interest groups that are deeply embedded and trusted by residents hold the key to understanding the need, building awareness, co-designing solutions and delivering outcomes that are felt far beyond physical site boundaries. This means engagement that is relational rather than transactional and enduring rather than project-focused: a commitment to working alongside and understanding the full ecosystem of stakeholders in an area. At Arup we're proudly committed to this approach.

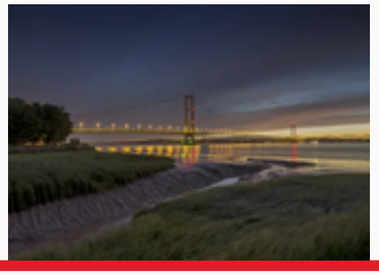
Working in partnership with the West Marsh Development Trust in Grimsby, we are increasing our understanding of community need and the opportunity for us to enable and support the tireless work of the Community Centre and volunteers with their vision for change. We're working in a mentoring capacity as they seek to establish a community ethical landlord model to acquire and retrofit derelict properties to meet a critical need for decent, secure, affordable housing. And this insight informs our own perspective and advocacy in wider conversations about regeneration.

Taken together, these conditions will determine whether the Humber can move from momentum to sustained delivery to enabling investment, supporting industrial transformation, and unlocking long-term growth.

But understanding the scale of that opportunity requires a clear view of how the Humber's economy is structured today - where its strongest sectors and industrial clusters are located, where productivity is already high, and where the gaps that must be addressed remain.

The analysis that follows examines these dynamics in detail, identifying where growth is already taking place, and where the right conditions could allow it to accelerate.





Grid acceleration

Enabled local government

Water security

From Conditions to Clusters: What the Data Shows

The analysis above sets out the enabling conditions that will determine whether the Humber can convert its potential into sustained economic growth: empowered local institutions, an upgraded electricity grid, secure water supply, reformed environmental consenting, and resilient coastal infrastructure. These are the foundations without which industrial ambition cannot be realised.

The following data analysis examines where the Humber's industrial economy currently stands. Which sectors are already generating above-average productivity, which are large but under-performing, and where the structural gaps are most acute.

The Humber's clean energy sector, already the most productive cluster in the region, is precisely the sector for which grid acceleration and water security act as binding constraints. Unlocking those constraints is not merely an infrastructure question; it is the precondition for the Humber's highest-value industrial activity to grow. Similarly, the case for empowered local government and a unified pan-Humber investment narrative maps directly onto the finding that the region's foundational manufacturing clusters, concentrated but below-average in productivity, require coordinated, place-based programmes of the kind that devolved institutions are best placed to design and deliver.

The sectoral analysis below should therefore be read in this context: the question is not only which sectors are strong, but whether the conditions exist to allow those strengths to compound over time.

Section 3

Analysis: East Yorkshire and Northern Lincolnshire

This paper presents a cluster analysis of the key industrial sectors within East Yorkshire and Northern Lincolnshire (EYNL) by calculating a location quotient and productivity measure. Each sector has been assessed against the national average using standardised GVA per employee as a measure of productivity and a location quotient (LQ) based on employment to indicate geographic concentration. The results are used to classify sectors into four quadrants: Mature, Scalable, Foundational and Non-clustered - and to identify the strategic priorities that follow.

The analysis draws on the eight growth sectors identified in the UK Government's Modern Industrial Strategy: Advanced Manufacturing, Clean Energy, Creative Industries, Defence, Digital and Technologies, Financial Services, Life Sciences, and Professional and Business Services. Where sub-sectors appear across multiple industrial strategy categories, they are noted in both contexts.

Sectoral Cluster Results

Figure 1 sets out the classification of each sub-sector in EYNL, alongside the strategic implication for policy intervention. The sections that follow provide fuller commentary on each industrial strategy theme.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Sector	Classification	Strategic Implication
Petroleum, Chemicals & Pharmaceuticals	Mature - High LQ (3.11), Positive Productivity (+0.68)	Anchor asset. Sustain and deepen R&D links to drive higher value-added activity.
Electricity, Gas & Steam Supply (Clean Energy)	Mature - LQ above average (1.10), High Productivity (+3.12)	Strongest productivity performer in the dataset. Priority for innovation investment and supply chain development.
Fabricated Metal Products	Mature - LQ (1.49), Positive Productivity (+2.03)	Established cluster with above-average productivity. Target for automation and digital adoption programmes.
Agriculture & Hunting	Mature - LQ (1.38), Positive Productivity (+1.98)	Productive specialism. Opportunity to connect to agri-tech and bioeconomy value chains.
Motor Vehicles	Foundational - LQ (1.50), Below-average Productivity (−0.41)	Significant employment base but below-average productivity. Interventions should focus on process innovation and technology adoption.
Machinery & Equipment	Foundational - LQ (1.42), Below-average Productivity (−1.38)	Concentrated but low-value. Productivity improvement programmes such as Made Smarter directly applicable here.
Scientific R&D	Non-clustered - LQ (0.05), Near-average Productivity (+0.22)	Critical gap. Near-absence of R&D activity limits innovation diffusion across all sectors. Targeted R&D investment required.
Computer Programming & Consultancy	Non-clustered - LQ (0.32), Positive Productivity (+1.30)	High productivity where present but insufficient scale. Scalable sector that could move into the mature quadrant with targeted support.
Financial Services	Non-clustered - LQ (0.38), Near-average Productivity (+0.03)	Under-represented relative to national average. Capacity exists to support growth if linked to wider business services development.

Figure 1:
Sectoral cluster classification for East Yorkshire and Northern Lincolnshire. Source: ONS GERD; Business Register and Employment Survey, 2022

Advanced Manufacturing

Advanced Manufacturing presents a mixed picture across EYNL. Several sub-sectors sit in the Foundational quadrant - highly concentrated in the area but delivering below-average productivity.

The Manufacture of Petroleum, Chemicals and Pharmaceuticals stands out as the strongest performing sub-sector in the dataset, with an LQ of 3.11 - more than three times the national average - and a positive productivity score. This reflects the Humber's established industrial cluster at sites such as Saltend Chemicals Park. Critically, unlike many of the area's other manufacturing specialisms, this sub-sector combines scale with above-average productivity, making it the area's most significant industrial anchor.

Fabricated Metal Products (LQ 1.49, GVA per employee +2.03) is the area's most productive concentrated manufacturing sub-sector after chemicals, sitting in the Mature quadrant. Motor Vehicles (LQ 1.50) and Machinery and Equipment (LQ 1.42) are also well concentrated but fall into the Foundational category due to below-average productivity scores of −0.41 and −1.38 respectively. This pattern - industrial mass without proportionate economic value - is a long-standing challenge for the area and a key target for innovation diffusion programmes.

The area's manufacturing base has genuine scale but is caught in a productivity trap in several key sub-sectors. The lesson from programmes such as Made Smarter in the North West (which achieved an £8 return per £1 of public investment) is that technology adoption and process innovation, rather than pure R&D, is the most direct lever for productivity improvement in these foundational clusters.

Computer and Electronic Products (LQ 0.30), Electrical Equipment (LQ 0.35) and Other Transport Equipment (LQ 0.42) are all below the national average for concentration and below average on productivity, placing them in the Non-clustered quadrant. These sub-sectors do not currently represent viable clusters for the area without significant upstream investment in capability.

Clean Energy

Clean Energy is the area's most strategically significant growth opportunity, and the data provides important nuance for policymakers. Electricity, Gas, Steam and Air Conditioning Supply has both an above-average LQ (1.10) and the highest standardised productivity score in the dataset (+3.12), placing it firmly in the Mature quadrant. This is an important result: it is both geographically concentrated and highly productive.

This finding reflects the Humber's position as a major energy hub - including offshore wind, hydrogen, and carbon capture infrastructure - and the high-value nature of energy generation employment relative to national averages. The area's clean energy assets are not merely present in volume; they are generating disproportionate economic value.

However, the sub-sectors that sit within the clean energy value chain present a more cautionary picture. Machinery and Equipment (LQ 1.42) and Architectural and Engineering Activities (LQ 0.83) are both present in the area but score below average on productivity, consistent with the broader finding that the Humber has the need to drive up productivity at firm level through targeted intervention in both innovation and diffusion enabled by skills investment.

There must be targeted public R&D investment in energy innovation institutions in the area, such as the Offshore Renewable Energy Catapult's presence in Grimsby, and an effective read across to local skills policy in both combined authority areas.

Digital and Technologies

The digital sector presents a broadly less significance relative to national averages, with most sub-sectors falling below LQ 1 and recording below-average productivity. Telecommunications (LQ 0.59), Computer Programming and Consultancy (LQ 0.32) and Information Service Activities (LQ 0.91) are all below the national average for concentration.

The exception is Computer Programming and Consultancy, which - despite low concentration - records an above-average productivity score (+1.30), placing it in the Scalable quadrant. This is a sector that is productive where present but has not yet achieved the geographic mass to constitute a cluster. It represents a credible growth target, with the potential to move into the Mature quadrant through deliberate investment in digital skills, incubation infrastructure, and connectivity to anchor industries.

Creative Industries

Creative Industries in EYNL are generally Non-clustered across sub-sectors, with LQs below 1 and below-average productivity scores. Publishing (LQ 0.27), Motion Picture and TV Production (LQ 0.48), Programming and Broadcasting (LQ 0.54), and Advertising and Market Research (LQ 0.25) all fall below the national average for concentration.

Advertising and Market Research is an exception in productivity terms (+2.14), though the low LQ (0.25) means it does not constitute a cluster. Creative, Arts and Entertainment Activities (LQ 0.82) is the closest to national average concentration but records a strongly negative productivity score (−1.55), indicating that the creative employment that does exist in the area is lower-value in nature.

Life Sciences

The Life Sciences sector is difficult to disaggregate from other categories due to ONS data classifications. The Manufacture of Petroleum, Chemicals and Pharmaceuticals - already discussed under Advanced Manufacturing - is the area's primary life sciences-adjacent specialism, with an LQ of 3.11 and a positive productivity score.

Human Health Activities (LQ 0.91) sits just below the national average for concentration and records a slightly negative productivity score (−0.09), placing it in the Foundational quadrant at the boundary. This primarily reflects front-line health delivery rather than research and development, and the distinction matters for productivity: health delivery employment is typically lower-value-added than R&D and innovation roles.

Scientific Research and Development (LQ 0.05) compares unfavourably to the average nationally, though it should be recognised that R&D activities are not best measured through SIC codes alone.

Professional and Business Services and Financial Services

Both of these enabling sectors perform below the national average for concentration in EYNL, which at a pan Northern level is identified in the Northern Powerhouse Independent Economic Review as a key enabler.

Legal and Accounting Activities (LQ 0.72), Head Offices and Management Consultancy (LQ 0.58), Architectural and Engineering Activities (LQ 0.83), and Advertising and Market Research (LQ 0.25) all fall below LQ 1. In terms of productivity, Advertising and Market Research (+2.14) and Legal and Accounting (+0.24) are positive, but the other sub-sectors record negative productivity scores, suggesting low-value delivery functions rather than high-end professional services.

Financial Services are similarly under-represented: Financial Service Activities (LQ 0.38), Insurance and Pension Funding (LQ 0.09) and Activities Auxiliary to Finance (LQ 0.25) are all well below the national average. The contrast with West Yorkshire and Greater Manchester - where Financial Services sit firmly in the Mature quadrant – illustrates that unless the region can draw on these strengths from both sides of the Pennines it will act as a binding constraint on growth.

The debate about extending Northern Powerhouse Rail needs to be framed in the context that the presence of an institution like the National Wealth Fund in nearby Leeds is made more impactful if it is nearer and more reliable to get to, as well as the specialist related advisers in the so called 'Northern Square Mile' which must be framed as an asset for the wider North including the Humber, and not only for West Yorkshire as a city region itself.

Three strategic priorities

Summary: Strategic Priorities

Taken together, the cluster analysis for EYNL points to three clear strategic priorities for innovation and industrial policy.

1

First, defend and deepen the mature clusters.
Chemicals and Pharmaceuticals and Clean Energy generation are the area's two most significant assets - both concentrated and productive. Policy should prioritise sustaining these anchors through R&D investment, skills pipelines, and supply chain development, while seeking to move associated sub-sectors (such as machinery and engineering services) up the productivity curve.

2

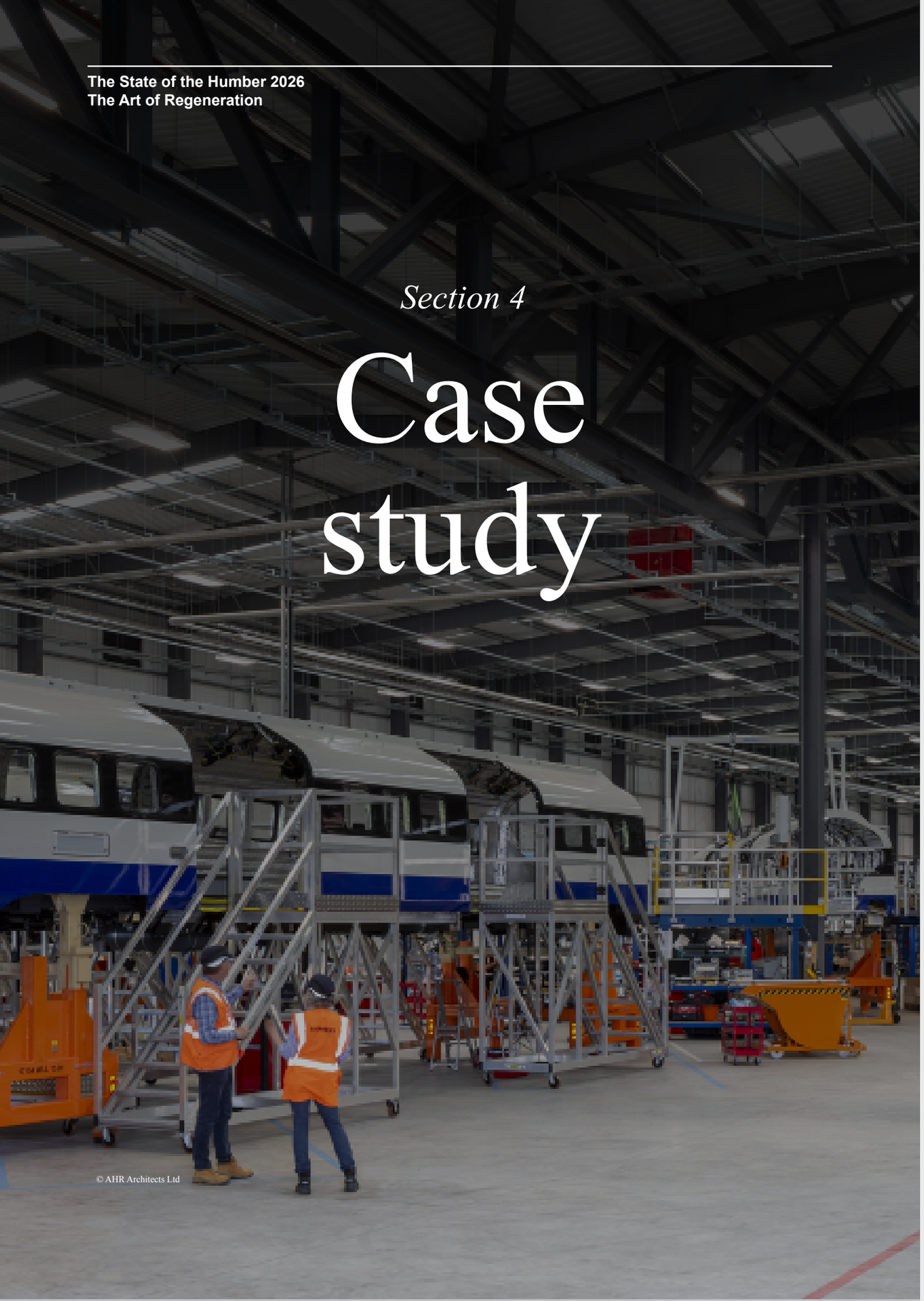
Second, address the foundational cluster productivity gap.
Motor Vehicles, Machinery and Equipment, and other Advanced Manufacturing sub-sectors are large employers in the area but are trapped in below-average productivity. Technology adoption programmes - modelled on Made Smarter - are the most direct intervention available, and the area's manufacturing base makes it a strong candidate for an expanded programme aligned to the Humber's industrial priorities.

3

Third, grow areas of the economy which have higher productivity but are employing less people than the national average
Including targeted skills investment by public and the private sector where gaps exist.

Section 4

Case study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Siemens Mobility Rail Village, Goole

A new manufacturing hub delivering jobs, apprenticeships and supply chain opportunities while supporting the UK's decarbonisation of rail.

Siemens Mobility is investing up to £240 million in its Rail Village at Goole, including a Train Manufacturing Facility, Components Facility, Logistics Centre, Bogie Assembly and Service Centre. It is where the company is manufacturing the new Piccadilly line tube trains for London and intends to assemble battery bi-mode trains for the UK. Arup has led a multi-disciplinary team, supported by architects AHR to deliver all aspects of the engineering design for the facility which will create a healthy, intelligent and connected environment for those within.

But the impact stretches far beyond the factory floor. The Rail Village is bringing up to 1,000 jobs to the area and 1,700 across a supply chain kept local wherever possible. Leeds-based contractors were contracted for the build, with its supply chain rooted entirely in the UK and over 70% based in Yorkshire.

That community-first mindset shows in how Siemens Mobility gives back. The annual Goole Charity Cricket Day raises significant funds for seven local charities, including the Two Rivers Community Pantry, where employees regularly volunteer. In schools, the Primary Engineer Programme is sparking curiosity in children across 13 local schools, while 34 apprentices at the Rail Village are already building careers that will help transform rail travel and transport for the UK.

The future is green, too. The site is targeting net-zero operations by 2030, powered by 1,700 solar panels and air source heat pumps.

"The Humber's position as one of the UK's leading industrial clusters comes as no surprise to us. Our investment of up to £240 million in our Rail Village in Goole, Yorkshire reflects our strong confidence in the region's future. Built on a bold vision to create a world-class rail manufacturing hub, the facility will bring up to 1,000 jobs to the East Riding of Yorkshire and support around 1,700 supply chain opportunities, further promoting localisation. With a clear pipeline from government, businesses like ours will have the certainty needed to continue investing and deliver the next generation of rail travel right here in Britain."

Aglaja Schneider, Joint UK&I CEO for Siemens Mobility

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Section 5

Education as “agents of regeneration”

Universities have a pivotal role to play in driving regeneration. Through research excellence, investment in skills and partnerships with industry, government and the third sector, universities are highly effective catalysts for innovation, economic growth and community development.

With a strategy based around ‘Place’, ‘Public’, ‘Partnership’ and ‘Impact’, the University of Hull exemplifies this approach to advancing economic and cultural development. It supports NPP objectives by analysing and understanding challenges pertinent to its own region and others, designing and co-creating innovative solutions, developing talent and skills, fostering cross-sector collaboration and informing policy.

A leader in clean energy and industrial transformation, the University supports offshore wind energy, carbon capture, hydrogen innovation, and low-carbon supply chains across the Humber’s Energy Estuary. This work attracts inward investment, strengthens industrial competitiveness and trains future leaders through the Aura Centre for Doctoral training.

Renowned for research in climate adaptation, the University’s Energy and Environment Institute collaborates regionally, nationally and internationally, promoting community and business resilience and enhancing productivity. It supports effective coastal transition (e.g. leader, COAST-R network), initiatives in flood resilience such as SuDSlab provide real time data in sustainable drainage assets and PFRlab drives innovation and testing for deployable property-level flood resilience measures. The influential Risky Cities project applies arts, humanities to create novel and effective tools for community awareness, resilience, and climate action.

Through the Hull York Medical School and regional NHS partnerships, the University addresses health inequalities, ageing, and mental health, improving productivity and social outcomes.

The University boasts a vibrant enterprise ecosystem with Knowledge Transfer Partnerships (e.g. Wren Kitchens), spin outs (e.g. Railwhere) and sustainability partnerships (e.g. Royal Mint). Industry collaboration through the Logistics Institute Advisory Board, strengthens SME innovation and competitiveness.

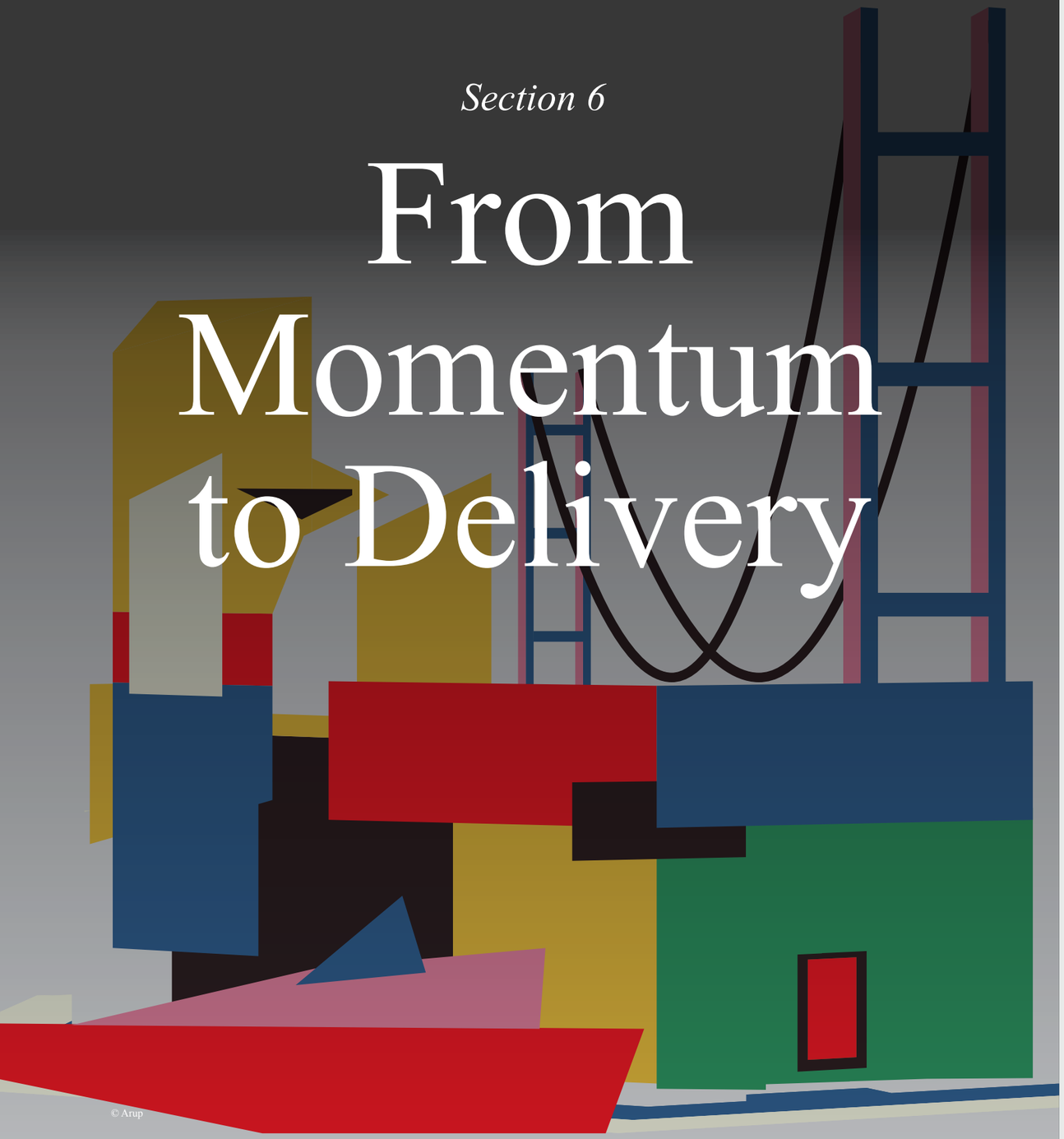
As a major educator and employer, the University of Hull fosters talent, drives skills development and social mobility, supporting widening participation at undergraduate and postgraduate levels, apprenticeships, SME training, and workforce upskilling across multiple disciplines. Recognised as a Carbon Literate Educator, the University is helping to facilitate a zero carbon society.

The University of Hull Business School is among the top 2% of business schools worldwide to hold both AMBA and AACSB accreditations. Its world-class, globally recognised MBA is one of more than 80 masters programmes offered by the University, designed for ambitious working professionals, senior managers, and entrepreneurs.

Together, these activities position the University of Hull as a strategic anchor institution, embedding research within industry, policy, and communities to deliver sustainable regeneration across the Humber and northern England.

Section 6

From Momentum to Delivery



The Humber has reached a defining point in its economic evolution. It is no longer an emerging industrial opportunity, but a region of established national importance, central to the UK's energy system, industrial base and transition to net zero. The evidence set out in this report shows that the Humber's future will be shaped not by the scale of its ambition, but by the effectiveness of its delivery.

What makes this moment distinct is the alignment now taking place. Strategic assets, industrial capability and institutional leadership are converging in a way that positions the Humber as one of the UK's most credible locations for industrial investment. Clean energy, advanced manufacturing and logistics already generate disproportionate economic value, while the region's emerging clusters offer a pathway to greater resilience, productivity and inclusion. The challenge ahead is not to define what the Humber could become, but to ensure the conditions exist for that potential to be realised at pace.

Delivery is therefore the central test. Grid capacity, water availability, environmental consenting, coastal resilience and coordinated local leadership are not abstract policy debates; they are the practical mechanisms through which growth is either enabled or constrained. Where these are addressed decisively, investment follows. Where they are not, opportunity is delayed or lost.

The Humber's significance extends well beyond the region itself. Decisions taken here will influence national energy security, industrial competitiveness and the credibility of the UK's place-based approach to economic growth. In that sense, the Humber is not a special case, but a proving ground.

With sustained collaboration between government, industry, institutions and communities, the Humber can move from momentum to delivery. Success here would secure long-term prosperity for the region and establish a replicable model for how decarbonisation and growth can be delivered together.

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