

## Industrial Strategy Green Paper consultation

### Submission by Yorkshire Universities

#### 1. About Yorkshire Universities and the university sector in Yorkshire

- 1.1 Yorkshire Universities (YU) is a regional association representing twelve institutions in Yorkshire: the universities of Bradford, Huddersfield, Hull, Leeds, Leeds Beckett, Leeds Trinity, Sheffield, Sheffield Hallam, York and York St John; and Leeds College of Art and Leeds College of Music.<sup>1</sup> YU is a partnership based on a shared interest in place and the contribution universities make (both individually and collectively) to Yorkshire. In economic terms, this contribution is delivered as employers, purchasers of goods and services, providers of graduates/post-graduates, skills, and by undertaking research and innovation activity. YU has three decades' experience of working in collaboration with regional and local institutions and actors, including Local Enterprise Partnerships (LEPs), local authorities, Regional Development Agencies (RDAs), business, Members of Parliament and local communities. Our members also have a wider societal and civic position, which, as the Industrial Strategy illustrates, is crucial as public policy seeks to address profound socio-economic disparities and inequalities across and within the UK.
- 1.2 The unique strength of YU lies in its ability to consolidate the diverse profiles of its members, bringing together a holistic 'offer' to businesses and communities across the 4 LEP areas of Yorkshire and articulating this proposition within the wider 'Northern Powerhouse' pan-region. Some of our members are universities with an international perspective, some are very local; some engage with large private sector companies, others with small and medium size employers (SMEs); some have scientific and technical curricula, others are based in the arts and social sciences; some work across a wide spectrum, while others focus on niche areas. YU is able to bring together the scale and capacity of its member institutions, drawing upon inter and cross-disciplinary research strengths, and can play a pivotal role connecting business with a collective group of universities.
- 1.3 Together, YU members make a £3.7bn economic contribution to Yorkshire and play a critical role in generating jobs, supporting skills development creating innovation and driving enterprise. Yorkshire's universities produce over 55,000 graduates each year and play a vital role in the region's social and cultural life by attracting a large and diverse student population from more than 150 countries.

#### 2. Overview

- 2.1 YU welcomes the publication of the Industrial Strategy Green Paper. The Strategy provides a rationale and framework for a more active and interventionist role for government (at all levels) in developing long-term, sustainable and inclusive growth in the UK's nations, regions and localities. In taking forward an Industrial Strategy,

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<sup>1</sup>[www.yorkshireuniversities.ac.uk/](http://www.yorkshireuniversities.ac.uk/)

the UK government is adopting an approach that other countries have been formulating and implementing for decades.<sup>2</sup>

- 2.2 Industrial policy is necessarily geographical. Whether intended or not, government policy has geographical expressions and implications. Building a strong geographical dimension into the Industrial Strategy will enable and support government ambitions to spread prosperity more evenly across the country.<sup>3</sup> It is important, therefore, to consider the inter-dependencies that exist between the 10 Pillars in the Strategy. Consequently, our response is structured on the basis of embedding the concepts of local and regional growth and institutions front and centre within 6 key themes, which we highlight as being critical for developing and implementing a place-based approach to the Industrial Strategy.
- 2.3 YU looks forward to working closely with the government, its agencies, sub-national and local institutions and partners in Yorkshire to support the implementation of the Strategy. Yorkshire has a distinct contribution to make to the long-term economic future and prosperity of the UK.
- 2.4 The private sector wants to see joined-up approaches to policy and strategy and, where appropriate, how the contributions of different universities can be integrated. Here, there is an important role for associations such as YU, illustrating how institutions can work in partnership. For example, YU demonstrated recently at an All Party Parliamentary Group (APPG) the impact of higher education through the profiling of case studies of renewable energy (University of Hull) and advanced manufacturing (Sheffield), and is now exploring strategies for extending such collaborative work.

### **3. Addressing the challenge...**

- 3.1 Yorkshire's population of 5.4 million produces an annual economic contribution of £88 billion – almost 7% of the UK's total economic output.
- 3.2 The UK faces a major challenge in improving overall productivity. At the same time, productivity rates vary substantially between and within UK nations and regions, with productivity strong in London, and weaker in the north (including Yorkshire) and the midlands, and there are limited economic relationships between richer and poorer regions in the UK, certainly when benchmarked against other OECD national economies.<sup>4</sup> New research is also indicating that disparities in productivity between

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<sup>2</sup>See, for example, Chang, H-J., Andreoni, A. and Leong Kuan, M. (2013) 'International industrial policy experiences and the lessons for the UK', Future of Manufacturing Project: Evidence Paper 4, Foresight, Government Office for Science: London.

<sup>3</sup> Pike, A. (2017) Industrial Strategy: An Academic Roundtable, Centre for Urban and Regional Development Studies (CURDS), Newcastle University: Newcastle upon Tyne.

<sup>4</sup> McCann, P. (2016) The UK Regional-National Economic Problem: Geography, Globalisation and Governance, Routledge: London.

UK cities are being driven primarily by factors within sectors and industries rather than differences in the sector composition of individual cities.<sup>5</sup>

- 3.3 Recent economic growth in the UK, although stagnant compared to ‘pre-crisis’ trends, has been driven primarily by an increase in self-employment and those in employment working longer hours rather than actual improvements in productivity.<sup>6</sup> Long-term, low productivity has a negative impact on growth, wages, job security, tax revenues and public investment, and it affects international competitiveness.
- 3.4 International evidence demonstrates that policy on industrial strategies should include a focus upon generating ‘more and better jobs’ in more inclusive and sustainable models.<sup>7</sup>The route to improving productivity, addressing spatial disparities and building more inclusive forms of growth lies in new and targeted investment in human capital, infrastructure, innovation and enterprise, supported by stable and effective institutions working in a co-ordinated fashion, particularly at the sub-national and local levels.

#### **4. Skills**

- 4.1 The government sees improvements in the UK skills bases as a key driver of productivity improvements. In Yorkshire, there are low proportions of high-level occupations and higher-level skills and qualifications. Across different parts of the region, there is a legacy of educational underperformance up to 19 years, and a low percentage of the working age population is qualified to NVQ 4+ (average of 30.5% in Yorkshire compared to 34.5% in England, excluding London).<sup>8</sup>
- 4.2 Skill shortages are reported in key sectors in Yorkshire, such as Advanced Manufacturing, Financial & Business Services and Transport & Logistics. In Sheffield City Region, for example, the proportion of firms reporting skills gaps is amongst the highest in the country, while in Hull and Humber, despite specialist industry needs, and a history of local training interventions, the level of workplace-based training is below the national average.<sup>9</sup> Universities want to work with business to adopt new technologies and other forms of innovation, but the supply of skilled people is currently limited, which is undermining efforts by firms to create value. It is important to develop and adapt the skills of academics to support the transfer and embedding of knowledge from universities into business environments.
- 4.3 Universities want to expand their work with business, schools and further education to provide a ‘seamless link’ from primary school to university, especially for STEM subjects/opportunities. But, equally, consideration should be given as to how universities could support other themes, such as the creative industries, and the contribution these sectors make to more balanced and inclusive growth.

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<sup>5</sup> See City Evolutions Research Programme: <http://www.cityevolutions.org.uk/>

<sup>6</sup>Harari, D. (2016) *Productivity in the UK: Briefing Paper Number 06492*, House of Commons Library: London.

<sup>7</sup>See, for example, OECD (2015) *Making Inclusive Growth Happen*, OECD: Paris.

<sup>8</sup>SQW (2016) *Northern Powerhouse Independent Economic Review*, SQW: London.

<sup>9</sup>Ibid.

4.4 The apprenticeship levy presents a new opportunity, but it requires careful coordination. Public and private sector institutions need to be proactive and support the talent pipeline for Yorkshire's long-term skills needs, and not simply leave market mechanisms to shape supply and demand. Finding a balance between capital and revenue investment, and how both are brought together for skills development, is crucial. The AMRC Training Centre in Sheffield, for example, is a centre for excellence for apprenticeship and continuing professional development training in Yorkshire. There is an opportunity to plan skills more effectively at the regional and local level, and embed it fully within place-based industrial strategies, while recognising the need for skills development to be flexible enough to reflect continued technological change and job evolution. But this requires intelligence, foresight, quality data, and monitoring and evaluation underpinned by analytical capacity, something the university sector is well-placed to play a leading role in, on a collaborative basis. In addition, organisations should be permitted to spend elements of their apprenticeship levy on sponsoring Knowledge Transfer Partnerships (KTPs) and PhDs. Adopting a flexible approach would build on successful apprenticeship-type models, expand further the university contribution in particular sectors, and incentivise further business investment in research and innovation, which organisations, such as the Confederation of British Industry, have advocated.<sup>10</sup>

## 5. Innovation

5.1 Research & Development (R&D) is an important tool for stimulating innovation, which is itself a crucial element in improving productivity. However, R&D investment in the UK is lower than in most other leading knowledge-based countries and is sub-optimal for an advanced economy. There is also an over concentration of public research funding in the south of England, driven by an over-emphasis on 'academic research excellence' at the expense of stimulating business R&D and innovation across the wider economy.

5.2 The Government has indicated that it will invest an additional £4.7bn by 2020 in R&D funding. YU welcomes this new investment and the opportunities over the coming months to identify areas and themes where the extra R&D funding should be invested.

5.3 Significantly, the Industrial Strategy Green Paper recognises that innovation is not simply about new technology, but it is also about more productive ways of working, and adopting a broader approach that goes beyond a linear process that begins in universities and ends with a commercialised product. The challenge is to embed both technology and human capability and capacity into industry in an integrated manner. This requires a partnership approach, and one that involves business, local authorities and universities, with universities having a particular and distinct role in the stewardship and nurturing of knowledge.

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<sup>10</sup> See, for example: CBI (2017) <http://www.cbi.org.uk/insight-and-analysis/now-is-the-time-to-innovate/>

- 5.4 Linking science and innovation and territorial cohesion [through industrial strategies] speaks to the multi-faceted role of universities as key civic institutions, able to foster innovative environments in less successful places.<sup>11</sup> Public policy should recognise that many places lagging behind benefit from universities as anchor institutions contributing significantly to ‘place making’ and mobilising the innovative capacity of their communities.
- 5.5 Local innovation can be found in the smart specialisation strategies (SSS) that were a condition for the UK being awarded European Structural and Investment Funds (ESIF) to support innovation.<sup>12</sup> The SSS hub has provided information, advice and guidance to LEPs and other local institutions in the innovation agenda. It will be important that there is similar capacity and support through and into implementation of the Industrial Strategy.
- 5.6 Innovation and skills development are two sides of the same coin and are indispensable as human capital is required to improve productivity. Separating the two into distinct pillars in the Industrial Strategy reflects embedded structures (i.e. government departments) and the allocation of public funding. However, the interconnectedness between innovation and skills is critical. For example, the KTP programme has created new forms of value because of its explicit integration of innovation and skills development.

## **6. Business and enterprise**

- 6.1 It is important that the Industrial Strategy attracts greater support and investment from the business community for start-ups, scale-ups and market leaders. Some of the UK’s competitor countries, such as France and Sweden, have a clear framework for providing such support. Graduate start-ups have been important in Yorkshire. YU believes that more students should be supported to establish new businesses, which means more targeted investment into programmes like graduate enterprise learning.
- 6.2 As a general point, over 90% of businesses in the UK are Small-Medium-sized Enterprises (SMEs). The Strategy should focus on improving the value and uplift of SMEs and ensure that small firms are aligned to UK supply chains to facilitate and strengthen user-producer knowledge relationships.
- 6.3 Yorkshire’s particular sector strengths lie in: Advanced Manufacturing, Financial & Professional Services, Health & Life Sciences, Digital & Creative Industries, Food & Drink, Petroleum products and Chemicals, Public Administration and Defence, while future opportunities have been identified in: Low Carbon & Environmental Industries, Energy Renewables, Creative Industries, Visitor Economy, Agri-Tech, Bio-renewables, Materials, Healthcare Technologies and Digital. Sub-regionally, there is

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<sup>11</sup> Goddard, J. (2017) Towards a placed based science and innovation strategy for England: a role for universities? A paper for the BEIS, Advisory Group on Smart Specialisation and Innovation Audits, Centre for Urban and Regional Development Studies (CURDS), Newcastle University: Newcastle upon Tyne.

<sup>12</sup> Ibid.

a particular focus on Renewable Energy (Humber); Advanced Manufacturing/Engineering (Sheffield/Huddersfield); Medical Technologies (Leeds); and Bio-Tech (York).<sup>13</sup>

- 6.4 The Industrial Strategy makes reference to Sector Deals. While the government will look to support interventions in certain ‘high value’ industries, Sector Deals should not inadvertently reinforce silos, and exclude other opportunities requiring intervention and support. Instead, support for sectors should reflect the complex, multifaceted nature of industrial production and supply chain linkages. Individual propositions for Sector Deals should be based on their merits, and for Yorkshire added value will be assessed on how best the region, North of England and the UK is able to benefit from Yorkshire’s particular sector strengths. Furthermore, there is a need for public policy to focus on the integration between sectors and industries and the foundational/horizontal elements of place-based industrial strategy, such as infrastructure (communications, transport, energy and water), health and care, housing, etc.
- 6.5 Yorkshire’s universities collaborate effectively, and they are keen to do more to drive supply chain management and interaction (especially through SMEs). Interventions, such as the Advanced Manufacturing Supply Chain Initiative (AMSCI), which is focused on the West Midlands and Liverpool City Region, could be expanded to cover LEP areas in Yorkshire, and include suppliers further along manufacturing supply chains, beyond Tier 1 and Tier 2.
- 6.6 Technological change is driving transformation in business, enterprise and the world of work. The Industrial Strategy should provide for foresight activities, seeking to predict and prepare for future shifts in the relationships between growth, productivity, employment and technology.

## **7. Institutions**

- 7.1 Previous industrial strategies have neglected the importance of place. The new Industrial Strategy should be embedded within the devolution agenda, particularly in England, with new institutions and governance arrangements being established. Existing and new arrangements should recognise that universities are vital regional and local assets, part of the institutional eco-system in places such as Yorkshire. YU and its members will work with whatever institutions and decision-making structures are in place at the national level and in regions and localities. For three decades, YU has worked with RDAs, LEPs, Combined Authorities, etc. All YU members have a strong position on local civic engagement.
- 7.2 There perhaps should be a period of institutional stability at the sub-national scale in England in order to help deliver the Industrial Strategy, while recognising that the quality and effectiveness of institutions are important ingredients for local growth

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<sup>13</sup> SQW (2016) Northern Powerhouse Independent Economic Review, SQW: London.

strategies and development.<sup>14</sup>Where institutions and particular configurations are not working or are not fit for purpose, the government has intimated that reform is a possibility.<sup>15</sup>Part of the problem with the UK's (especially England) highly-centralised state and widening spatial disparities has been the periodic rupture and change in the governance of local and regional development. It may be more appropriate to consider how more flexible, softer and variegated geographies should underpin the institutional arrangements necessary to support the Industrial Strategy. For example, are the existing geographies for coordinating and managing transport and skills strategies and investment suitable geographies for coordinating and managing innovation?

- 7.3 The LEPs, with their specific mandate to promote innovation, should look to widen and deepen their role in facilitating relationships between universities and business. YU is currently engaged in projects with Yorkshire's LEPs to facilitate business and university engagement in innovation strategy and practice, which importantly forms the basis for widening and deepening cross-LEP working.<sup>16</sup>YU welcomes the proposal in the Industrial Strategy to support networks of universities that want to collaborate to improve commercialisation, and the government's offer to help form joint investment funds covering groups of universities.YU will work closely with its members and other local institutions, such as the four LEPs in Yorkshire and business, to embrace and even build upon these initiatives.

## **8. Investment**

- 8.1 As the UK looks set to lose research, innovation, structural development funds and infrastructure investment (e.g. European Investment Bank) from the European Union, new public and private investment arrangements will need to be prepared.
- 8.2 YU is working with universities, business and others to support the development and delivery of ERDF projects, and continues to do in light of the government's commitment to guarantee funding, under certain conditions, for ESIF projects.
- 8.3 There are new and emergent opportunities for government, with the support of public/private institutions, such as universities, to design a new approach to local economic growth funding in England post-ESIF. The model should factor in the case for place-based growth; focus on policy outcomes; reflect the external environment; identify the role(s) of national and local institutions and actors; be based on particular geographies; and use specific mechanisms for allocating funding. The UK government has used European Commission-mechanisms to allocate EU funding.

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<sup>14</sup> OECD (2012) *Growing All Regions: Organisation for Economic Cooperation and Development*: Paris.

<sup>15</sup> The Rt. Hon Greg Clark MP, Secretary of State for Business, Energy and Industrial Strategy, wrote the foreword to a recent report by Localis (2017), which recommended that places develop local industrial strategies led by 'strategic authorities': <http://www.localis.org.uk/research/the-making-of-an-industrial-strategy/>

<sup>16</sup> For example, YU is working with the York, North Yorkshire and East Riding LEP and the Humber LEP, sharing good practice and intelligence on ESIF project development and delivery with YU members and wider stakeholders across the different LEP areas.

Any new UK government instruments (such as those facilitated through deal-making processes) will need to allocate funding on the basis of clear and transparent criteria.

- 8.4 Yorkshire and its institutions, including universities, will need to set out robust cases for new investment as part of the Industrial Strategy, and recognise the competitive and sometimes uneven nature of territorial investment in the UK, and within parts of the north of England. For example, the recent Local Growth Fund allocations (January 2017) saw an allocation across the four Yorkshire LEPs of £24 per capita, compared to a Northern Powerhouse LEP average of £34 per capita. While Greater Manchester received £50 per capita and Leeds City Region £23 per capita. The government and institutions in Yorkshire need to consider why this disparity has arisen and how the dynamic can be altered.
- 8.5 The Industrial Strategy Challenge Fund (ISCF), part of the National Productivity Investment Fund, should have a strong place-based dimension, as well as a focus on technology. YU members will be developing propositions and business cases for funding through the ISCF, and articulating the benefits of using scale and joint-working to bid for transformational projects.
- 8.6 The nature of investment finance has changed, with increasing emphasis towards strategic (and often hybrid) programmes led by local partnerships over longer time-scales. This poses the question of how different public and private funding and financing sources can work together (e.g. how can public leverage private). However, any further move away from grants towards loan-based finance should not create additional complexity in the mechanisms for allocating public investment in innovation.<sup>17</sup>

## **9. Conclusions**

- 9.1 YU welcomes the publication of the Industrial Strategy Green Paper. The Strategy provides a clear rationale and framework for a more active and interventionist role for government (at all levels) in working with institutions and actors, including universities, to build and sustain productive and inclusive growth in the UK's nations, regions and localities. YU looks forward to working closely with UK government, its agencies, sub-national and local institutions and partners in Yorkshire to support the implementation of the Strategy.
- 9.2 This submission has outlined some proposals on how the emergent Strategy could be strengthened by adopting a genuine place-based approach to industrial policy. Yorkshire has a distinct contribution to make to the economic future and success of the UK, and universities are ready to play their part in delivering an Industrial Strategy that benefits cities, towns, local communities and businesses in the region.

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<sup>17</sup> HoC (2017) Managing intellectual property and technology transfer: Tenth Report of Session 2016-17, House of Commons Science and Technology Committee: London.