

Building Our Industrial Strategy: Green Paper

**Response on behalf of the Council of Leaders
at the National Centre for Universities and Business**

Building Our Industrial Strategy: Green Paper Response

NCUB's Council of Leaders (see Annex 1) welcomes the UK Government's commitment to the development of a modern industrial strategy. Effective collaboration between universities and businesses should be at the heart of the strategy.

As we have shown through a series of Task Forces and evidence into Government Reviews (see Annexes), the openness and excellence of the UK research base is reflected in the attractiveness to UK and overseas firms as a place to do research and development as well as attract and develop the next generation of talent.

We call on the Government to place at the heart of the Industrial Strategy the following core recommendations:

1. *Maintaining the excellence of the UK Research Base through long-term strategic commitments from the Government.*
2. *Extend the opportunities and benefits of university-business collaboration to all sizes of companies across all parts of the UK.*
3. *Further develop the incentives and rewards for collaborations between universities and businesses.*
4. *Develop consistent differentiated sector strategies to incentivise university-business interactions designed to match specific sectorial systems of innovation*

We ask the Government to consider the following questions:

1. *Will the Government designate a Minister responsible for delivery of the Industrial Strategy? And will the Government identify measures by which the success of this Strategy can be assessed?*
2. *How will the Government connect this Industrial Strategy with other Government Strategies in areas such as education and digital?*
3. *Why were tax and regulation not given more prominence in the Green Paper?*
4. *The focus of the strategy on sectors with established strong leadership supports incumbent sectors such as life sciences, banking, aerospace and automotive. But what of sectors that do not have strong leadership, perhaps because they are industries of the future? Will they be at a disadvantage?*

Our membership of universities and businesses are committed to making the UK a strong, vibrant and resilient economy and stand ready to work with the Government to realise the ambitions of the Industrial Strategy.

The National Centre is renowned for creating programmes delivering real change by working closely with its members and partners throughout the UK. We facilitate leaders and experts in their fields to work together to identify and solve problems and have a proven track record of impact through both our projects and influencing government. We aim to find practical ways of harnessing talent developed in our universities and ground-breaking research and development for the benefit of the UK economy. We are developing a suite of digital tools that includes **konfer** which helps business find and connect to research and innovation opportunities in UK universities and **BrandU** which is a tinder-styled work experience app.

Annex 1: Council of Leaders

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Chief Executive:

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(Channel 4)

Sir Michael Arthur

(Boeing UK)

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(BBC)

Prof. Ian Chapman

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Dominic Christian

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Iain Coucher

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David Cutter

(Diageo)

Jeremy Darroch

(Sky)

Annette Doherty

(GlaxoSmith Kline)

Andrew Duff

(Severn Trent)

David Eyton

(BP International)

John Fallon

(Pearson)

Paul Feldman

(Jisc)

Kevin Goodman

(Babcock International)

Richard Hardie

(UBS)

Dennis Hogan

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Thirunamachandran

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Dr Menelas Pangalos

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Rob Woodward

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(Keele University)

Prof. Anton Muscatelli

(University of Glasgow)

Annex 2: Background to the recommendations and illustrative case studies

Our responses to the consultation have been framed primarily around areas of core focus for the National Centre – namely: Investing in science, research and innovation (**Pillar 1**); Developing skills (**Pillar 2**); Cultivating world-leading sectors (**Pillar 8**); Driving growth across the whole country (**Pillar 9**); and finally, Creating the right Institutions to bring together sectors and places (**Pillar 10**).

However, we also make reference through our submission to other pillars in the proposed Industrial Strategy where opportunities for collaboration between industry and academia could further enrich the developing industrial strategy (**Pillar 4** - Supporting businesses to start and grow; **Pillar 6** - Encouraging trade and inward investment policy).

Pillar 1: Investing in science, research and innovation

We welcome the prominence and investment being given to **science, research and innovation** through the developing Industrial Strategy. This is an area of real strength for the UK and all efforts should be made to retain and extend these areas of excellence into the future.

In 2012, through our Growing Value Task Force, we stressed the importance of the excellence of the research base to the strength of the UK economy – from our world class inventiveness in our universities flows world-beating business innovation. But research is a competitive, global activity and other countries are capturing market share. We reiterate the need for the UK to compete for a greater share of supply chains, from research through to wide-scale deployment of new concepts and products, in order to support the UK's economic prosperity and sustained investment in the higher education and research base. **It is for this reason that we call on the Government to maintain the excellence of the UK Research Base through its long-term strategic commitments.**

The commercialisation of research is one of the many ways in which value is created and it is inherently risky. As many reviews into commercialisation have shown, exploiting opportunities is complex. We are committed to supporting the Government review of increasing the effectiveness of research investment set out in the Green Paper and in particular ensuring that both universities and businesses feed into this work. We believe it is of critical importance to ensure that any exploration of new ways to commercialise ideas is undertaken collaboratively with both universities and businesses.

The opportunities offered by commercialisation should not be the preserve of large businesses. The National Centre is committed to developing solutions that **extend the benefits of university-business collaboration to all sizes of companies and across all parts of the UK**. To this end, we look forward to working with the Government to take forward the recent recommendation of the House of Commons Science and Technology Committee, which endorsed our innovation brokerage tool (konfer) aimed as a “straightforward way for businesses to identify potential academic collaborators”. For more information about konfer – [click here](#).

The UK is widely recognised as one of the best places in the world for university-business collaboration but more can be done to **further develop the incentives and rewards** to enable

more of this to happen. The impact agenda has done much to encourage academics to seek out industry collaborations and, as we showed in 2016 in our work on academic interactions, there is clear evidence of the importance of encouraging early career researchers to engage in collaborative opportunities as they are then more likely to continue this throughout their career. But we would also encourage the Government to revisit the recommendation in the Dowling Review around VAT issues on shared facilities. This remains a significant disincentive to the creation of shared physical spaces for organisations such as universities and research institutes. The current situation actively discourages collaborating with commercial partners for fear of a hefty tax bill. In our advice, developed with PwC, published for the sector (which we would be willing to update to feed into the White Paper) we highlighted this would need only minor changes to taxation policy to remove this barrier to collaboration.

Alongside new and innovative ways to encourage and incentivise university-business links, it is also important to strengthen existing structures and in particular the current incentives for universities. The Higher Education Innovation Fund (HEIF) is an invaluable support mechanism in England. We would encourage the Government to do more than just continue this funding but increase it in future years and ensure it is also reintroduced in Wales.

In the section on encouraging trade and inward investment (Pillar 6), specific reference is made to how the Government will seek to develop a “new, more strategic approach” to inward investment. The focus is centred on the strategic inward investment that most contributes to wealth creation for the UK. As we demonstrated through the Enhancing Value Task Force, much of the R&D done in the UK is through multinational corporations whose headquarters are outside of the UK. At one level, this is an example of impactful inward investment – the UK is a good place to invest in R&D. But this is as much a vulnerability as a strength and not all companies with a presence in the UK undertake R&D here. We would encourage the Government to adopt a more strategic approach to inward investment in which priority should be given to ensuring R&D activities are part of the activity mix.

PILLAR 2: Developing skills

Alongside the focus on Science, Research and Innovation, we welcome the emphasis placed on developing skills as a fundamental pillar of the Industrial Strategy.

The development of a skilled workforce is a critical enabler of any economy and the future Industrial Strategy needs to ensure it is supporting the development of infrastructures and opportunities for everyone to reach their potential through education, training and development.

The Council of Leaders welcomes the importance placed on skills development not only as set out in Pillar 2 but as a cross-cutting theme that impacts many of the pillars in the proposed Industrial Strategy. In fact, we would encourage the Government to place more emphasis and importance on skill development throughout the Industrial Strategy.

We cannot afford to take our eye off the ball when it comes to the development and nurturing of the next generation of talent. Through the Industrial Strategy we should not only be focusing on the skills

demands of our current industrial base but being at the forefront of defining future skills requirements and continuing to develop world leading education and training programmes. However, the Council believes that the current focus on skills development, as articulated in Pillar 2, is skewed towards basic and technical educational development.

Whilst these are of course critical and often neglected in government reviews, the Government should be encouraged to not ignore the continued development of higher level skills (for which our universities are world leading) but also to encourage further collaborations between businesses and universities to identify future skills needs and opportunities. As technology advances are occurring at an almost exponential rate, skills demands from industry are seeking to keep pace. We need to ensure we are developing graduate skills that reflect the need to continue to learn and adapt rather than specified skills (which are likely to have sell by date). We need, therefore, mechanisms to support the development of responsive and agile programmes from our universities but we need to break new ground on innovative courses in subjects to equip the UK for new jobs and new opportunities. The introduction of the Apprenticeship Levy presents new opportunities for skills development programmes and we would encourage the Government to support the further adoption of Degree Apprenticeships as a new focus on applied and technical learning.

The members of the Council from both universities and businesses have stressed the importance for future growth and productivity in the UK economy that comes from continued ease of access for overseas academics and researchers. A vibrant and dynamic workforce in our university should also be encouraged to develop more entrepreneurial graduates who will be inclined towards the risks needed to be innovative (whether in terms of company generation or within existing firms).

PILLAR 8: Cultivating world-class sectors

We welcome the recognition in the Industrial Strategy of the need to identify and support world-class sectors to grow the UK economy.

As we have shown through a series of sector specific Task Forces, innovation pathways vary by sector, depending for example on the 'clock-speed' of specific industries, industry structure, maturity and the significance of intellectual property. From manufacturing and engineering through to the creative and digital sectors, the demands and opportunities vary considerably. There is no single 'silver bullet' solution to enhancing the value and impact of university inventiveness that would work across all sectors. Therefore, it is important to **develop differentiated sector strategies to incentivise university-business interactions that are designed to match specific sectorial systems of innovation.**

But, as we have shown through the Fuse programme – our landmark work on the Creative, Digital and IT sectors in places like Brighton, London and Newcastle – we are seeing the emergence of new advances and technology breakthroughs when different sectors or approaches converge. Often these industries have strong connections with new ideas and new technologies (frequently emanating from universities). We need to maintain the UK's research strength but we also need, as we have seen through Fuse initiatives, to create the conditions in which these connections are developed and pushed

forward. Lastly, it is important to ensure that new or emerging sectors are not disadvantaged relative to established sectors.

PILLAR 9: Driving growth across the whole country

As a UK-wide organisation, we recognise the importance of driving growth across the whole country. Our universities and businesses are based across the four countries of the United Kingdom and have an important role to play in, and for, each one.

The Industrial Strategy presents an important series of challenges about how we should grow and develop the entire UK economy. Work undertaken through our Growing Value methodology in Scotland and Wales shows some of the marked differences across the UK and the need to develop practical solutions that meet local needs and requirements. In further developing the Industrial Strategy it will be important to ensure that where it can it must work and address the whole of the UK but also recognise those areas where the Devolved Nations have delegated responsibilities.

We support the proposal in the Green Paper around the creation of new competitive funding streams to support world-class clusters of research and innovation in all parts of the UK. It is important that these are open to all parts of the UK and are used to genuinely drive the development of world-class clusters. The Green Paper highlights that these can be led by businesses or universities and we would encourage the Government to think about using these funding streams as a lever to support collaboration to bring the best of both worlds.

But we would also offer the words of caution that were first said by Sir Andrew Witty in his review for the Government in 2013: there is a need for the Government to play a role in ensuring that there is not a duplication or replication of activities in different localities. The Smart Specialisation Hub (supported by BEIS and delivered by the National Centre in partnership with the KTN) seeks to support LEPs and local partners in England in understanding their position relative to others and targeting their investments in areas that push and strengthen their local comparative advantage. The evidence base being developed through the Smart Specialisation Hub, linked as well through the Science and Innovation Audits, is a unique resource on understanding local research and innovation strengths and we would encourage the Government to continue to support and build on this work.

Lastly, the links between science, research and innovation and developing skills cannot be understated. While the Green Paper recognises the need to drive growth across the whole country – and the challenges to be overcome in achieving this – developing cutting edge research and innovation without also developing a skills or talent pipeline (or vice versa) will lead to further imbalances across the country. This will limit both day-to-day performance and, more importantly, potential achievement and growth.

PILLAR 10: Creating the right institutions to bring together sectors and places

We welcome the recognition in the proposed Industrial Strategy of the need to create the right institutions to identify emerging areas of strength for both sectors, places and clusters of expertise. We would encourage the Government to build on the strengths of existing organisations rather than

create new institutions. But to also consider the opportunity benefits of supporting new approaches such as networks and digital platforms rather than setting up institutions.

The National Centre for Universities and Business, established in 2013, brings together universities, businesses and public sector bodies to address this interface between sectors, places and expertise. We represent a membership from all parts of the UK that cuts across sector boundaries and draws together expertise as much from research and innovation as from skills and talent development. This is an active and committed network with a close connection with public partners in the Higher Education Funding Councils in England, Wales, Scotland and Northern Ireland as well as the 7 Research Councils. It has, within a short period of time, created a strong reputation for delivery of independent, evidence driven reports alongside collaborative change management programmes.

Our emerging suite of digital platforms offer new and innovative approaches to identify and capitalise on emerging areas of strength for both sectors, places and clusters of expertise. For example, [konfer](#) helps business find and connect to innovation opportunities in UK universities. It links to research, facilities, academics and sites from every university in the UK. We hope this will be invaluable for our small business community who can use the tool to identify (both by expertise and by location) opportunities to connect and collaborate with universities.

To complement our work on the research and innovation side, we are also developing a work experience app for students called BrandU. The aim is to ensure every student, regardless of social background, has access to opportunities that will develop their personal brand and increase their employability. BrandU aims to drive volume in the number of opportunities, add innovation into opportunities of varying duration, and widen access beyond local work experience, especially for those from disadvantaged backgrounds.

In summary

Our membership of universities and businesses are committed to making the UK a strong, vibrant and resilient economy and stand ready to work with the Government to realise the ambitions of the Industrial Strategy. We can share with the Government an array of case studies, success stories and cutting edge exemplars from across the UK. Our State of the Relationship Report for 2017, which captures many of these example, will be published in May and we would welcome the opportunity to brief Ministers and Senior Officials on the benefits and opportunities for the UK economy brought about through university-business collaboration.

Annex 3: List of Key Reports

Task Forces

CIHE (2009) The Fuse – Creative, Digital and Information Technology Task Force

<http://www.ncub.co.uk/reports/the-fuse-igniting-high-growth-for-creative-digital-and-information-technology-industries-in-the-uk.html>

CIHE (2010). Great Expectations - Manufacturing and Engineering in the UK Task Force

<http://www.ncub.co.uk/reports/great-expectations-top-manufacturing-and-engineering-talent-2030-creating-the-pipeline.html>

NCUB (2014) Leading Food 4.0. Task Force

<http://www.ncub.co.uk/reports/fe-report.html>

CIHE (2012). Enhancing Value Task Force

<http://www.ncub.co.uk/reports/growing-value-business-university-collaboration-for-the-21st-century-2.html>

NCUB (2016). Growing Value Scotland

<http://www.ncub.co.uk/what-we-do/gvs.html>

Reports and publications

NCUB (2016) Annual Report on Smart Specialisation in England

<http://smartspecialisationhub.org/>

NCUB (2014) State of the Relationship 2014.

<http://ncub.co.uk/reports/sor.html>

NCUB (2015) State of the Relationship 2015

<http://www.ncub.co.uk/reports/state-of-the-relationship-2015-report.html>

NCUB (2016) State of the Relationship 2016

<http://www.ncub.co.uk/reports/state-of-the-relationship-report-2016.html>

NCUB (2016) The Collaboration Progress Monitor – opening the State of the Relationship Report 2016. <http://www.ncub.co.uk/sor>

NCUB (2016) The National Survey of Academics, 2016. <http://www.ncub.co.uk/reports/national-survey-of-academics.html>

NCUB (2015) Easy Access IP: A Preliminary Assessment of the Initiative.

<http://www.ncub.co.uk/reports/easyaccessip.html>

NCUB (2015) Strategies for Sustaining Growth of Income from Knowledge Exchange across UK HEIs

<http://www.ncub.co.uk/reports/ke-income.html>