



## A Northern Powerhouse Higher Education Event Humans need not apply? On the relationship between artificial intelligence and inclusive growth

**When:** February 6<sup>th</sup> 2019, 9.45am (tea/coffee served from 9.15am) to 4.30pm.

**Where:** Liverpool Science Park, Innovation Centre One, 131 Mount Pleasant, Liverpool, L3 5TF, United Kingdom.

**Register (mandatory but free) at:** <https://www.eventbrite.co.uk/e/humans-need-not-apply>

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**Overview:** Professor Dinah Birch (Pro-Vice-Chancellor, Cultural Engagement) and Professor Mark Boyle (Director, Heseltine Institute for Public Policy, Practice and Place) at the University of Liverpool welcome you to this event on artificial intelligence (AI) and its relationship with inclusive growth (IG). Designed as a Northern Powerhouse HEI event and drawing speakers from across the region and beyond from industry, politics, academia and civic life, this day-long event will ask how Northern Powerhouse leaders and key stakeholders might best attend to **both** artificial intelligence and inclusive growth, including and in particular in their Local Industrial Strategies (LISs). It will explore the extent to which the former can best be harnessed so as to deliver the latter.

**Who the event is for:** The event is open to all stakeholders interested in the uneven geographic development of the United Kingdom, the fate of the Northern Powerhouse, artificial intelligence, inclusive growth, the national Industrial Strategy and Local Industrial Strategies; including academics, industry specialists, combined authorities, local authority and Local Enterprise Partnership (LEP) personnel, local politicians and elected members, and researchers and consultants.

**Purpose of the event:** In the light of the 2017 White Paper *Industrial Strategy: Building a Britain fit for the future*, it is clear that the UK government and, in preparing their Local Industrial Strategies (LISs), Northern Powerhouse Mayoral Combined Authorities (MCAs), Combined Authorities (CAs) and Local Enterprise Partnerships (LEPs), will need to attend to two critical historical forces: the rise of big data and artificial intelligence and growing social and spatial inequalities. The first will energise a Fourth Industrial Revolution; the latter has already birthed a *cri-de-coeur* on behalf of the 'left behinds' (expressed not least through a vote to Brexit from the EU) and a demand that future growth be inclusive. Productivity efficiencies and social justice have always made for awkward bedfellows, but it is a particular concern that these two forces might act in contradictory ways. Is confrontation inevitable? Can public policy do anything to effect their reconciliation?

### Background:

**Inclusive Growth** As elsewhere, there has arisen a new politics of inequality in the UK, underpinned by growing socio-economic inequalities, socio-spatial polarisation, uneven geographical development and imbalanced regional growth. Against the backdrop of globalisation, neoliberalism, and austerity, we now live in the age of the 'left behinds' marked by a growing dislocation between representative democracy and popular sovereignty and a rise in political populism. The left-behinds are marked by a particular class, education and age profile and are anchored in places now rendered redundant by global capital, and abandoned to managed decline and terminal marginality. Inclusive growth is recognised as the necessary antidote to the descent of socio-economic and socio-political exclusion

into political populisms rooted in fear, resentment and retrenchment; ‘one-nation politics and good jobs for all’ is the call to arms. How is this to be achieved?

**Data Revolution/Artificial Intelligence** Meanwhile, a Fourth Industrial Revolution beckons. Whereas the First Industrial Revolution used water and steam to power production, the Second, electricity to create mass production, and the Third, electronics and information technology to automate production, the future prosperity of the UK will depend on the data revolution, powerful new data analytic tools and more complex automated systems, including and in particular machine learning and artificial intelligence. And so ‘artificial intelligence and the data-driven economy’ (hereinafter data revolution/artificial intelligence or DR/AI) stands as one of the four Grand Challenges identified by the UK government in its 2017 White Paper *Industrial Strategy: Building a Britain fit for the future*. In this new age, not only will software and code permit robotic devices to perform complex tasks; sophisticated algorithms will enable machines to mimic aspects of human consciousness – perhaps to reach reflexive decisions, to undertake cognitive and sentient reflection, and even to make moral judgements. The extent to which the UK is able to finally address its pernicious problem with low productivity will in no small way depend upon its capacity to roll out DR/AI broadly across sectors, and deeply within sectors.

**Can artificial intelligence be a progenitor of inclusive growth?** These two historical forces intersect in particularly intense and unusual ways in cities, city regions and even rural areas in the Northern Powerhouse. Here the demand for inclusive growth is especially audible. Savaged by deindustrialisation and the victim of a spatially blind national economic strategy which has privileged growth in London and the SE of England and aggravated a North-South divide in prosperity and opportunity, it is in the Northern Powerhouse that the politics of the left-behinds is playing itself out with the greatest vigour. Hope is being invested in the new national Industrial Strategy. And yet DR/AI, a cornerstone of this strategy, risks agitating existing inequalities. Firstly, the 2017 *Industrial Strategy* White Paper observes that AI ecosystems are already more developed in some UK regions: perhaps London, Edinburgh, Bristol, Cambridge and Edinburgh. Will these regions benefit from this head start so as to further entrench uneven geographical development and open up a new productivity gap between them and the Northern Powerhouse? Secondly, whilst the impact of AI on the labour market is the subject of much debate, it is likely that it will polarise income inequalities, creating more very high and very low paying jobs at the expense of a squeezed middle. Once machines replace human beings: No Humans Need Apply!

**Key questions:** The point of departure of this workshop is that the Northern Powerhouse need not approach DR/AI with a sense of foreboding – nor indeed a naive boosterism. DR/AI already exists, pervading the economy and penetrating many sectors. It will be a central force in determining the fate of Global Britain in the twenty-first century. It cannot be ignored. Equally, without public policy intervention, the risk is that the Fourth Industrial Revolution will leave the UK a less equal and even more divided country. Much will depend upon who governs the production, ownership, dissemination, and application of DR/AI and thereafter the ends to which DR/AI is put. For the UK government and for the Northern Powerhouse, two key questions must be addressed:

- *How can public policy ensure that lagging regions in the UK are able to participate equally and fully in the data and AI revolution?*
- *How can public policy ensure that the data and AI revolution is harnessed to promote inclusive growth and to extend opportunities to left behind communities within the Northern Powerhouse?*

## Programme

9.15-9.45am	-Arrive Tea/Coffee-
<b>WELCOME AND INTRODUCTION : CAN ARTIFICIAL INTELLIGENCE PROMOTE INCLUSIVE GROWTH?</b>	
9.45-9.50am	Professor Dinah Birch (PVC Cultural Engagement, University of Liverpool) Welcome and opening remarks
9.50-10.00am	Professor Mark Boyle (Director Heseltine Institute for Public Policy, Practice and Place, University of Liverpool) and Jacqueline Davies (PhD student, ULMS, University of Liverpool) Our Question: Can artificial intelligence promote inclusive growth?
<b>UK2070 COMMISSION INDEPENDENT INQUIRY INTO CITY AND REGIONAL INEQUALITIES IN THE UNITED KINGDOM</b>	
10.00-10.30am	Chair: Professor Cecilia Wong (Professor of Spatial Planning, University of Manchester and Member of the UK2070 Commission) <ul style="list-style-type: none"> <li>Lord Robert Kerslake (Chair of UK 2070 Commission) UK2070 Commission's 'Independent inquiry into city and regional inequalities in the UK'</li> </ul>
<b>INTERROGATING KEY TERMS: 'ARTIFICIAL INTELLIGENCE' AND 'INCLUSIVE GROWTH'</b>	
10.30-11.10am	Chair: Professor Mark Boyle (Director Heseltine Institute for Public Policy, Practice and Place, University of Liverpool) <ul style="list-style-type: none"> <li>Professor Katie Atkinson (Dean of Electrical Engineering, Electronics, and Computer Science University of Liverpool) Artificial Intelligence: What it means, why it matters, and what policy challenges it poses</li> <li>Rebecca Riley (Head of Research and Office for Data Analytics, West Midlands Combined Authority) Inclusive Growth: What it means, why it matters, and what policy challenges it poses</li> </ul>
<b>IMPLICATIONS OF AI FOR WORK AND CITIES</b>	
11.10-11.50am	Chair: Dr Andrew McClelland (PDRA, Heseltine Institute for Public Policy, Practice and Place, University of Liverpool) <ul style="list-style-type: none"> <li>Mr Jon Andrews (Head of Technology and Investments, PwC) Implications of AI for the future world of work</li> <li>Dr Catriona Wolfenden (Innovation Manager, Weightmans LLP) Implications of AI for Law and the Judicial System</li> </ul>
11.50am-12.20pm	Chair: Professor Dinah Birch (PVC Cultural Engagement, University of Liverpool) Discussion and reflection from morning session
12.20-1.10pm	- Lunch-
<b>IMPLICATIONS OF AI FOR AGEING AND HEALTH CARE</b>	
1.10-1.50pm	Chair: Professor Christine Milligan (Co-Director of the Lancaster University Centre for Ageing Research) <ul style="list-style-type: none"> <li>Professor Mike Catt (Director National Centre for Ageing, University of Newcastle) Implications of AI ageing societies</li> <li>Dr Paul Fergus and Dr Carl Chalmers (School of Computer Science, Liverpool John Moores University) Implications of AI for health and health care</li> </ul>
<b>POLICY CHALLENGES AND OPPORTUNITIES: THE NORTHERN POWERHOUSE: TOWARDS AN INCLUSIVE FOURTH INDUSTRIAL REVOLUTION</b>	
1.50-2.30pm	Chair: Colin Sinclair (Chief Executive of Knowledge Quarter Liverpool) <ul style="list-style-type: none"> <li>Mr Mark Basnett (Managing Director, Liverpool City Region Local Enterprise Partnership) Local Industrial Strategies and the pursuit of inclusive growth</li> <li>Dr Annette Bramley (Director of N8 Research Partnership) The Northern Powerhouse: Prospects amidst a fourth industrial revolution</li> </ul>
2.30-3.30pm	<b>Creating a Northern Ecosystem for Accelerating the Adoption of AI</b> Chair: Dr Annette Bramley (Director of N8 Research Partnership) <ul style="list-style-type: none"> <li>Mr Michael Gleaves (Deputy Director Hartree Centre) The Hartree Centre: Delivering competitive advantage to the Northern Powerhouse by accelerating the adoption of high performance computing, big data and cognitive technologies.</li> <li>Professor Steve Caughey (Director National Innovation Centre for Data, University of Newcastle) The National Centre for Data Enabling the Northern Powerhouse to compete and thrive in the new data-driven global marketplace</li> <li>Mr Simon Reid (Sector Manager Advanced Manufacturing at LCR LEP) LCR 4.0 AI and Advanced Manufacturing</li> </ul>
3.30-4.00pm	Chair: Professor Mark Boyle (Director Heseltine Institute for Public Policy, Practice and Place, University of Liverpool) Discussion and reflection from afternoon session
4.00-4.30pm	Chair: Professor Dinah Birch (PVC Cultural Engagement, University of Liverpool) <ul style="list-style-type: none"> <li>Mayor Steve Rotheram (Metro Mayor of the Liverpool City-Region Combined Authority) The Liverpool City-Region Combined Authority: Towards an Inclusive Fourth Industrial Revolution</li> </ul>
4.30pm	- Close-