

Delivering the Life Sciences Industrial Strategy across the North

The **Northern Health Science Alliance (NHSA)** is a partnership of eight leading universities, eight leading NHS Hospital Trusts and the four Academic Health Science Networks of the North England, established to improve the health and wealth of the region by building on an internationally recognised life science and healthcare cluster.

The North of England has all the individual ingredients for a thriving economy that can create opportunities for the 15 million people who live there. Alongside Advanced Manufacturing & Materials, Energy and Digital, Health Innovation is one of the four prime capabilities of the region as identified by the Northern Powerhouse Independent Economic Review (NPIER) - economic sectors through which the North of England has the greatest global competitive advantage¹.

To realise the region's potential in health innovation, the NHSA has been working closely with Government and industry leaders throughout the development of the Life Sciences Industrial Strategy as a formal member of the Life Sciences Industrial Strategy Board and was delighted to have been highlighted specifically as a successful exemplar of regional strength².

A commitment to implement the recommendations of the Life Sciences Industrial Strategy in the North would simultaneously help to end northern inequality in health outcomes and boost life sciences investment, significantly promoting the region's £17.5 billion³ contribution to the UK life sciences industry.

Through our current projects and with the northern life sciences sector employing 570,000⁴ people and forecasted to grow by 44.6% by 2030⁵, the NHSA with its partners is uniquely placed to work with Government to deliver the Life Sciences Industrial Strategy in the North across **six key areas**:

1. Healthcare Advanced Research Partnership (HARP): The North can provide the clinical research environment to support pan-Northern implementation of genomics in medicine, developing effective diagnostics for early, asymptomatic chronic disease, digitalisation and AI to transform pathology and imaging. This includes utilising Newcastle's National Institute of Ageing and the North's four Active and Healthy Ageing Reference Sites to support projects around healthy ageing.

2. Reinforcing the UK science offer, Translational Science: The NHSA can further develop its pan-Northern Memorandum of Understanding between the northern National Institute of Health Research (NIHR) Clinical Research Networks (CRNs) to support the NIHR CRNs to increase capacity and delivery through pan-regional collaboration.

Working with NWeHealth Ltd, the only organisation to have delivered a real-world clinical trial, the NHSA is well placed to support the roll-out of the Salford Lung Study infrastructure across the North of England.

3. **Growth and infrastructure, Clusters and 'place', Support the growth of Life Sciences clusters:**

The NHSA will continue to promote the UK and the North internationally with maintained support from Department for International Trade to the international pharma, medtech and digital health industries. The recent award of the Northern Powerhouse in Health Research (NPIHR) Science and Innovation Audit (SIA) in Precision Medicine and Data for Better Health is a clear recognition of the North of England's potential in health research and its ability to grow the health and wealth of the region.

The NHSA is a founding member of a self-assembled alliance of UK Clusters including NHS Research Scotland, MedCity, Life Science Hub Wales, Northern Ireland and the South West GW4 Alliance. With the Academy of Medical Sciences this group can work with Government to promote a 'single front door' to the UK for research collaboration, partnership and investment as well as cross-cluster collaboration.

Growth and Infrastructure, Manufacturing, attract substantial investment to manufacture and export high value life science products of the future: The North of England is home to the manufacturing clusters in Speke and in the North East. In the North East the overall direct, indirect and induced GVA contribution to the UK by the regional cluster is estimated at over £1bn. The North can work with Government to attract substantial investment to manufacture and export high value life sciences products of the future.

4. **NHS collaboration, supporting the delivery of fifty collaborative programmes in late-stage clinical trials, real world data collection, or in the evaluation of diagnostics or devices:**

The NHSA unites eight NHS Teaching Trusts, eight top universities and four Academic Health Science Networks. The NHSA can ensure that health research projects work in partnership through a collaborative model with the potential to be rolled out across the North's four AHSNs and the UK to underpin the research in the NHS and drive investment and health outcomes throughout the country.

NHS collaboration, Medtech Centres of Excellence: The NHSA through centres in Leeds, Sheffield, Newcastle and Manchester and recent designation of five NIHR Medtech and In vitro diagnostic Co-operatives, as well as the Leeds City Region Science Innovation Audit for MedTech, strongly positions the North to deliver on the creation of Medtech Centres of Excellence.

5. **Data, establish two to five regional innovation hubs providing data across regions of three to five million people:**

The NHSA's central project, Health North: Connected Health Cities (CHC), harnesses patient data at scale to diagnose and treat patients quickly and deliver services more effectively and efficiently. CHC is a prime example of an innovative data ecosystem across multiple geographies of 3-5m populations enabling easy linkage and comparison of data, facilitating forecasting, joined-up care and real-world outcomes-based evaluation. The NHSA commits to developing a subset of the data innovation hubs in line with the CHC programme to support the ambitions and recommendations set out in the Life Sciences Industrial Strategy.

6. **Skills:** Through our direct work with leading Universities, teaching hospitals, NIHR BRCs and global industry in the region, the North can establish and build on existing training programmes to ensure the skills necessary to deliver the fourth industrial revolution are available across the UK.

¹ NPIER (2016) The Northern Powerhouse Independent Economic Review.

Available at: <http://www.transportforthenorth.com/wp-content/uploads/Northern-Powerhouse-Independent-Economic-Review-Executive-Summary.pdf>

² Office for Life Sciences (2017) Life Sciences Industrial Strategy. Available at: <https://www.gov.uk/government/publications/life-sciences-industrial-strategy>

³ IPPR North (2016) Health innovation: Breathing life into the northern powerhouse Available at: <https://www.ippr.org/publications/health-innovation-breathing-life-into-the-northern-powerhouse>

⁴ IPPR North (2016) Health innovation: Breathing life into the northern powerhouse Available at: <https://www.ippr.org/publications/health-innovation-breathing-life-into-the-northern-powerhouse>

⁵ NPIER (2016) The Northern Powerhouse Independent Economic Review.

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