

# Innovation North

## A framework for innovation collaboration and action in the North of England

### Executive Summary

This paper has been prepared by a Task & Finish Group (TFG) of the Northern LEPs Innovation Working Group - comprising the Innovation Leads of the 11 Northern LEPs, Innovate UK, and the N8 Research Partnership.

It is set within the context of the proposals set out in the UK Industrial Strategy Green Paper to deliver interventions and investment which can strengthen growth and productivity across the country and the wide range of assets and opportunities currently present within the North of England including innovation hubs for major corporates, nationally and internationally recognised science and research, existing innovation and cluster based networks and UK leading examples of local eco-system development.

It recognises that whilst a number of pan-Northern organisations already exist – e.g. Transport for the North, Health North, Tech North, Northern Powerhouse Partnership – none of them have innovation as their sole or primary remit.

Against this backdrop, the paper sets out how partners can seek to maximise the impact of innovation initiatives and interventions by working collectively and seeking out opportunities to combine evidenced local and regional smart specialisation assets, capabilities and eco-systems<sup>1</sup>, in order to yield a step change in productivity that can also directly contribute to national economic rebalancing.

The paper recognises that there are a number of potential routes to delivering strengthened innovation performance in the North:

- Strengthening national and international profiling, positioning and understanding of the North's distinctive innovation-related capabilities
- Focusing and channelling dialogue and collaboration to support innovation delivery
- Strengthening the performance of key industrial supply chains
- Strengthening local innovation eco-systems
- Enhancing the pace and scale of commercialisation, i.e. the translation of world class scientific research capabilities into innovation with economic impact
- Increased inward innovation focused engagement and investment

### **Key proposals**

This paper is significant in its own right as the first to have been developed jointly between a group of LEPs and Innovate UK working with other partners, and focuses on things that can meaningfully and best be delivered at Northern scale aiming to complement existing local, regional and national actions.

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<sup>1</sup> These are identified in a range of documents including Strategic Economic Plans, Science and Innovation Audits, Smart Specialisation Report and National datasets. This analysis has yet to be aggregated.

It acknowledges that this spirit of shared understanding of opportunity and collaborative enterprise will be central to build on this momentum. It proposes work over two phases:

Short term proposals (0-6 months):

- Agree a framework identifying those issues and interventions which could benefit from a collaborative Northern approach, by:
  - Summarising and projecting the genuinely distinctive, nationally or internationally significant innovation **assets, capabilities and partnership vehicles** across the North drawing from analysis of existing reports, e.g. Strategic Economic Plans, Smart Specialisation Strategies, and Science and Innovation Audits plus national level data and evidence
  - Identifying themes and challenges aligned with the **Northern Independent Economic Review** prime capabilities and **Industrial Strategy Challenge Fund** themes as the potential focus for a group of Northern innovation competitions, to be resourced from new national funding streams and aimed at accelerating commercialisation.
  - Convening the Chairs or an industry leader from the respective Innovation Board or equivalent from each of the 11 LEP areas, working with Innovate UK and the N8 and other northern leaders to begin to define the shape of the right **leadership model to drive collaborative innovation** across the North
- Prepare a collaborative **submission to the Autumn budget** from Northern LEPs and partners to resource the support for development and delivery of the subsequent longer term actions below.

Longer term proposals (6 months to 2 years):

- Deliver agreed programme **of Northern Innovation Competitions**
- Commission a detailed strategic review of innovation capability and opportunity across the North in our **international context**, drawing information from the Smart Specialisation Hub, and learning from best practice to consider opportunities and challenges for the North in the context of Brexit and the UK Industrial strategy. It proposes the specific option of updating the analysis in the **OECD's 2008 Review of Northern Innovation**
- Identify **5-10 large scale collaborative innovation projects or interventions** that could have a genuinely additional impact on the long term economic performance of the North.
- Define both the **strategic governance and programme delivery and management arrangements** required.

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## Background

1. Productivity continues to remain one of the key challenges for the North of England, to enable it to more strongly contribute to economic growth within the UK, and ensure more effective public services. Innovation is widely recognised as one of the key drivers of productivity. The UK itself underperforms on a basket of innovation metrics compared with more leading economies, and within the UK context the North as a whole underperforms against UK averages.
2. It is clear that companies which innovate grow faster than those that do not, and that across the North there are opportunities for both process and product improvements to raise productivity within companies, and to deploy new technologies to respond to rapidly changing markets. Similar improvements are available to the public sector to deliver new approaches to public service delivery and offer better value.
3. Action to strengthen the focus on innovation is already underway through the adoption of **strategic economic plans** (SEPs) in each of the eleven LEPs across the North, many of which have been updated over the last few months. Joint work between LEP Innovation leads over the last 15 months at the officer level has created a context within which there is now a chance to examine how partners can more effectively cooperate on driving innovation at the Northern scale, firstly by bringing together local, regional and national partners to identify opportunities at this larger spatial scale, and also to complement the development of existing Northern bodies dedicated to transport, health and the tech sector. This also recognises the broader landscape shaped by devolution and central government's place-based growth agenda, including the creation of Combined Authorities and Metro Mayors and emerging industrial strategy.
4. These discussions have identified a number of approaches and frameworks to innovation which are currently being developed in different parts of the north and which offer different potential areas of innovation opportunity including:
  - Strengthening the performance of key industrial supply chains
  - Strengthening innovation focused dialogue within local/regional and network based innovation eco-systems to create opportunities to deliver innovation outcomes, and to develop dialogue across these communities
  - Acceleration of research and knowledge along the Technology Readiness spectrum to deliver higher levels of value through commercial and social applications
  - Strengthening the projection of northern capability into national and global innovation communities to secure inward engagement and investment

## Recent activity

5. A number of reports have focused on the potential for strengthening innovation in the North of England. **Northern Prosperity is National Prosperity** (IPPR North 2012) recommended the creation of a Northern Innovation Council to lead innovation across the north. The first report of the **Northern Powerhouse Partnership** (NPP 2017) has highlighted the opportunity for action in the North in this area. It recommended that employers and civic leaders be brought together to

develop a Productivity and Innovation Strategy which would analyse what could and should be done at the appropriate spatial level to raise productivity.

6. Both argued that strong cooperation will ensure that stakeholders can better understand where collectively a focus or prioritisation of activity around science and innovation can achieve the greatest productivity gains for all – in turn supporting investment so the North can be genuinely world class in key areas. It argued that such collective activity should be business-facing – to ensure it address the barriers most critical to the private sector.
7. This work would follow through on previous collaborative models which have strengthened the profile and delivery of innovation across the North, including The Northern Way. The Northern Powerhouse Independent Economic Review (2016) commissioned by Transport for the North (TfN) highlighted the additional gains to be achieved through a focus on strengthening the performance of a set of Prime Capabilities alongside a significant science and knowledge base.
8. There is now an opportunity for LEPs and other partners to engage pro-actively with, and lead, this work by cooperating together across individual LEP geographies at the scale of the North. As well as being an opportunity, it has been suggested that without effective action at the Northern level then there is a potential risk that the region will fall further behind in terms of productivity gains, may face the prospect of less visibility in public policy environments given the development of the Midlands Engine which has gained some recent traction in this area and will miss out on opportunities in global investment and talent markets in a highly competitive international environment.

#### Task and Finish Group

9. As outlined above, officers from the eleven LEPs across the North have been meeting on a regular basis for more than a year to share thinking and best practice. This was initially intended as a way to understand complementarity in the undertaking of Science and Innovation Audits (SIAs) with central government<sup>2</sup>. The Audits are aimed at helping to provide a better understanding of specific science assets and research excellence, and how these strengths can be better commercialised in order to drive innovation. It evolved subsequently evolved to engage a wider set of national and regional partners and has been a point of increasingly fruitful discussion.
10. Building on this, Northern LEPs subsequently established a Task and Finish Group (TFG) to scope out and make recommendations as to how a framework to support innovation in the North can potentially be taken forward. This has included working alongside Innovate UK as well as the N8 Research Partnership – recognising that innovation is tied closely with the research and science base. More broadly, such an approach presents an opportunity to better align local, regional and national action in the context of national Industrial Strategy objectives, the Northern LEP Strategic Economic Plans, and Northern assets and priorities.

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<sup>2</sup> Wave 1: Greater Manchester & Cheshire East; Lancashire & Sheffield CR; Wave 2: Liverpool City Region; Leeds City Region; Northern Bio-Economy (led by York); Off-Shore Renewable (led by Newcastle).

## Partnering with Innovate UK

11. In February, the Chairs of the eleven Northern LEPs wrote to the Chief Executive of **Innovate UK**, Ruth McKernan, seeking its active involvement in these discussions with the aim of developing a co-ordinated approach across national, regional and local levels through a partnership approach which recognising the opportunities from aligning this work where appropriate with objectives of central government.
12. Innovate UK responded positively, highlighting the opportunity to *“come together at an appropriate spatial level to drive northern productivity and to develop the region’s alignment on innovation with the local and national scales”*. It offered to collaborate with the TFG and bring a national perspective, sector experts and datasets – and has agreed that its regional engagement team should provide additional resource and expertise where needed. Moving forward this could include project management and secretariat functions to support development of the work, as well as to act as the collator of input from the LEPs and others, and help develop draft papers on pertinent topics.

## Suggested framework of actions

13. The initial work of the TFG has identified a group of initial areas of potential cooperation which can aim to build awareness and understanding of Northern innovation opportunities and enhance delivery of policy. It has also identified a long list of other partners and stakeholders whose work could be engaged to support such a programme and whose views should shape it. These include other northern clusters and innovation networks, the full complement of universities and other research bodies, catapults and other centres for excellence and business and public sector networks, as well as national departments and innovation agencies. It has also identified the importance of co-ordination with other bodies operating at the scale of the North to ensure complementary approaches and the avoidance of misunderstanding and duplication. In this regard, organisations including the Northern Powerhouse Partnership, Transport for the North, Business North and the DIT NP Team, as well as structures such as the N8 and IPPR north need to be engaged.

### **(i) Towards the development of a collaborative Northern Research and Innovation Framework**

14. In the short-term there is the need to agree an approach to a collaborative Northern Research and Innovation (R&I) framework which will put in place the basis for ongoing cooperation between key partners and wider stakeholders from local, regional, northern and national levels. A first step should ideally include a refresh of highlights from the existing innovation evidence base, an understanding and presentation of the key science, research and innovation assets across the North, and an articulation of opportunities for further cooperation, particularly in the context of the change in global markets and the emergence of new global challenges. The report could be produced in two formats: a general written summary report, as well as an audio-visual

presentation for use in inward investment discussions and at the Great Exhibition of the North to be held in 2018.

15. The report could focus on opportunities for driving innovation by focusing on challenges across the existing Prime Capabilities - for example digital applications in low carbon and renewable energy, and other applications into advanced manufacturing which can lead to strengthened application of the science base, innovation led growth in the SME base and inward investment. It should also identify opportunities for strengthening market facing dialogue which can support new innovation to be developed by matching need with possibility. Over time a group of value-adding projects at the scale of the North which could strengthen the economic environment could be proposed including areas such as health innovation and data analytics, transportation links such as the Northern Arc Hyperloop project and the proposed Northern Hydrogen network.
16. The TFG proposes that if progress is to be made around a Northern Innovation Strategy then it must secure additional value to existing operations and must be built on a shared sense of mission. It is not sufficient simply to duplicate or aggregate work occurring at the local level – but identify those areas where cooperation across the wider regional geography brings specific additional benefits. This implies the achievement of scale compared with the local level, through the identification of complementarity in specialisms across boundaries, or the improvement of targeting on opportunity compared with the national level, recognising the limitation of a “one size fits all” set of national policies and actions. Such a strategy must also be objective – being clear about the genuine strengths and opportunities as opposed to listing all activity that occurs in this space. Strong objectivity and prioritisation will help ensure credibility with external partners, both nationally and internationally.
17. It is important therefore that partners are able to draw upon a **strong evidence base** to properly understand Northern innovation assets and eco-systems and to identify the interventions or investments which can add value. Some of this is already in place – for example the NPIER, the analysis underpinning SEPs, as well as the first two waves of SIAs, smart specialisation reports, and outputs from national bodies including the Smart Specialisation Hub and Innovate UK. Going forward, it may be useful to commission additional analysis as appropriate to plug any gaps, for example on better understanding linkages across Northern supply chain networks and how these support knowledge transfer from HEIs, or opportunities to encourage product and process innovation.
18. A number of **case studies** should also be identified which highlight where cooperation across the North is already underway (for example around the energy and transport sectors), and where science/ research assets are already well connected and helping to drive innovation and further examples could be developed learning from international practice. As well as to identify actions and opportunities for further inward investment or to better respond to external markets. This could include the connections across the North between the various components of the High Value Manufacturing Catapult, between the Royce, the AMRC, and the CPI working with industrial clusters, the collaboration between digital and tech clusters through Tech North. It should be outward looking rather than insular, and the linkages between the east and west coast

centres of renewable energy and the ORE test centre at Blyth provide both an opportunity for the North and could also provide a strong basis for strengthening collaboration with Scotland.

19. As part of this Strategy, it would be particularly valuable to short-list **priority projects** or joint programmes that could be delivered by partners across the North. As a first step, LEP innovation leads propose to identify what these potential actions might be – and then begin to draw in thoughts from a wider set of stakeholders including the universities (both N8 and other Northern-based HEIs), the Northern Growth Hub Network, the Catapults Network, and the Smart Specialisation Hub. In terms of timing the aim should be to produce a draft strategy by the end of October to influence thinking around the Budget.
20. One of these projects could be to put in place a programme **of Northern Innovation Competitions** - working with technology specialists at Innovate UK and key businesses to target “grand challenges” under each of the four Prime Capabilities; aiming to catalyse delivery of new responses by industry (for example around industrial digitalisation) and to engage innovative SME’s and researchers in the delivery of solutions. Ideally this will mean working with central government to identify appropriate funding opportunities, including from the Industrial Strategy Challenge Fund and from new funds announced in the Autumn Budget. These competitions would be delivered through the Northern LEP network – and evaluated to demonstrate the benefits of intervention at the sub-national level to specifically drive innovation.

**(ii) Autumn Budget Joint Submission**

21. The Autumn Budget offers a good opportunity to demonstrate that key partners across the North are working more closely together to identify actions around innovation that are best undertaken at a regional level drawing together both local and national priorities. For clarity this will not cut across the work of individual LEPs working with partners to mobilise local and regional innovation eco-systems. A **collaborative submission** led by the LEPs describing a framework for a future multi-level approach would send a strong signal to Ministers and demonstrate the potential for delivering a genuinely strategic response to the Industrial Strategy and relevant funding opportunities.

**(iii) Strategy Development: Drawing from International perspectives**

22. While these initial actions will provide a basis for extending collaboration, the development of a strategic framework for ongoing cooperation between key partners and wider stakeholders will require a more detailed examination of the evidence base and should draw from insight over best practice from across the world.
23. In 2008, the OECD undertook a **Review of Regional Innovation for the North of England** which was helpful in developing a shared understanding of the opportunities and challenges in the North, and in drawing international perspectives and insights into the development of the innovation approach of a previous pan-Northern, multi-level initiative, The Northern Way. It observed the increasing recognition amongst OECD member states of the spatial dimension of innovation which require coherent policies to support, and that regional policy in the UK has a

clear aim to enhance productivity performance both to boost growth and reduce performance gaps.

24. 10 years on, a further OECD focus could help inform both the evidence base and the strategic discussion on a way forward – recognising the new institutions which have emerged in terms of the network of LEPs, the Catapults, the Knowledge Transfer Network, the N8 research partnership, and the Smart Specialisation Hub. A 2018 report would aim to provide an independent, external report to review progress in the North since 2008 against key metrics, helping to shape co-ordination of UK and northern institutions in the context of international best practice, and make recommendations on areas of focus or institutional practice which can accelerate performance. Initial soundings of the OECD Secretariat in Paris have been positive. However, such an exercise would cost at least 100k euros, and would need to be approved by the UK government.

#### **(iv) Leadership**

25. Longer term, it is clear that driving an innovation agenda at the level of the North will require coordinated and dedicated **senior leadership**. Around half of Northern LEPs formally have an innovation board in place, which also include local members of some of the regional networks such as N8 and representatives of key businesses and translation bodies.
26. One option would be to work towards putting in place a similar body that would address the agenda from the wider Northern perspective. It is likely that such a move would take some time. However, as a first step it is recommended to draw members of these Boards together alongside innovation leads from all the 11 LEPs to consider the actions set out in this paper, to explore others, and to oversee an agreed action plan. They would be supported in the first instance by LEP innovation officers and the Innovate UK team.

#### Next Steps

27. Having worked together on this proposed approach, the existing Innovation Leads Group recognises the importance of high level buy-in to this work from Northern LEP Chairs and other partners. Chairs have met recently to consider how they can retain collaborative momentum across the North, and have acknowledged that current Northern vehicles including Transport for the North, the Northern Powerhouse Partnership and Governments' Northern Powerhouse Partners Programme have delivered momentum and potentially offer useful vehicles to progress ambitions. However, they have also recognised other bodies and agreed it was important for the most appropriate machinery be developed to deliver a Northern innovation agenda.
28. This group therefore seeks input from Chairs at the meeting scheduled for 19 July, and welcomes the opportunity to present these proposals around innovation and seek endorsement going forward. The group also seeks comment on the existing capacity of LEPs to conduct this work, and agreement to the proposed mechanism to seek the additional resource set out in this paper.