

Supplementary written evidence submitted by the West Midlands Combined Authority (CRV0069)

This is a written submission following the oral evidence from **Andy Street**, Mayor of the West Midlands, **Dr Clive Hickman**, Chief Executive of the Manufacturing Technology Centre and **Prof Simon Collinson**, Director of WMREDI and Professor of International Business & Innovation on 25 November 2021 at the MTC in Coventry and is supported by **Mike Wright**, Chair of the West Midlands Innovation Board.

This submission provides further insight and detail on three main elements of the witness session:

- Evidence the need for, and expected impact of, securing more public investment in R&D in the West Midlands
- Explanation about how this might be targeted taking account of the needs and opportunities from the pandemic
- Importance of linking public research funding with broader skills and workforce development to drive commercial benefits and regional economic prosperity.

## Economic challenges and R&D funding

Pre-pandemic, the West Midlands was the fastest growing outside London, driven in particular by a thriving automotive manufacturing base, construction and business and professional services. That said, and in common with many post-industrial regions, business productivity was 16% below the national average, reflecting a bigger 'long-tail' of less productive firms, and fewer 'frontier' firms.

As highlighted in your letter to the Secretary of State on 16 December, research funding in the West Midlands is unbalanced. There is a very high level of private investment (£398 per head), which is heavily concentrated in a relatively narrow industrial range<sup>1</sup>. While this reinforces the region's global comparative advantage, it means that the research base is not diversifying fast enough, and that the level of public funding is low (£83 per head). The evidence is clear that public R&D funding can help to 'crowd-in' private investment<sup>2</sup>.

To quantify what 'levelling-up' public R&D investment could mean for the West Midlands' '3 LEP' area<sup>3</sup>: to reach the 2:1 funding ratio referred to by academics, this would mean an additional £498m of public funding p.a. (of course, that would also be expected to lever further private investment, so the actual number could be higher).

This is in the context of the Spending Review which set the path to a £5bn increase in public R&D budgets to 2024/5. Broadly, that additional resource can be channelled in three ways, and we believe there's opportunity to apply lessons learned with other devolved funds:

- *Dispersed through established BEIS channels*, such as UKRI – this is likely to be a large part of the mix including UKRI's core research budgets, but also gives opportunity to disproportionately expand place-based programmes, such as the Strength in Places Fund and Catapult Network.
- *Controlled directly by regions* – building on the accountability of metro mayors and using precedents about brownfield funding and adult education. There are two benefits: first, best empowered to integrate with other areas of delivery and influence, including upskilling, business support, FDI, and land supply programmes and second, best informed and accountable to make trade-offs, for instance about whether to invest in existing or latent strengths.

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<sup>1</sup> <https://institute.global/policy/levelling-innovation-boosting-rd-underperforming-regions>

<sup>2</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/897470/relationship-between-public-private-r-and-d-funding.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897470/relationship-between-public-private-r-and-d-funding.pdf)

<sup>3</sup> Black Country, Coventry & Warwickshire and Greater Birmingham & Solihull – a population of over 4m and six universities

- *Spending by other Departments* (MoD, DHSC) but requiring them to set out how that spending is helping to 'level-up' the innovation ecosystems across the UK.

We believe that the R&D Places Strategy, linked to the Levelling-Up White Paper, is an important opportunity for Government to both quantify and explain how public R&D investment will level-up the West Midlands' economic recovery.

### **Targeting R&D investment to drive economic recovery**

The West Midlands has made two related calls so public R&D investment further diversifies our traded sectors and catalyses additional growth in those clusters where we have global competitive advantage. The effect will be a more resilient economy, where the positive spillovers improve wages, opportunity and prosperity across the region<sup>4</sup>.

First, the private sector-led Innovation Board has reorientated its focus to concentrate on translational innovation. This means convening funders, project developers (e.g. universities) and beneficiaries (like businesses) to ensure that translational research proposals are properly shaped to exploit commercial, as well as research, outputs. It had previously played more of a role on the diffusion of technologies and processes and, while still vital, is now covered by other integrated elements discussed below.

Second, the region has used independent analysis of the opportunities for additional (above forecast) growth to pinpoint those traded, industrial clusters and nascent strengths to lead our pandemic recovery. These are summarised in the ***West Midlands Plan for Growth*** and have precise R&D needs. For example, the West Midlands' aerospace cluster is more heavily dependent on SMEs and civil aviation than elsewhere. There's opportunity to target public R&D investment in translational activity to catalyse additional growth, meaning the spillover benefits are not just felt in the UK, but in regions like the West Midlands.

Together, the West Midlands Plan for Growth and sharper focus of the Innovation Board provide:

- Better alignment of regional innovation assets, capabilities and infrastructure by leveraging the strong innovation intermediaries within the region (for example WMG, MTC, BHIC, ERA and ESC).
- Enhanced translational innovation between the regions research institutions and the business base. Translational institutions like WMG, the MTC and Tyseley Energy Park prove the enduring local economic impact of the model.
- Ensuring business investment in R&D aligns with targeted workforce upskilling. For example, over 40,000 people work in the manufacture of internal combustion engine (ICE) vehicles and upskilling support must combine both their transferable skills and businesses future needs.
- the West Midlands and UK's competitive advantage in automotive and mobility, there are also nascent clusters of expertise in the seven technology families<sup>5</sup> that could be the basis for forging a leading global position for the UK
- Supporting the scaling up of the vibrant SME community in the region

### **Integration R&D and other policy levers**

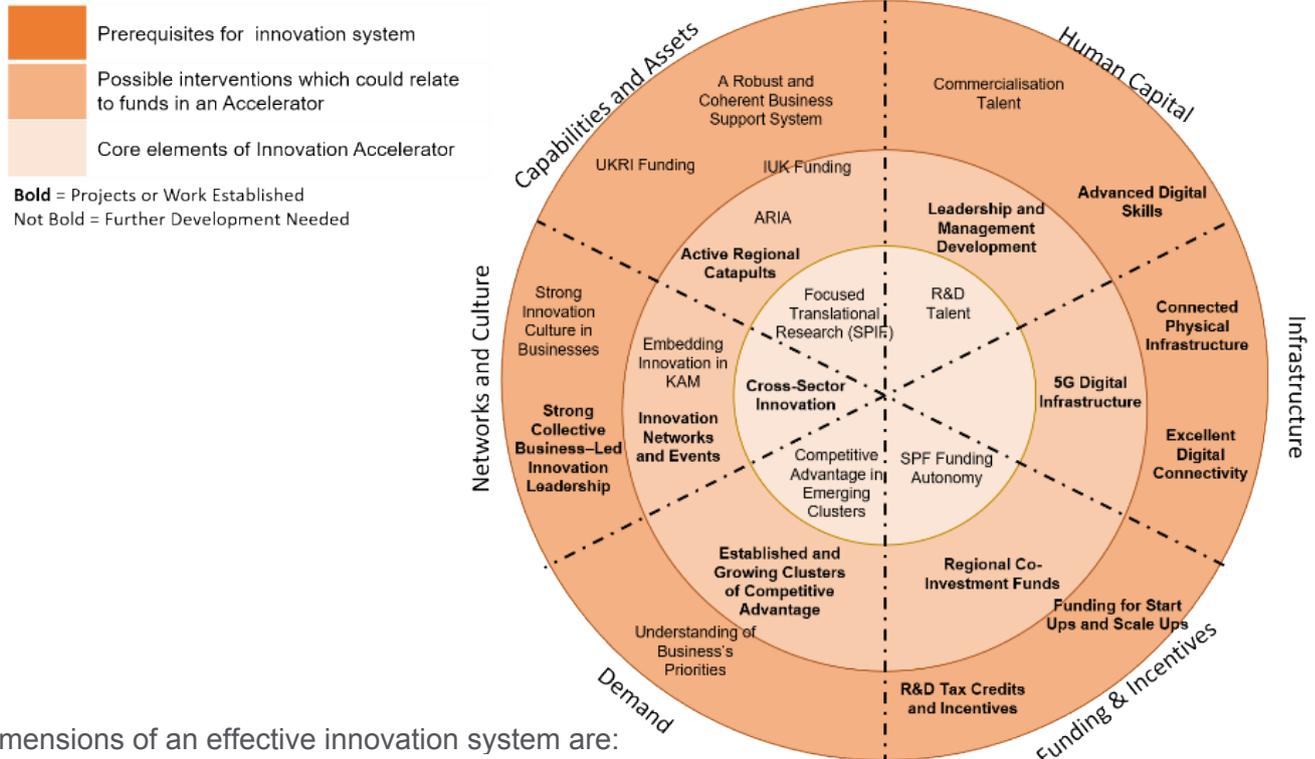
Realising the full spillover effects from public R&D spending depends on complementary policies and programmes. This system is best convened regionally through the soft powers of metro mayors.

The WMCA has developed the framework overleaf to use with BEIS and other agencies to test and align the prerequisites for success. There are examples below about the importance of policy integration.

<sup>4</sup> <https://www.ukonward.com/wp-content/uploads/2021/02/Onward-Levelling-Up-Innovation-.pdf>

<sup>5</sup> The West Midlands has identifiable strengths in Advanced Materials and Manufacturing; AI, Digital and Advanced Computing; and Energy and Environmental Technologies. There are nascent strengths in Electronics, Photonics and Quantum and Robotics and Smart Machines.

Figure 1: Proposed West Midlands Innovation Framework



The dimensions of an effective innovation system are:

- Distinctive world class capabilities and assets:** This includes the West Midlands' world class assets like WMG and the MTC in translating research expertise for commercial ends. This is a focus for further public R&D investment, including a potential role for ARIA.
- Market Demand:** Understanding the distinct traded clusters where the West Midlands must maintain global comparative advantage. This is the focus of the West Midlands Plan for Growth, identifying those barriers to catalysing further growth.
- Human Capital:** Growing a complementary and highly skilled labour market, linking skills with R&D need. This in particular should focusing on upskilling associated with new business models and working practices, which drives both inclusive growth and better productivity.
- Funding and Incentives:** Ensuring R&D output is properly backed with a supply of finance (such as take-up of R&D tax credits) and then the venture capital to commercial and scale-up products. The regulatory framework can also be relevant here.
- Infrastructure:** Providing appropriate land, and connectivity infrastructure (digital, energy, transport).
- Networks and Culture:** Coordinated networks driving a culture of innovation within the regions businesses and presenting opportunities for developing new cross sector markets. This means aligning business support services that help to diffuse technologies and working practices throughout supply chains, and ensuring regional Foreign Direct Investment priorities sell the overall capabilities and incentives available in the West Midlands.

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