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8 January 2025

Dr. Dave Smith and Dame Angela McLean c/o The National Technology Adviser Department for Science, Innovation and Technology 100 Parliament Street London SW1A 2BQ

Dear Dr Dave Smith and Dame Angela McLean,

## **RE: Technology Adoption Review for Growth, Innovation and Productivity**

The Digital Futures Policy Centre at the Institution of Engineering and Technology would like to highlight several areas of consideration regarding the Cross-government Review of Technology Adoption for Growth, Innovation and Productivity.

In summary:

- Due to the broad scope of the review, concerns were raised that the three components are not facing the same challenges but are being addressed as a collective. Each component should be addressed individually as well as holistically, particularly as they will need to be tackled cross-departmentally.
- Start-up companies and those who are looking to scale-up face different challenges, and it is important not to conflate the two.
- Pathways for growth are critical to success and Catapults can play an important role in this through signposting, translation and via early technology readiness maturation.
- There is a clear gap in the ecosystem regarding development and adoption. It is important that information is not lost between development and use of a product, otherwise it becomes less effective and a poor return on investment.
- Further work should be done to foster an entrepreneurial approach to innovation, particularly at early career stages.
- Finally, getting fundamental components such as smooth system thinking and data management right is critical to productivity yet is often overlooked for investment.

The scope of the review is broad, however, not all of the components (Growth, Innovation and Productivity) are facing the same challenges, so in addition to looking at the challenge holistically, they would also be well served to be addressed on an individual basis, particularly as they would need to be tackled cross-departmentally.

Start-up companies trying to scale-up need treating differently to established companies that continue to grow, and it is important not to conflate policies to address both in the same way. Pathways for growth are critical to successful scale-up and creates a more targeted approach when moving from innovation to adoption. To help this, the role of Catapults needs to be strengthened and used specifically to support scale-up. Of course, the role of the Catapult is not to deliver in-service products that need to be maintained and supported to industry but to provide a pathway for technology signposting, innovation, translation and

early technology readiness level maturation and hence they would be well placed to support scale-up activities.

There is a clear gap in the ecosystem that needs to be addressed with regards to supporting best practice for development and adoption, ensuring that knowledge is not lost along the pipeline. A clear example of this is in products such as AI, where product development knowledge is not passed onto product users and maintainers in a robust way. The Responsible handover of AI report highlights this example specifically as a break in the pipeline for information/knowledge handover.

Tools using AI in government for project management purposes is an example where money has been spent on a product without having the appropriate mandate, training and advisory board in place. This can be avoided through a digital transformation plan and an implementation strategy. Not only to secure the technology, but to create harmony and implementation across the public and private sectors. This is because once the public sector has proved effective operability, it will be more enticing for the private sector to follow suit.

The key to increasing productivity is executing the fundamental components of a smooth system, such as robust data management. This is not a new concept, but it isn't deemed a priority for investment in either time or money. Without the fundamentals, newly incorporated technologies will eventually stagnate, fail or become overly burdensome, thereby providing a poor return on investment.

Investing in an entrepreneurial approach to innovation is something that the UK lacks compared to other countries and is not fostered enough at early career stages or through education pathways. Fostering an ecosystem whereby failure is acceptable, on the path to success, ensures an entrepreneurial mindset that encourages start-ups.

Finally, investing in people is beneficial for employment, but not necessarily for productivity. For example, repeatedly focussing on new technologies when the solution is adopting existing technologies, creates further, separate problems by incentivising technologies that are not needed or are not mature enough to succeed.

Please do let us know if you would like any further clarification on these points or to discuss the issues raised further. We would be happy to support the review into technology adoption going forward and would be able to support with professional engineers from our register of policy experts.

Yours Sincerely

Dr Graham Herries Chair of the Digital Futures Policy Centre at the Institution of Engineering and Technology