

Rebooting the UK's Tech-Diffusion Ecosystem to Drive Growth

Annex – Benefits and Costs

Upgrading the UK's technology-diffusion ecosystem offers a near-term boost to growth within this parliament while essentially paying for itself through higher tax revenue – critical for a government facing tight fiscal and economic constraints. This technical annex sets out how in more detail.

The ambitious programme set out in *Rebooting the UK's Tech-Diffusion Ecosystem to Drive Growth* – delivering support to **100,000 firms** or 7 per cent of all employing SMEs – could raise productivity across these businesses by 5.3 per cent on average, **delivering in excess of £6 billion (or 0.2 per cent) of GDP** by the end of this parliament (Table 1).

The programme would be broadly fiscally neutral. It would raise approximately **£2.5 billion in additional tax revenues** (Table 1), assuming a 40 per cent fiscal return from the

additional GDP gains.¹ That would almost cover the **£1.1 billion in setup costs** and **£1.6 billion in running costs** over the same period (Table 2).

Table 1. Estimated benefits by the end of this parliament

Policy recommendations	Firms reached by the end of this parliament ¹	Estimated productivity uplift	GDP gains (£billions)	Additional tax revenues ² (£billions)
Technology-adoption voucher	100,000 Employing SMEs	4.0%	2.2	0.9
Technology-adoption stream within the Growth Guarantee Scheme	20,000 Small and medium	2.3%	1.0	0.4
University technology-adoption centres				
Training: Help to Grow: Management	40,000 Employing SMEs	4.2%	0.9	0.4
Peer learning: volunteer mentors and retirees	50,000 Employing SMEs	1.5%	0.4	0.2
Advisory: Knowledge Adoption Partnerships	10,000 Small and medium	5.8%	1.3	0.5
Infrastructure, technology compass and technology catalogue	100,000	1.0%	0.6	0.2
Total	100,000	5.3%³	6.4	2.5

¹ Firm size aligns with ONS definitions: Employing SMEs includes all firms with 1 to 249 employees, including micro firms with 1 to 9 employees, small firms with 10 to 49 employees and medium firms with 50 to 249 employees.

² Assuming a 40 per cent return in tax revenue from the additional GDP gains²

³ According to our top-down estimate of productivity uplift

Table 2. Estimated costs by the end of this parliament (£millions)

Policy recommendations	Estimated cost (£millions)
Technology compass	5
Technology catalogue	15
Technology-adoption voucher	700
Technology-adoption stream within the Growth Guarantee Scheme	70
University technology-adoption centres	
Set up of university technology-adoption centres	460
Training: Help to Grow: Management	400

¹ In 2024/25, UK government raised around £1,136 billion (£1.1 trillion) in receipts – income from taxes and other sources. This is equivalent to around 39 per cent of the size of the UK economy, as measured by GDP. Receipts were last consistently around 39 to 40 per cent of GDP in the early 1980s. <https://commonslibrary.parliament.uk/research-briefings/cbp-8513/#:~:text=In%202024%2F25%2C%20UK%20government,GDP%20in%20the%20early%2D1980s.>

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Policy recommendations	Estimated cost (£millions)
Peer learning: volunteer mentors and retirees	80
Advisory: Knowledge Adoption Partnerships	300
CTO platform	130
Digital ID for business	500
AI CTO assistant	25
Total	£2,685
<i>Setup cost</i>	£1,131
<i>Running cost</i>	£1,554

This annex sets out in greater detail how we have calculated those estimates, covering first the benefits and then the costs of these policy recommendations.

BENEFITS

Top-down estimate:

The upgraded services proposed in this report – which would reduce adoption barriers for 100,000 firms (50,000 firms with 1 to 9 employees and 50,000 firms with 10 to 249 employees) or 7 per cent of the UK’s employing SMEs – would deliver around £6.3 billion of GDP or 0.2 per cent of GDP and generate an estimated £2.5 billion in additional tax revenues by the end of this parliament. These benefits would stem from faster knowledge transfer, stronger regional diffusion networks and a more dynamic, innovation-oriented business environment.

For this estimate, we assume a 5.33 per cent productivity increase across the targeted firms. That reflects the average productivity uplift achieved by a mature business-support system that combines improvements in technology adoption (5.6 per cent) and business efficiency and management capability (5.05 per cent), according to analysis from the Enterprise Research Centre around the types of business advice that supports small business productivity.³ The top-down estimate therefore represents the expected aggregate

³ <https://www.enterpriseresearch.ac.uk/publications/what-kind-of-business-advice-improves-small-business-productivity/>

gains once the redesigned diffusion ecosystem reaches full operational maturity and steady participation levels.

Bottom-up estimate:

A bottom-up approach adds together the direct steady-state productivity gains derived from individual support services of this programme,⁴ including the impact of an always-on digital CTO as a service accessible to all UK firms.

Each component has been modelled individually, drawing on international and national benchmarks, empirical evaluations and take-up assumptions. When combined, these policy-level estimates yield a cumulative GDP gain of approximately £6.4 billion and £2.5 billion in additional tax revenues by the end of this parliament – in line with the top-down approach.

1. Technology-adoption voucher

The technology-adoption voucher is designed to support 100,000 employing SMEs – approximately 7 per cent of the total – over the course of this parliament. The scale and the expected productivity impact of the technology-adoption voucher scheme draw on national and international precedents. The UK's Help to Grow: Digital programme was conceived on a similar scale, aiming to support 100,000 SMEs over 3.5 years.⁵ However, the initiative fell short of expectations due to limited take-up and weak communication, rather than an overambitious target. The proposed technology-adoption voucher scheme system corrects these shortcomings through a demand-driven design, integrating financial incentives with better targeting, clearer communication, and advisory support through the CTO platform and technology catalogue.

Singapore's Productivity Solutions Grant, which provides co-funding of 70 to 80 per cent for pre-approved digital solutions, allocated S\$600 million (approximately £350 million) to support 100,000 projects over four years. Independent evaluations covering 12,730

⁴ Annex A1 of the Green Book encourages "using representative steady-state values" where precise timing of impacts is uncertain but aggregate magnitudes are known.

⁵ <https://assets.publishing.service.gov.uk/media/65a6a60864060200143cb791/help-to-grow-digital-final-report.pdf>

recipients between 2017 and 2020 found that the scheme increased firm-level productivity by 3.0 per cent⁶ and revenue by 2.2 per cent on average.⁷ Importantly, firms adopting sector-specific digital solutions achieved productivity gains of around 4.0 per cent – nearly double those achieved by firms adopting generic solutions (2.4 per cent).⁸

Germany's Digital Jetzt programme provides further corroboration. With a €163 million budget between 2020 and 2022, it generated approximately €349 million (approximately £308 million) in additional gross value added (GVA) within 4,176 funded firms – a direct productivity effect of roughly 6 per cent per firm – and €1.2 billion (approximately £1.06 billion) in total additional GVA once indirect and induced effects across the wider economy are included.⁹

Drawing from these two benchmarks and recognising that the technology-adoption voucher scheme would include personalised diagnostics, curated technology catalogues and advisory support to ensure firms adopt the most relevant tools, we assume an average productivity uplift of 4 per cent for participating firms. This figure aligns with the sector-specific outcomes observed in Singapore and represents a conservative midpoint between Singapore's 3 per cent baseline scenario and Germany's 6 per cent direct-impact case.

Applying this 4 per cent productivity uplift to the estimated 100,000 participating employing SMEs (who currently produce around £0.5 million in GVA per firm on average now)¹⁰ yields an aggregate increase in GDP of around £2.2 billion by the end of the parliament. Using standard fiscal multipliers of 40 per cent, this corresponds to approximately £0.9 billion in additional tax revenue. These figures represent the cumulative impact once full participation is achieved.

2. Technology-adoption stream within the Growth Guarantee Scheme (GGS)

Evidence from both the UK and the European Union demonstrates that credit guarantee schemes can meaningfully enhance firm performance. The UK's Enterprise Finance Guarantee – the predecessor to the current GGS – showed robust impacts on firm

⁶ https://isomer-user-content.by.gov.sg/166/b217fb7b-7dd0-4e02-a094-7ff650ac4bff/FA_1Q2023.pdf

⁷ <https://accesspartnership.com/wp-content/uploads/2023/03/unlocking-singapores-digital-potential.pdf>

⁸ https://isomer-user-content.by.gov.sg/166/b217fb7b-7dd0-4e02-a094-7ff650ac4bff/FA_1Q2023.pdf

⁹ https://www.mittelstand-digital.de/MD/Redaktion/DE/Publikationen/Zwischenbericht-Digital-Jetzt-NEU.pdf?__blob=publicationFile&v=4

¹⁰ <https://www.gov.uk/government/statistics/business-population-estimates-2024/business-population-estimates-for-the-uk-and-regions-2024-statistical-release>

outcomes between 2010/11 and 2012/13. Evaluations found that participating firms achieved annual turnover growth of 7.3 per cent, employment growth of 6.6 per cent and productivity growth of around 0.7 per cent per year.¹¹ These results underpinned the design of the post-Covid recovery lending schemes and informed the transition to the current GGS.

At the European level, broader credit guarantee programmes targeted at SMEs have shown even stronger results. Evaluations of EU-wide SME guarantee schemes reported average increases of 17.3 per cent in employment and 19.6 per cent in turnover within five years, translating into productivity gains of approximately 2.3 per cent.¹²

Building on this evidence, the proposed technology-adoption growth guarantee stream is expected to generate larger productivity effects than its predecessors, as it directs financing towards investments with inherently higher returns, rather than general working capital or operational uses. Anchoring the expected gains to the European benchmark (around 2.3 per cent productivity growth) is therefore reasonable and consistent with the stronger growth potential of technology-oriented investments.

The proposed technology-adoption stream within the GGS is designed to reach 20,000 firms by the end of this parliament, or roughly 5,000 firms per year, targeting businesses with 10 to 249 employees that have the organisational capacity to adopt higher-risk emerging technologies. This new stream would operate alongside the existing GGS, which currently supports around 5,500 firms annually, effectively doubling total programme reach.¹³ By leveraging the CTO platform to increase awareness, streamline applications, and communicate the strategic and financial benefits of technology-oriented lending, the scheme would stimulate greater demand for growth loans directed toward technological transformation.

Applying this 2.3 per cent productivity uplift to an estimated 20,000 small and medium-sized firms, which have an average GVA of around £2.2 million,¹⁴ by the end of the parliament

¹¹ <https://www.british-business-bank.co.uk/about/research-and-publications/economic-impact-evaluation-enterprise-finance-guarantee-efg-scheme>

¹² https://www.eif.org/news_centre/publications/eif_wp_29_economic-impact-guarantees_july15_fv.pdf

¹³ <https://www.british-business-bank.co.uk/about/research-and-publications/growth-guarantee-scheme-including-recovery-loan-scheme-iteration-3-performance-data-30-september-2024#230548828-3080748946>

¹⁴ <https://www.gov.uk/government/statistics/business-population-estimates-2024/business-population-estimates-for-the-uk-and-regions-2024-statistical-release>

yields a projected increase in GDP of approximately £1 billion and an associated £0.4 billion in additional tax revenue.

3. University technology-adoption centres

Training: Help to Grow: Management

Independent evaluation of Help to Grow: Management (HtGM) provides robust evidence of its effectiveness and value for money. The evaluation found a benefit-to-cost ratio of 2.3:1,¹⁵ with benefits measured in terms of GVA. This means that for every £1 of public investment, participating firms generated £2.30 in additional GVA. Using this benchmark, an investment of £400 million over the remainder of this parliament would yield total benefits of approximately £0.9 billion in additional GVA and £0.4 billion in extra tax revenue. Distributed across the expected 40,000 employing SME firms, this equates to an average GVA gain of £23,000 per firm or a 4.2 per cent productivity uplift.¹⁶

Peer learning

An improved peer-learning and mentoring network is estimated to generate an average productivity uplift of approximately 1.5 per cent among participating firms. This is the midpoint between two estimates around the impact of peer learning, drawn from the Be the Business: Mentoring for Growth programme and the Made Smarter Adoption experience. Applying a 1.5 per cent productivity uplift to the 50,000 employing SMEs targeted during this parliament results in an estimated £400 million increase in GDP and £160 million in additional tax revenue.¹⁷

The Be the Business: Mentoring for Growth programme provides a useful reference point for the potential impact of business mentoring. The initiative, which connects SME leaders

¹⁵ <https://www.gov.uk/government/publications/beis-government-major-projects-portfolio-accounting-officer-assessments/help-to-grow-management-programme-accounting-officer-assessment-2021-html#:~:text=Based%20on%20this%20analysis%2C%20we,for%20money%20test%20is%20satisfied.>

¹⁶ To calculate this firm-level productivity effect, we focus on employing SMEs – the target size range of the programme – of which there are approximately 1.4 million in the UK, generating a combined GVA of around £786 billion, or around £0.55 million per firm. A £23,000 increase in GVA for firms of this size thus represents an average uplift in productivity of around 4.2 per cent per participating firm.

¹⁷ Applying this 1.5 per cent productivity uplift to the estimated 50,000 participating employing SMEs (who currently produce around £0.5 million in GVA on average now) yields an estimated £400 million increase in GDP and £160 million in additional tax revenue by the end of this parliament.

with senior business mentors on a pro bono basis, generated up to 10 per cent additional employment growth and 11 per cent higher turnover within a year of support – equivalent to roughly a 1 per cent productivity uplift.¹⁸

However, the proposed peer-learning network under university technology-adoption centres would not operate as a traditional mentoring scheme. Embedded within the redesigned diffusion ecosystem, it would combine structured peer learning, expert-led guidance, and integration with the CTO platform and AI CTO assistant, enabling mentors to provide tailored, data-driven support. This enhanced model aligns more closely with the Made Smarter Adoption experience, where advisory and network effects alone (excluding financial support) were found to increase firm productivity by around 1.9 per cent.¹⁹

Taken together, these two references suggest that a midpoint productivity increase of 1.5 per cent is a feasible and conservative estimate for firms engaged in the new peer-learning and mentoring system.

Advisory: Knowledge Adoption Partnerships (KAPs)

Evaluations of the long-running Knowledge Transfer Partnership (KTP) scheme provide a strong basis for estimating the impact of KAPs. Evidence shows that KTPs deliver between £4.20 and £5.50 in net economic benefit per £1 invested,²⁰ reflecting both direct productivity improvements and wider innovation spillovers. The KAP scheme would be expected to generate similar or even slightly higher returns given its targeted focus on technology integration.

Adopting a conservative 4.2:1 benefit-to-cost ratio, a £300 million investment over the remainder of this parliament would yield around £1.3 billion in additional GDP and £0.5

¹⁸ https://media.bethebusiness.com/documents/Impact_Evaluation_of_Mentoring_for_Growth.pdf

¹⁹ Evaluations of the Made Smarter Adoption programme found that participating firms achieved 6.5 per cent higher turnover and 3.9 per cent employment growth, implying a 2.6 per cent productivity increase. Around 16 per cent of firms received direct financial support, while the remaining 84 per cent benefited solely from business-advisory and mentoring services. The former are estimated to have achieved productivity gains of around 6.2 per cent – comparable to those under Knowledge Adoption Partnerships – while adjusting for the latter group suggests an average 1.9 per cent productivity uplift attributable to peer-learning and advisory effects alone. <https://assets.publishing.service.gov.uk/media/65e06d14cf7eb1b0e5f57f3e/made-smarter-adoption-report.pdf>; <https://www.madesmarter.uk/resources/news-made-smarter-adoption-kpi-statistics-fy202223-fy-202425/#:~:text=Table%201%3A%20Registrations%20Made,3%2C236>

²⁰ <https://www.ukri.org/wp-content/uploads/2023/10/UK-23102023-KTP-Evaluation-Final-Report-FINAL-Aug-23.pdf#:~:text=Economic%20impact%20%E2%9D%96%20KTPs%20between,priorities%20for%20in#/novation%20and%20with>

billion in tax revenue. Distributed across the 10,000 firms expected to participate over the period – around 4 per cent of all small and medium-sized firms (with 10 to 249 employees) – this equates to an average benefit of approximately £135,000 per participating firm, or a 5.8 per cent increase in productivity relative to each firm's average GVA of £2.2 million.

4. Infrastructure, technology compass and technology catalogue

Estimating the productivity gains generated by the redesigned, technology-driven support system is inherently challenging. While there is strong evidence that digital infrastructure and coordination platforms improve delivery efficiency, there are no direct precedents that robustly evaluate the impact of an integrated, AI-enhanced diffusion system such as the one proposed here. As a result, this assessment adopts a conservative assumption based on evidence provided by analogous examples of digital infrastructure and their impact on productivity.

The AI-enabled infrastructure – comprising the CTO platform, business digital ID, AI CTO assistant and the identification-stage services (technology compass and technology catalogue) – is expected to deliver incremental productivity gains through multiple channels such as improved targeting, faster service delivery, higher compliance and follow-through, and better coordination across the adoption journey.

Although the precise scale of these effects is difficult to isolate, relevant evidence offers a useful frame of reference. Micro-studies on digital connectivity show that doubling broadband speeds among small firms can increase labour productivity by roughly 2 per cent,²¹ illustrating the potential of even incremental digital improvements. However, the redesigned diffusion system focuses not on connectivity but on service delivery optimisation, and therefore its direct impact is likely to be smaller.

Given this, it is reasonable to assume that the new infrastructure could yield a fraction of the productivity gains achieved through the university technology-adoption centre services, particularly those linked to improved management, advisory support and peer learning. Taking a conservative assumption of 1 per cent productivity uplift – less than one-tenth of

²¹ <https://onlinelibrary.wiley.com/doi/pdf/10.1111/twec.13485>

the combined benefit of all university technology-adoption centre services – provides a credible baseline for the incremental gains attributable to the AI-enhanced diffusion infrastructure. Applying this 1 per cent productivity increase across 100,000 employing SMEs – especially the small ones, since the medium ones will have the full benefits of university technology-adoption centre services – results in an estimated £0.6 billion in additional GDP and approximately £0.2 billion in extra tax revenues by the end of this parliament.

This assumption is conservative but aims to recognise that the redesigned system's long-term benefits – such as improved data integration, better policy learning and higher institutional efficiency – would likely exceed the measurable near-term productivity effects captured by impact assessments of individual policies.

COSTS

Assuming the government implements this programme to upgrade the UK's diffusion ecosystem – reaching 100,000 SMEs over the course of this parliament – the total cost would comprise **£1.1 billion in setup costs** and **£1.6 billion in running costs**.

Setup costs cover the development of the digital infrastructure, the two identification services (technology compass and technology catalogue) and the establishment of university technology-adoption centres. Running costs include delivery of the policy programmes and maintenance of the digital systems.

1. Technology compass

Diagnostic tools are rarely costed as standalone products, since they are typically integrated into larger transformation platforms. The most relevant benchmark is the Digital Transformation Accelerator (DTA) for the network of European Digital Innovation Hubs (EDIH), which received €3.6 million over three years (approximately £3.9 million in 2025

prices) to host a software platform supporting online diagnostics and service catalogues.²² The DTA's web portal includes tools for assessing network performance and tracking improvements in digital maturity among participating organisations.²³

Using this as the benchmark for the setup cost of the technology compass and including maintenance and running costs consistent with UK market rates under the G-Cloud framework,²⁴ this results in a total cost of approximately £5 million by the end of this parliament.

2. Technology catalogue

There are no published estimates for the standalone cost of developing a national technology catalogue, as comparable systems – such as Singapore's SMEs Go Digital Productivity Solutions Grant (PSG) directory²⁵ – embed catalogue functions within wider digital transformation programmes. However, a strong analogue is provided by the UK's Tech Innovation Framework,²⁶ with a budget of £9.5 million for the period 2022–2026, which funds the design, development and operation of a framework and a system to manage a catalogue of tech solutions in the social care sector.

Adjusted to 2025 prices, this equates to approximately £12 million, which provides a reasonable benchmark for the technical development and operation of a cross-sectoral technology catalogue. To this, we add an estimated £3 million by the end of this parliament to cover governance, coordination and ongoing maintenance, consistent with UK market benchmarks for government digital services.

- Coordination and governance – Based on the Early Years Coordination Service model,²⁷ which operates at roughly £2 million over four years, this covers the

²² <https://www.developmentaid.org/organizations/awards/view/407574/digital-transformation-accelerator-for-the-network-of-european-digital-innovation-hubs>

²³ [https://digital-strategy.ec.europa.eu/en/policies/edihs#:~:text=The%20Digital%20Transformation%20Accelerator%20\(DTA,the%20online%20catalogue%20of%20EDIHs](https://digital-strategy.ec.europa.eu/en/policies/edihs#:~:text=The%20Digital%20Transformation%20Accelerator%20(DTA,the%20online%20catalogue%20of%20EDIHs)

²⁴ <https://assets.applytosupply.digitalmarketplace.service.gov.uk/g-cloud-14/documents/708460/961170721145026-pricing-document-2024-04-12-1016.pdf>

²⁵ <https://grants.gobusiness.gov.sg/support/productivity-solutions-grant/psg-directory>

²⁶ <https://www.contractsfinder.service.gov.uk/notice/ba68fbc6-fc06-4a4d-93f0-f02ef90a9d41?origin=SearchResults&p=1>

²⁷ Early years coordination service (£2 million – 4 years) [Early Years Coordination Service - Contracts Finder](#); DBT Data Platform development and support (£6.8 million – 4 years) [Provision of Data Platform Development and Support for Department for Business and Trade - Contracts Finder](#)

permanent coordination mechanism between government, firms and technology vendors required to nominate, evaluate and refresh approved technologies.

- Platform maintenance and continuous improvement (£1.0 million) – Derived from standard UK market benchmarks for cloud hosting, cybersecurity, backlog management and technical support for comparable government digital services.²⁸ This would also cover the ongoing iterative development of the catalogue.

Overall, the technology catalogue would cost approximately £15 million by the end of this parliament, combining setup and running costs.

3. Technology-adoption voucher

The technology-adoption voucher scheme is designed to support 100,000 employing firms – equivalent to approximately 7 per cent of this group of firms – over the course of this parliament. The scheme would co-fund up to 50 per cent of adoption costs, with a cap of £10,000 per firm, balancing fiscal scalability with meaningful firm-level support.

Total cost is estimated at £700 million by the end of this parliament, assuming full participation across 100,000 firms and an average grant utilisation rate of around 70 per cent of the cap, consistent with uptake observed under the Made Smarter programme.²⁹ Although this represents a substantial investment, it remains achievable and fiscally contained when compared to international benchmarks.

4. Growth Guarantee Scheme stream for tech adoption

The proposed technology-adoption stream within the GGS is designed to reach 20,000 firms by the end of this parliament.

This measure would not require a direct allocation of capital from the government's budget. The proposal aims to allocate an additional £1 billion of loan capacity to the GGS to finance

²⁸ <https://assets.applytosupply.digitalmarketplace.service.gov.uk/g-cloud-14/documents/708460/961170721145026-pricing-document-2024-04-12-1016.pdf>

²⁹ Based on the number of projects and the expenditure on grants between FY22/23 and FY 24/25 in the Made Smarter Adoption programme, the average value of grants corresponds on average to a 70 per cent of the cap of the grants. [Made Smarter Adoption KPI Statistics: FY2022/23 – FY 2024/25 | Made Smarter](#)

software, equipment or digital transformation projects, backed by a 70 per cent government guarantee. This implies a maximum contingent liability of £700 million, though this would only be drawn upon in the event of defaults.

Assuming a default rate of 10 per cent – typical for higher-risk technology loans – the expected fiscal cost to the Exchequer would be around £70 million by the end of this parliament. For context, by mid-2025 the GGS had already facilitated £2.5 billion in SME lending with historically low loss rates.³⁰ The government has previously expanded the scheme by £500 million in lending capacity, demonstrating that such targeted extensions are both feasible and fiscally sustainable.

5. University technology-adoption centres

Setup of university technology-adoption centres

Drawing on international best practice, the university technology-adoption centres are modelled on Germany's Mittelstand-Digital network,³¹ which successfully established 25 centres nationwide with an average annual budget of around €40 million between 2014 and 2018 – equivalent to approximately £47 million adjusted for inflation. Based on this reference, the UK could establish 60 university technology-adoption centres by the end of this parliament for a combined cost of around £460 million covering both setup and operational expenses, or £8 million per university technology-adoption centre over the course of the parliament (or roughly £2 million to £3 million per year).

The estimated cost aligns closely with current UK benchmarks for comparable facilities. For instance, AI Innovation Hubs in the defence sector operate at approximately £2 million per year (2022), or about £2.5 million at 2025 prices.³² This consistency across reference points supports the feasibility and proportionality of the university technology-adoption centre proposal as a scalable national model for technology diffusion.

³⁰ <https://www.british-business-bank.co.uk/finance-options/debt-finance/growth-guarantee-scheme#:~:text=Open%20for%20applications>

³¹ https://ec.europa.eu/information_society/newsroom/image/document/2019-32/country_report_-_germany_-_final_2019_0D303AC9-00B0-5F1A-A0DF3E5B4391E9B5_61206.pdf

³² <https://www.contractsfinder.service.gov.uk/notice/8b12221f-0a6d-4a96-bee4-c25b4d0f9c79?origin=SearchResults&p=3>

Training: Help to Grow: Management

Current participation in the HtGM programme stands at around 3,300 firms per year, supported by an annual budget of roughly £74 million.³³

Expanding and enhancing the HtGM programme to reach 40,000 firms would cost around £400 million by the end of this parliament, based on current delivery costs of approximately £9,600 per participant, which includes course fees, facilitation and programme management. This estimate is derived from the existing per-participant cost of £6,750,³⁴ funded by government (with firms contributing £750 each), plus an additional 40 per cent to cover facilitation and operational costs – though given the dedicated role of university technology-adoption centres under this system that cost may be lower in practice.³⁵

Peer learning: volunteer mentors and retirees

The establishment of a peer-learning and mentoring network under the university technology-adoption centres draws inspiration from the successful SCORE programme in the United States, which in 2023 mobilised more than 10,000 volunteer mentors – mainly retired executives – on an annual budget of approximately \$21 million (around £18 million in 2025).³⁶ The UK adaptation would build on this model, developing a network of around 10,000 mentors under the university technology-adoption centre system, each supporting approximately five firms per year. This would enable the network to reach up to 50,000 unique businesses over the course of the parliament.

Establishing a national peer-learning and mentoring network under the university technology-adoption centre system would cost around £80 million over the course of this parliament (around £20 million per year), based on the US SCORE programme benchmark. The network would draw on existing initiatives such as the HtGM programme with more

³³https://assets.publishing.service.gov.uk/media/645a5508479612000fc29265/help_to_grow_management_end_of_year_one_evaluation_report.pdf

³⁴https://assets.publishing.service.gov.uk/media/645a5508479612000fc29265/help_to_grow_management_end_of_year_one_evaluation_report.pdf

³⁵ <https://www.enterprisenation.com/learn-something/help-to-grow-mentors-national-awards/>

³⁶ <https://www.score.org/>

than 4,700 mentors,³⁷ and Digital Boost with over 4,000 voluntary mentors that guide businesses in technology adoption.³⁸ It could also connect with complementary networks such as Tech London Advocates,³⁹ a community of over 15,000 entrepreneurs and industry leaders, or draw on The Royal Voluntary Service which connects 55,000 retirees to volunteer opportunities,⁴⁰ this should be a source of the retiree required expertise. The budget would cover coordination, training and digital platform support, ensuring efficient integration within the university technology-adoption centres.

Advisory: Knowledge Adoption Partnerships

The KAPs would adapt the existing KTP model to focus explicitly on technology adoption and integration within firms. The scheme aims to deliver 10,000 placements over the course of this parliament (roughly 2,500 placements per year once fully operational) – approximately a threefold increase compared to current KTP activity, which supports 800 to 1,000 businesses annually.⁴¹

Projects would target high-growth-potential small and medium-sized firms with the capacity to host and benefit from digital associates. The delivery of approximately 10,000 placements would require a budget of about £300 million over the course of this parliament. Each placement is expected to cost around £40,000 – half the cost of a traditional KTP – reflecting shorter duration and narrower project scope. Participating firms would contribute around 25 per cent of the cost (£10,000 per placement). This design mirrors the structure of existing KTPs, which cost approximately £80,000 per project, with Innovate UK covering 50 to 75 per cent of the cost and firms funding the remainder. The shorter, adoption-focused KAP placements therefore represent a cost-effective, scalable adaptation of an established model.

6. CTO platform

³⁷ <https://www.walesonline.co.uk/business/5000-business-leaders-enroll-national-26551886>

³⁸ <https://www.nolimits.ukri.org/partner/digital-boost>

³⁹ <https://www.techlondonadvocates.org.uk/about/>

⁴⁰ <https://www.royalvoluntaryservice.org.uk/our-services/advice-support/guide-to-retirement/>

⁴¹ <https://www.ukri.org/wp-content/uploads/2023/10/IUK-23102023-KTP-Evaluation-Final-Report-FINAL-Aug-23.pdf>

The CTO platform would consolidate all business-facing support for technology adoption into a single digital gateway. Built by leveraging existing government digital infrastructure – specifically the GOV.UK back-end systems and the forthcoming Business Growth Service portal – the platform would consolidate business support for technology adoption into a single, interoperable platform.

Costing is benchmarked against the UK government’s One Login programme, launched in 2021 to integrate digital access across multiple public services. The platform-development component of One Login was budgeted at approximately £100 million (within a wider £400 million programme).⁴² Adjusted to 2025 prices, a comparable investment for the CTO platform is estimated at around £130 million by the end of this parliament.

7. Business digital ID

The business digital ID would provide every UK firm with a secure, unified digital identity to access public services and tailored technology-adoption support. The system would build on the architecture of GOV.UK Verify and the One Login programme, extending this capability to businesses and integrating it directly into the CTO platform.

Costing draws on prior UK digital-identity initiatives. One Login, launched in 2021, was budgeted at around £400 million for full implementation.⁴³ Adjusting for inflation, the expected total cost of the business digital ID is around £500 million by the end of this parliament.

8. AI CTO assistant

The AI CTO assistant would act as a digital advisory companion combining AI with expert human guidance. It would provide SMEs with tailored, data-driven support throughout their adoption journeys, from initial diagnostics to implementation planning. Integrated within the

⁴² <https://www.computerweekly.com/news/252506595/UK-governments-new-digital-identity-system-to-cost-up-to-400m>

⁴³ <https://www.computerweekly.com/news/252506595/UK-governments-new-digital-identity-system-to-cost-up-to-400m>

CTO platform, it would deliver scalable, always-on assistance and generate insights to continuously improve the ecosystem's responsiveness.

Cost estimates are benchmarked against comparable AI systems used in public service delivery. Smaller-scale implementations, such as Denver's "Sunny" chatbot,⁴⁴ cost around \$184,000 (approximately £140,800) to deploy and \$100,000 (approximately £76,500) annually to maintain, while the U.S. National Science Foundation's AI chatbot was contracted for \$1.4 million (approximately £1.07 million).⁴⁵ Larger, national-scale systems provide a more relevant benchmark: Estonia's "Bürokratt",⁴⁶ which is an interoperable network of AI-powered virtual assistants connecting services across the public sector, has cost approximately €13 million over four years from 2019 (£15 million in 2025 prices), and Finland's AuroraAI programme,⁴⁷ which goes further with a national AI network that proactively offers tailored, cross-sector services, public and private, based on user needs, was completed at a cost of €10 million in 2018 (equivalent to £12 million in 2025).

Taking the Estonian example as a model, developing an AI CTO assistant for the UK is estimated to cost up to £25 million, including both a pilot phase – covering manufacturing and professional services – and economy-wide scale-up by the end of this parliament. That is based on the development costs of Bürokratt, inflation adjusted and accounting further for the additional cost of system training, integration with existing infrastructure and iterative refinement of the AI model to ensure reliability, security and sector relevance.

⁴⁴ <https://www.westword.com/news/denver-ai-chatbot-sunny-knows-basics-cant-help-on-hot-topics-20891202/>

⁴⁵ <https://fedscoop.com/ai-chatbot-part-of-federal-data-access-service/#:~:text=BrightQuery%2C%20Inc,secure%20compute%20environment%20in%20July>

⁴⁶ <https://e-estonia.com/estonias-new-virtual-assistant-aims-to-rewrite-the-way-people-interact-with-public-services/#:~:text=A%20distant%20cousin%20of%20Siri,and%20Alexa>

⁴⁷ <https://fcai.fi/eab-blog/2023/12/11/what-we-learned-from-auroraai-the-pitfalls-of-doing-ethics-around-unsettled-technologies#:~:text=question%20of%20the%20discussion%20comes,can%20be%20looked%20up%20online>