

Digital government and the productivity puzzle

The case for partnership between the public and private sectors



Foreword



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At a time when the global technological race is seeing nearly every sector of industry trying to understand, pivot and capture the benefits that digital technologies can provide, the transformation of businesses as well as the new services they provide is disrupting what was considered to be the traditional measure of productivity.

Now, whether you are a start-up disruptor or a newly established unicorn, you can stampede into a market, crashing through long held commercial models, as well as criss-crossing through sectors. It is no longer about product or service delivery being the centre of a business, it is now about how good your logistical model is or the customer experience that is king. Where does this leave governments and their relationship with citizens, via the services they deliver? Well it is not inaccurate to say that the public sector is lagging behind, and the digital expectation gap between how public services are delivered and the experience provided by the private sector is becoming a chasm.

Government does not need to lead the way but should demonstrate that it can both identify and deliver the innovation that digital transformation can provide and which can lead to increased productivity. It can be said to have tried by establishing Government Digital Services, however, momentum appears to have slowed and in a world that is moving at such pace, an approach that aims to build technology inside government is always going to face a challenge to keep up and be relevant. For government to capture the vast innovation and value that the market now has, it requires greater open collaboration with the organisations that can unlock the potential of digital transformation and keep abreast of the pace of change. This is not a case of simply contracting with a large IT organisation. The world of innovation is vast and varies in size and scale, hence government needs to be open to partnering with organisations that can bring innovation to the fore, but who can also locate and collaborate with others, be they start-ups or SMEs, to bring forward the right innovation from a vast digital marketplace.

By being open to a new partnership paradigm, government - and more importantly, government procurement - has the opportunity to harness greater innovation for the benefit of the citizen, and deliver improved productivity and value for the taxpayer.

Foreword



Stephen Martin
*Director General
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We had to wait until the middle of December for the biggest business deal of 2017 to arrive. Disney's \$66bn bid for 21st Century Fox's entertainment business, if approved by regulators, will create a global media titan that owns many of the world's best-known film franchises, including Toy Story, X-men and Star Wars.

This mega-deal has been widely interpreted as a reaction to the challenge posed to the traditional entertainment producers by streaming services, such as Netflix and Amazon, which only got into the game a few years ago, but are now serious content producers in their own right.

It forms part of a broader pattern of new digital innovators challenging companies in established service industries. In banking, companies like Monzo are now offering app-based alternatives to traditional high-street banks. In transport, ride-hailing apps like Uber, Lyft and Gett have been among the most high-profile digital disruptors, but they are only part of a broader change to how people travel. Consumers now have so much more information at their finger-tips, with companies like London-based Citymapper providing information on quicker journeys in cities across the world.

In many ways, the UK has been one of the most exciting countries for digital innovation, with a receptive market and a boom in start-ups in recent years. But in one significant way, Britain has not lived up to its potential. Despite clear awareness from ministers of the potential, government is yet to fully embrace the opportunities of digital transformation.

This doesn't just matter for citizens, who could be accessing information they need, for example on taxes or benefits, more easily. It is also a wasted opportunity to reduce some of the headaches for businesses that come from difficulty in accessing support schemes or government procurement, to name two examples. When raising the UK's productivity has become a core focus of government policy, removing unnecessary compliance burdens is an area that cannot be overlooked.

It would be a 'win-win' situation if the public sector could make better use of the innovation that has been rife in the private sector in recent years, creating scope for new, or improved, digital services as well as cost-efficiencies.

Governments in many countries have shown that public-private partnership, done properly, can produce benefits for citizens and the economy. There has been progress through initiatives like the Government Digital Service, now it is time to pick up the pace, and unleash the public sector's digital potential.

Executive summary

When the Prime Minister launched the Industrial Strategy Green Paper in January 2017, she made clear that a major driving force behind the plan was the desire to tackle the UK's so-called 'productivity puzzle':

This active government will build on Britain's strategic strengths and tackle our underlying weaknesses, like low productivity. This is vital because if we want to increase our overall prosperity, if we want more people to share in that prosperity, if we want higher real wages, and if we want more opportunities for young people to get on – we have to raise our productivity.¹

This report starts with an agreement that improving productivity growth should be an express aim of government policy. Raising productivity levels is a long-term and wide-ranging goal, which will involve all of government. We do not intend to replicate the work of the Industrial Strategy here. Instead, we seek to investigate the productivity question through the lens of technology-driven transformation of public services, particularly digital services.

There are two main motivations for this focus. The first is that technology has the potential to massively improve services, in a cost-effective manner that releases spending for productivity-boosting investment in areas like infrastructure and skills.

The second is that businesses are themselves users of government digital services, ranging from appeals against business rate valuations to applications for apprenticeship levy funds, and much more besides. Services which are simple to navigate will save management time that can then be spent improving a business's processes and products.

The paper, therefore, sets out to explore two interlinked questions –

- How can the private sector be an effective partner in bringing technological expertise to the public sector?
- How can the Government's digital transformation be pushed forward to the benefit of business in terms of regulatory compliance and accessing support?

We begin with the premise that the Government does not itself need to be an innovator or developer of technologies, but instead needs to create the environment in which technologies and processes that have been honed in the private sector can be adapted to deliver better services.

Crucially, the Government has identified that procurement is a vehicle for tackling the productivity puzzle, aiming in the Industrial Strategy to ensure “that all major government procurement projects are structured in a way that supports productivity improvements, so that UK-based suppliers are in the best position to compete for contracts throughout the supply chain.”

The report draws on survey evidence of the views of business leaders on government digital services and examines the potential for technology to produce productivity gains. Finally, it produces a set of principles for strengthening the partnership between public and private sectors in delivery of these services.

¹ https://beisgovuk.citizenspace.com/strategy/industrial-strategy/supporting_documents/buildingourindustrialstrategygreenpaper.pdf

The fiscal context

The UK’s public finances have been severely strained since the 2008 financial crisis – and remain in a precarious position. The recession precipitated a sharp rise in the government deficit. After reaching just over £150bn, it has since been on a gradual downward trajectory (Figure 1). This was supported by a slight recovery in tax revenues as the economy returned to growth, albeit slowly, alongside the Coalition government’s policy of austerity, which reined in expenditure across Whitehall departments – transport, work and pensions, and justice in particular – the welfare state, and across local government.

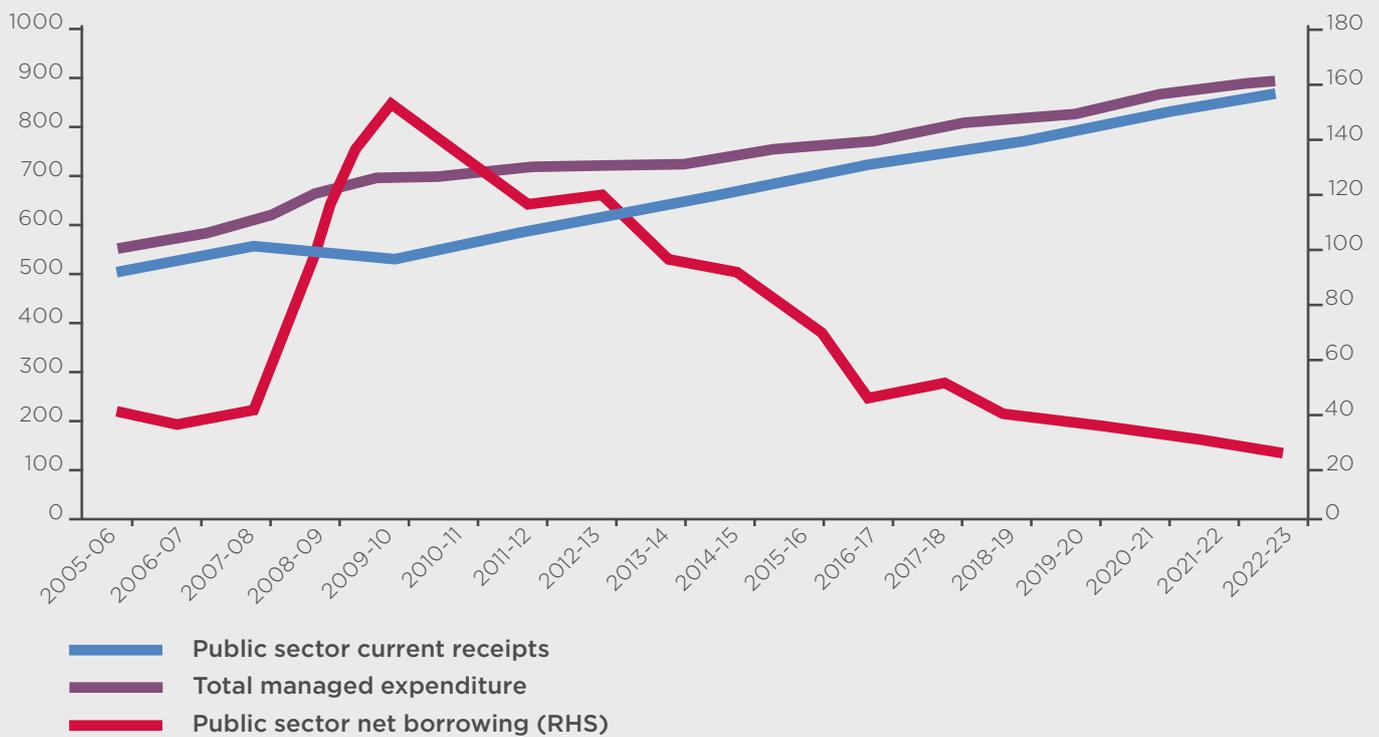
The debt burden has risen substantially, adding friction to fiscal decision making. The UK’s debt as a percentage of GDP has risen sharply since 2008 to just below 90% – the highest peacetime level (Figure 2) – costing around £40bn in debt interest payments per annum. The Office for Budget Responsibility’s (OBR) recent

downgrading of their forecasts for the rate of productivity growth places further limits on the projected fiscal headroom available for the Chancellor.²

Demands on public spending are increasing from several directions. An ageing population is putting pressure on health and pension expenditures. Brexit also has fiscal implications (although the impact is very difficult to predict, being dependent on both the process and the final destination), while growing public pressure for expenditure, such as on public sector pay rises, will further limit political room for manoeuvre. Meanwhile, health, education, and international development spending is ring-fenced.

As such, it is becoming apparent that the Government must place even greater emphasis on a more efficient and effective use of public funds: striving for value for money in all government expenditure.

Figure 1: Government Expenditure, Receipts, and Deficit (£bn)^(a)



² All data in this section comes from the Office for Budget Responsibility: <http://cdn.budgetresponsibility.org.uk/Nov2017EFOwebversion-2.pdf>

Figure 2: Public Sector Debt as a proportion of GDP (%)^(a)

(a) Source: Office for Budget Responsibility. November 2017. Data from 2017-18 are forecasts.

The productivity puzzle

The UK's poor productivity performance has repeatedly confounded official forecasts. The OBR based its projections of a return to trend growth on the assumption that the responsible factors were results of the financial crash and ensuing recession, and would thus dissipate as the economy recovered. Initially, labour hoarding in the face of weak demand was identified as the main culprit. But this became less plausible as firms began hiring again (employment growth has been one of the UK economy's stand-out success stories of the past few years).³

Then the impaired banking system was thought to be to blame for the continuing disappointment of weak productivity growth, as funding failed to reach firms or sectors with the greatest potential for productivity gains. As the OBR points out, the banking system is now better capitalised and significantly more robust, so this does not seem to explain the current picture.

Other suggested explanations relate to weak business investment, which has recovered very slowly since the financial crisis, in comparison with previous recessions. The OBR argues that the near-term uncertainty caused by the result of the EU referendum could be exacerbating or at least extending low rates of investment.

Surveys of Institute of Directors (IoD) members indicate that business confidence became more fragile during the course of 2017, with investment plans for the next 12 months tipping into negative territory last August, and more firms saying they expect investment spending to be lower rather than higher ⁴.

Here, the UK's strong employment performance could be something of a double-edged sword, with the OBR suggesting that uncertainty could have prompted firms to rely on "relatively flexible labour rather than less easily reversed investment in capital".

When it comes to adoption of technology, there are two seemingly contradictory trends bumping up against each other. On the one hand, the UK is, according to techUK's Tech Nation 2017 report ⁵, the leading country in Europe for investment in digital technology businesses. The evidence of digital disruption is observable all around us, transforming how we travel, shop and work. Every industry, from retail to healthcare, is being fundamentally altered by technology.

And yet, on the other hand, overall business investment is subdued and productivity growth seems unable to get out of the starting blocks. Clearly, more needs to be done to harness the potential of the rapid growth we have seen in digital technologies in recent years.

To return to the political context, the Brexit negotiations are outside of the scope of this paper, but clearly the outcome and manner will play a significant role in the future path of the UK's productivity. Tackling the UK's long-term economic challenges should be the Government's concern at any time, but Brexit must create extra impetus for domestic reform that stimulates productivity growth. The government acknowledges this need in the Industrial Strategy, which it calls a "critical part of our plan for post-Brexit Britain".

³ http://budgetresponsibility.org.uk/docs/dlm_uploads/Forecast-Evaluation-Report-2017_Web-Accessible.pdf

⁴ <https://www.iod.com/news-campaigns/press-office/details/A-Chancellor-pulled-in-many-directions-still-cant-afford-to-overlook-business>

⁵ <https://technation.techcityuk.com/>

Technology as a driver for productivity

Productivity gains have historically gone hand-in-hand with technological advancement.

The first industrial revolution (1760-1840) used water and steam power to mechanise production; the second (1870-1914) used electric power to create mass production; the third (1950-1980) used digital circuits to automate production and the 'fourth industrial revolution' (2000-) is using data exchange, and artificial intelligence, to personalise production.

These innovations in production techniques, skills, methods, and processes have all enabled humans to do more with less, and have brought about substantial gains to economic growth and living standards the world over.

With resources scarce and demands diversifying and constantly evolving, productivity gains are critical for success in business and government. Growth becomes impossible if organisations cannot incrementally produce more. Investment in new technology offers a major avenue – alongside improvements in labour welfare, education, management, and institutional structures – in achieving just that.

The most successful organisations have capitalised on innovation in order to bolster their operational models – by reducing inputs, making internal processes more efficient, and by improving the quality of outputs. While investment in the first industrial revolution meant the laying of private linking tracks to the railway or the purchase of new manufacturing equipment, today it often means software and technological upgrades to develop new digital accounting platforms and customer relationship management systems.

For government, with the proper use of technology, everything from regulatory compliance to benefit assessments can be made far easier; indeed, in time, some projects which currently require hundreds if not thousands of man-hours can be significantly

streamlined to such a degree that they happen almost labour-free. Individuals currently in roles made redundant by technology can be retrained to do more productive work.

Investing in new technology can kick-start an on-going innovative process, enhancing the future diffusion of ideas throughout an organisation. It can also facilitate easier and cheaper experimentation. For example, using advanced data techniques (such as machine learning) for modelling can improve the replication and adoption of certain innovations. Investment in technology can also boost cross-sector gains in research.⁶

In a time of enhanced social, economic, and political challenges, the importance of productivity is even more accentuated for the public sector. On the particular focus of this paper, evidence from surveys of business leaders suggests there is great potential if government were able to learn from the best examples of technology use in the private sector.

For example, 6 in 10 members of the IoD surveyed in 2017⁷ said that more efficient use of data in the public sector could reduce the amount they spend on complying with regulations, and around half explicitly said it would allow their organisation to become more productive. The challenge for policy-makers is that the majority of company directors say that government digital services are inferior to those in the private sectors.

[Government] “IT systems often have been designed in ways which are tightly coupled to the original function, with little scope for flexibly adapting or expanding their use”
IoD Member

⁶ The Future of Productivity, OECD, 2015

⁷ The IoD conducted two surveys through its Policy Voice platform, the first between 27 June – 13 July 2017, with 991 respondents, and the second between 27 July – 10 August 2017, with 896 respondents. All of the following results come from these two surveys.

The full results of the IoD's survey are below.

Adopting new technology is now widely acknowledged as a key method for the Government to make efficiency gains and savings to alleviate strains on the public purse. However, there is both increasing awareness and acknowledgement that efficiency gains alone are not the only benefits to be derived through new technology. There is now an opportunity to redesign services, develop entirely new 'fit for purpose' services to support reforming policies, and therefore, a significant generational opportunity to tackle the productivity puzzle in the public sector.

While measuring public sector productivity gains may be difficult, broadly speaking it relates to delivering high-quality services more cheaply, and can therefore be the result of technology's impact on reducing the government's cost base, restructuring of public services, and improvement in the delivery of services.⁸

The increase in accessibility to technology and digital platforms is providing an unprecedented opportunity to reshape services from basic automation of administrative tasks, to the triaging of government data. This can enable anything from new online services, all the way to entirely redesigning the relationship between the citizen and the state through a digital interface.

As such, the expansion of IT, digitisation, and Big Data has already served to – and promises to further – boost the efficiency and effectiveness of governments across the globe.

McKinsey research has estimated that digitisation could deliver productivity improvements worth at least \$1 trillion across the global public sector⁹. Online government interfaces, which reduce business-to-government paperwork, including tax filing and registering businesses, cut public sector costs partly by reducing the number of manual staff involved in shifting documents, while also improving service delivery by allowing basic

tasks to be done on a faster and more consistent basis.

For example, since the 1980s the Austrian government has steadily digitised the country's justice system, leading to the digital processing of 95 percent of applications for civil actions and 69 percent for civil enforcement. The savings in administrative and postage costs, and gains in revenue from applications, helped the ministry to cover over 70 percent of its expenditure from revenue in 2011.

⁸ Productivity in the public sector, What makes a good job? PricewaterhouseCoopers, July 2014

⁹ Government Productivity, McKinsey Center for Government, April 2017

¹⁰ Transforming the UK public sector in an era of austerity, McKinsey & Company, March 2015

The current state of public service transformation

The Government Digital Service (GDS), a unit in the Cabinet Office, was formed in April 2011 to improve the transformation of government services. Since its initiation, a number of programmes have been rolled-out, including improvements to the government's official citizen website interfaces (GOV.UK), security enhancement, and payment innovations.

GOV.UK Verify was developed to provide identity assurance so that users can access the government's digital services securely by providing proof of who they are. Users choose from a range of identity check providers to verify them - avoiding the security risks of holding personal data in large databases. The program is intended to reduce identity fraud, reduce expenses by eliminating the need for expensive face-to-face services, and save users time by allowing them to use a single account to access different government services. Currently there are over 1 million verified accounts integrated into 12 services run across Her Majesty's Revenue and Customs, Department for Work and Pensions, Driver and Vehicle Licensing Authority, Department for Environment Food and Rural Affairs, and Department for Business, Energy and Industrial Strategy.¹¹

GOV.UK Pay uses cloud computing to integrate payment service provider systems into the

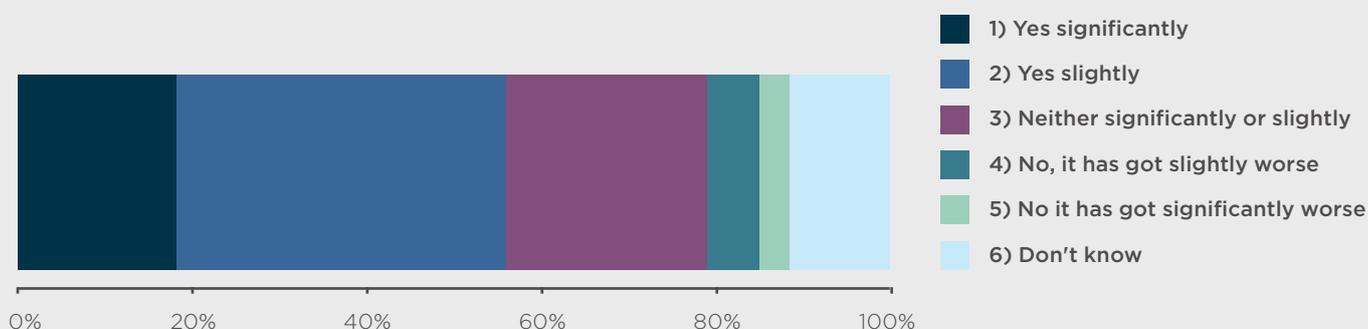
government network, in order to make it easier for services across the public sector to take online payments. The project is intended to enhance user experience by speeding up payment processes, including refunds, and boosting payment options. From the Government's perspective, the integration is intended to raise efficiency by cutting down on manual payment processing as well as make it easier to reconcile payments.

Furthermore, GOV.UK Pay has been designed to make it easier for the government to integrate future technological advances into the system. It was introduced to central government departments in 2016 and has since processed over 500,000 transactions with a total value of around £30m, with an extension to local government authorities in the pipeline.¹²

The Government's efforts have had some impact. Over half (56%) of respondents to a survey of members of the Institute of Directors felt access to, and the ease of use of, government digital services had improved over the past six years (**Figure 3**).

“GOV.UK has lots of information but nothing by way of guidance to navigate it for the complete novice.”
IoD Member

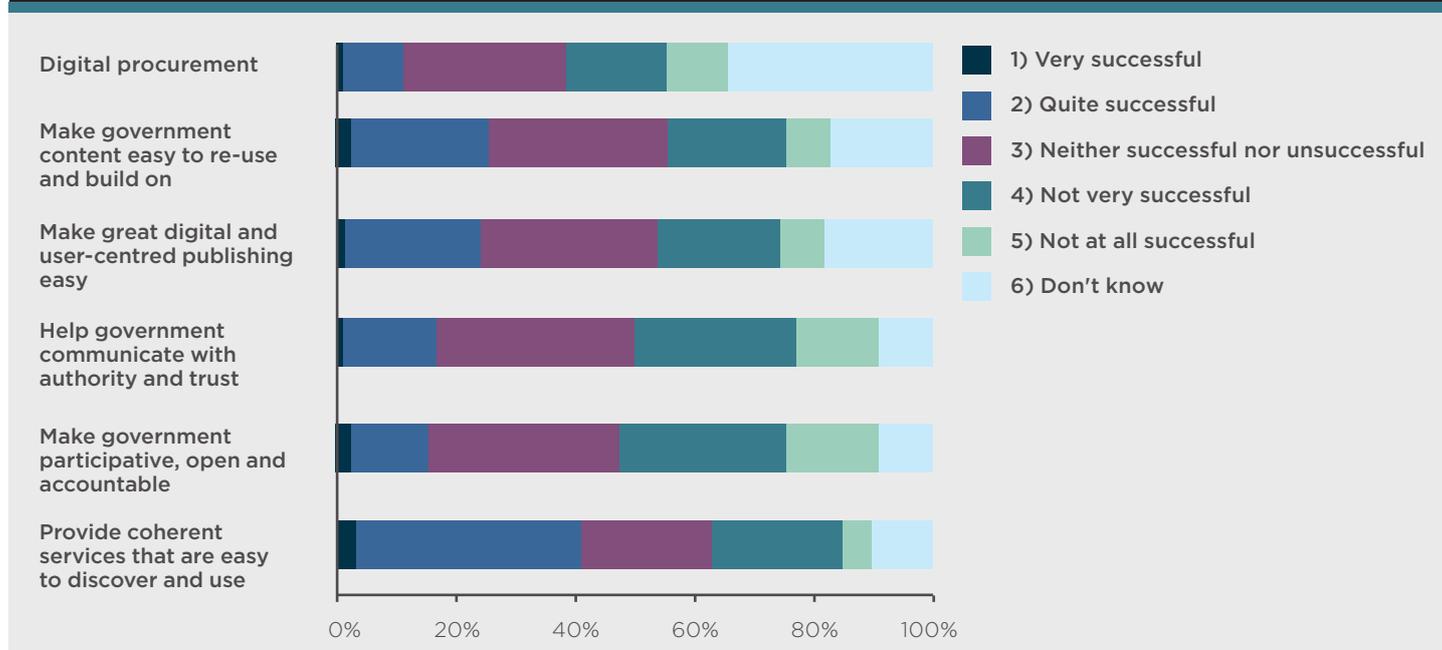
Figure 3: Has access to, and the ease of use of, Government digital services improved? (IoD Policy Voice July)



¹¹ Government Digital Service, GOV.UK Verify

¹² Government Digital Service, GOV.UK Pay, <https://www.gov.uk/performance/govuk-pay>

Figure 4: Last year the Government set a vision for its official digital site GOV.UK with the aim of making government work for its users by proposing the following goals. How successful has the Government been in achieving each of these goals?



However, there is a gap between the Government’s intentions and delivery. There is by no means a feeling among businesses that the Government’s digital proposition is without faults. When asked to judge GDS according to its stated intentions, IoD members gave mixed responses.

The Government has been more successful in providing useable services and content, but less successful in procurement, and in making government more participative, open and accountable.

These survey responses tally with a National Audit Office (NAO) report published in March 2017 which found that the Government Digital Service has “found it difficult to redefine its role as it has grown.”¹³

Verify, described above, was specifically criticised by the NAO:

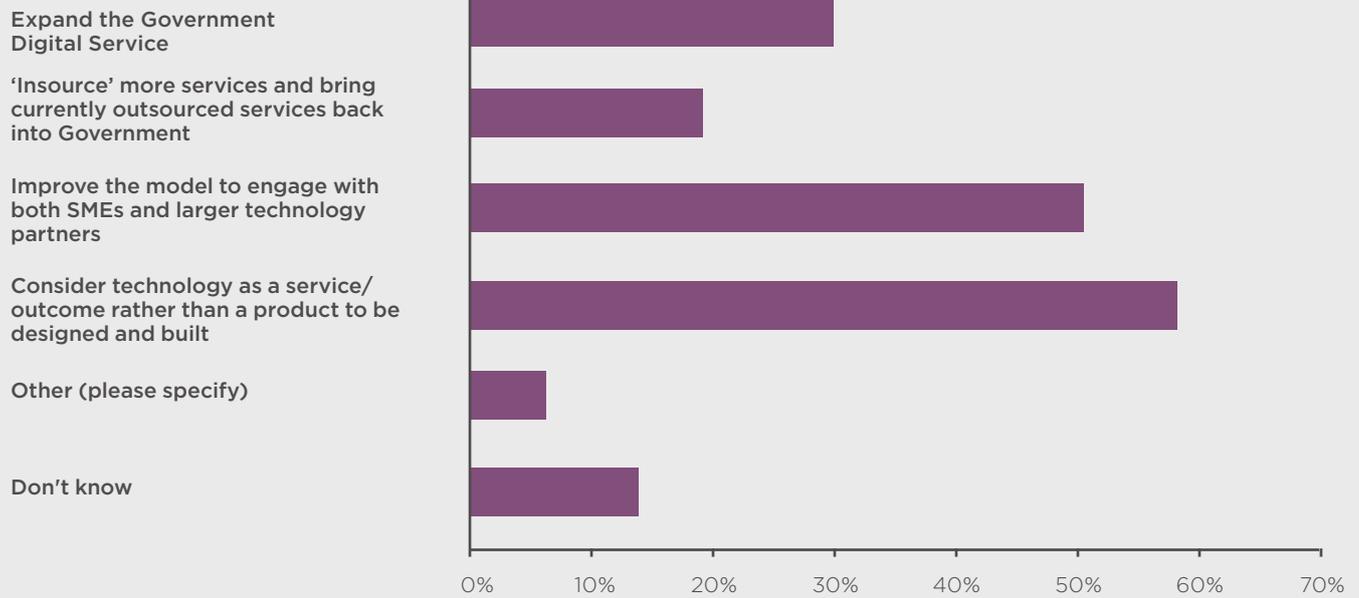
Verify has been difficult for some people to use, departments have taken longer and found it more difficult to adopt than expected, and GDS has had to soften its approach to mandatory use... Verify presents a strategic opportunity to

improve the way that personal data is used across government enabling better use of data, based on a single secure view of identity. But this strategic case has not been sufficiently developed, tested and communicated.

Indeed, IoD members do not think that increasing the reach and functions of the GDS is necessarily the best way to produce better services. When asked about steps the Government could take to improve its digital offering, only 30% said they thought expanding GDS was the best route to pursue, while majorities thought that a better option would be to improve the model for engaging with the private sector, and focussing on the outcome, rather than the delivery of a specific technology.

“The public sector needs to open its mind to...innovators”
IoD Member

¹³ Ibid

Figure 5: From your knowledge or experience, how do you think Government should improve its digital provision?

Public sector use of data

Integrating advanced data collection and analytics allows governments to conduct more accurate policy analysis and improve decision-making, including by better understanding public needs and preferences – which can greatly boost value for money in the public sector. For example, in Indonesia, PetaBencana is a tool that combines data from hydraulic sensors with social media and Jakarta city government data to produce real-time flood maps for the Indonesian capital, which experiences regular flooding. In effect, it allows public authorities to greatly enhance flood planning and monitoring.¹⁴

Similarly, sharing relevant data both with citizens and across public sector institutions can help free-up government resources by reducing query support and can also help to incentivise government accountability by creating greater transparency.

Improved data collection, and analysis, can also be used within the government to directly enhance public finances, including through improving payments, collection processes, and

by simplifying and cutting regulation.

Better use of data in HMRC could help to reduce the tax gap - the difference between tax due and tax collected - according to McKinsey research, which estimates that the UK could raise tax revenues by up to 2 percent per year through data analysis tools. Meanwhile, the Swedish government has invested in output-based budgeting, using data which allows them to better model the potential returns and costs from certain projects and ensure greater value for money on public expenditure.

In fact, the bulk of respondents to the IoD's survey felt that more efficient use of data in government would reduce the amount of time their organisation would spend on regulatory compliance procedures and, more broadly, around 1 in 2 felt it could allow their businesses to become more productive (**Figure 6**). That said, almost half of respondents did express concerns that it may also endanger personal data, reflecting the importance of effective implementation and management.

Figure 6: To what extent would more efficient use of data within the public sector...(IoD Policy Voice July)



¹⁴ Embracing Innovation in Government, OECD, February 2017

Data use in public transport

Case Study: Transport for London¹⁵

At the end of 2016 Transport for London (TfL) piloted the collection of depersonalised passenger WiFi data – obtaining information from 5.6 million mobile devices, across 54 stations. The trial emphasised the potential role of big data in boosting productivity, and revenues. The information drawn from the exercise provides useful insights on how TfL could reduce crowding and prioritise investment. TfL's analytics team were able to break down and aggregate the data to uncover patterns in movement across the tube system, and noted numerous potentially business-enhancing uses of the information, including enabling staff to better inform passengers on how to plan their journeys. The data can also be used in identifying congestion points and pinpointing areas for investment and providing opportunities to boost advertising revenues by informing companies on passenger flows. As public transport systems have to absorb increasing numbers of passengers, and in a context of constrained public finances in the UK, the need to maximise efficiency of capital investment, and make the most of commercial opportunities, will become more even more pressing.

Case Study: Mexico City's Mapaton

Mexico City, with over 14 million individual rides per day, is one of the largest and most complex bus systems in the world. Due to the sheer scale of the city, authorities had been unable to develop data to adequately map routes. An initiative developed through public, private, and NGO working groups, called Mapaton, was launched in 2016. It crowd-sourced information from over 4000 participants, relaying GPS coordinates from riders to provide data to map the bus network, as well as on journey length, passage frequency, duration, and fees. Mapping such a large network using traditional methods would have cost millions of dollars, but with Mapaton, the designers were able to produce data on 50,000 kilometres of bus routes at a cost of \$15,000 in just two weeks. The results have been utilised to develop data-driven policy and to develop smartphone apps to assist users of the bus system.¹⁴

¹⁵ Press release: Pilot shows how WiFi data can improve Tube journeys, Transport for London, September 2017

Public sector use of technology

In government, technological advancement also means incorporating new ideas and international best practice for government management and processes. And this includes using said knowledge to improve public sector technological adoption, procurement and the institutional framework for facilitating ongoing technology-led productivity growth.

Of course, government’s own technology investments need to be implemented, and allocated, effectively. Yet the public sector does not always have access to the expertise, funding, or exposure to competitive forces to truly capitalise on innovative opportunities. Indeed, the balance of respondents to the IoD’s survey suggested that the government is poorly equipped to take advantage of technological advances and automation. This was underscored by the fact that the majority of respondents felt that online payments, banking, and data entry provided by the private sector were better than the government’s own digital services (Figure 8).

Respondents to the IoD’s survey largely attributed the government’s modest progress on technological use to a lack of clear objectives and strategy, and relatedly, the poor use of outside experts and companies (Figure 9).

“it all depends on the rigour of the procurement process and the ability of client managers”
IoD Member

These survey responses point to the need to boost a new collaboration partnerships model between government and the private sector. While not unanimous, 46% of respondents to the IoD’s survey said that the outsourcing of government contracts would lead to more efficient government administration, against 27% who said it would make administration less efficient (Figure 10).

Figure 7: How equipped do you believe the public sector is to take advantage of changes due to technological advances and automation? (IoD Policy Voice July)

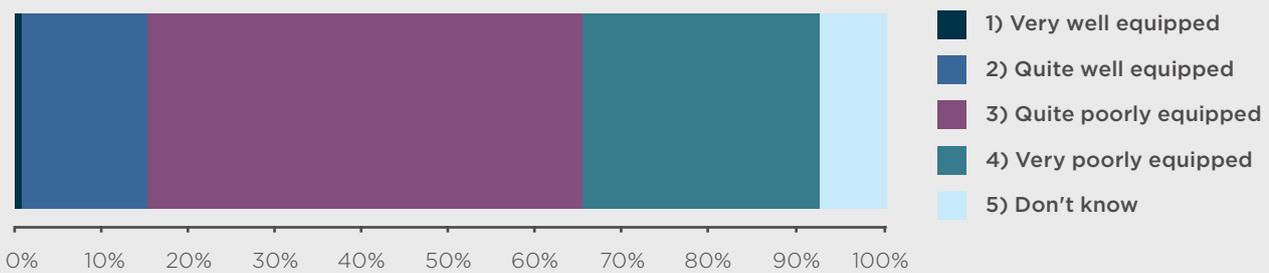
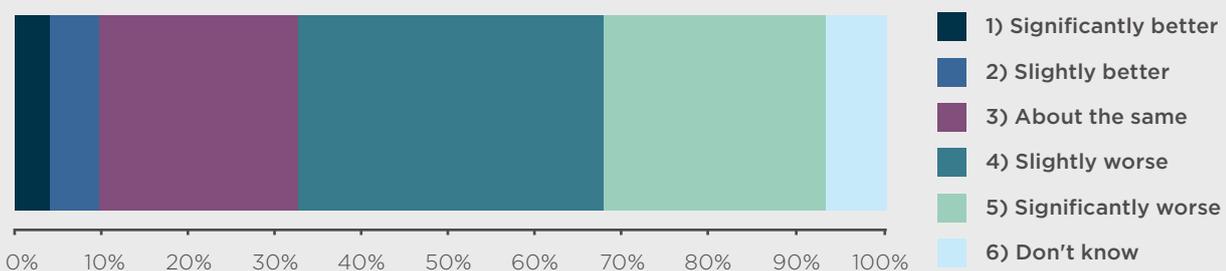


Figure 8: How do digital services in the public sector compare to your experiences of digital services in the private sector:



In this digital era, where innovation is almost considered the service, the public sector, working in partnership with private sector, should aim to draw upon the advantages of market forces to drive efficiency gains and ongoing quality improvements - as well as making cost savings and taking advantage of external expertise.

The private sector is not only a leader on technological adoption - but also on identifying innovation and developing expertise in procuring the highest quality contracts, ensuring value for money, and managing them effectively.

Figure 9: From your knowledge and experience of digitisation in the private sector, what do you feel are the reasons that Government has not advanced as far on its use of technology as other areas?

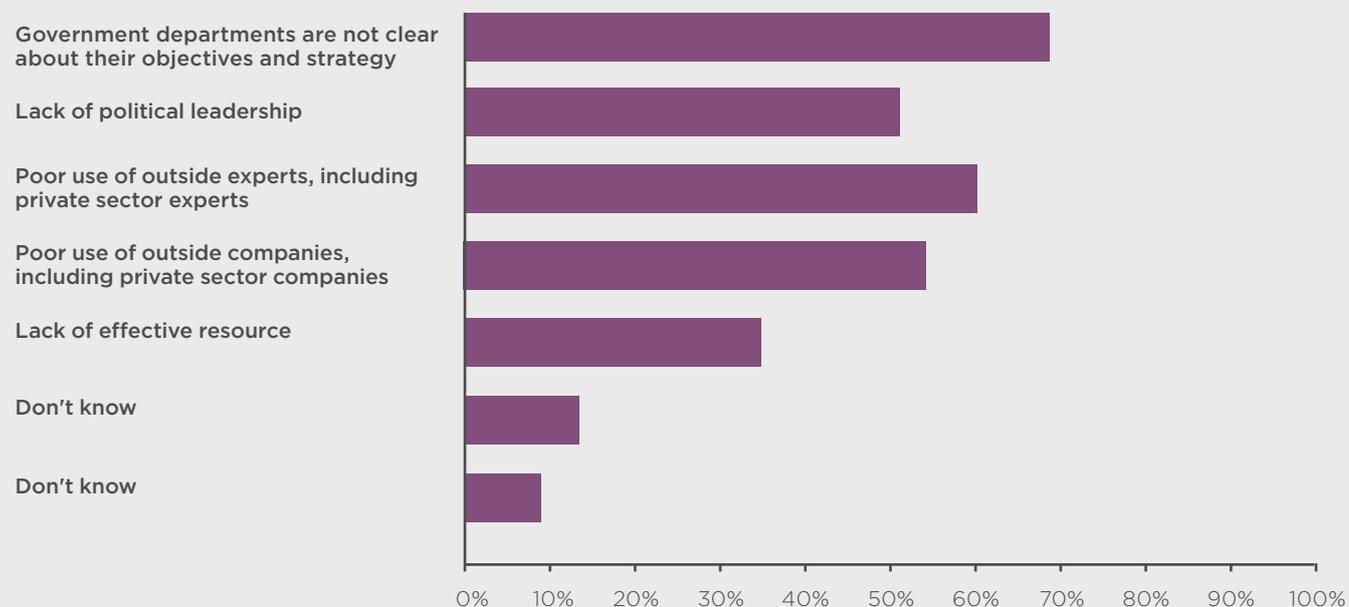
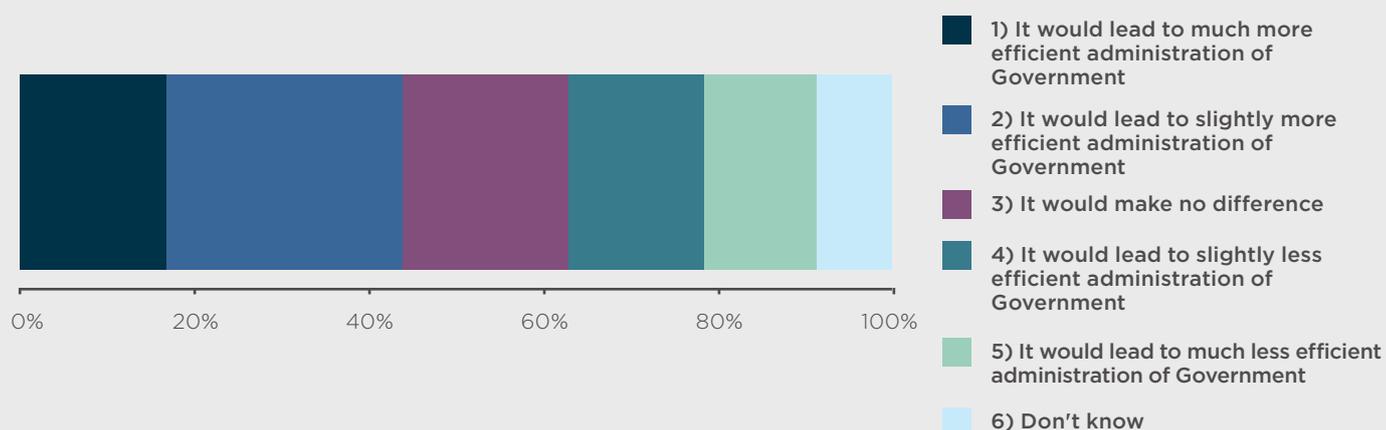


Figure 10: What would be the impact of 'outsourcing' of Government contracts? (IoD Policy Voice July)



Procurement and SMEs

The overwhelming majority of UK companies, and around 70% of IoD members, are small or medium-sized. The Government has committed to allocating a third of procurement spending to Small and Medium-sized Enterprises (SME) by 2020, either directly or through a supply chain. Feedback from IoD members suggests that pitching directly for government contracts continues to pose problems for SMEs, not least because of cash-flow pressures, which can put them off investing time and resources pursuing public sector opportunities.

The Government has, however, attempted to simplify the procurement process, by removing pre-qualification questionnaires for low value contracts, establishing the Contracts Finder Website, and accelerating payment of undisputed invoices.

[the Government should] “take some measured risk with disruptive small companies”
IoD Member

It is inevitable that seeking public contracts will always be more laborious for SMEs, involving an opportunity cost where a private sector client could be pursued instead.

In the Industrial Strategy White Paper published in late November¹⁶, the Government pledged to “improve our digital procurement platforms to make it easier for suppliers to do business with the government, for example through implementation of the Crown Marketplace purchasing platform”. In particular, the paper promises to “explore how to build on our pilot to collect feedback from purchasers – which may help highlight the quality on offer from smaller, less well-known businesses in addition to larger, more established brands”.

Crown Marketplace is an initiative from the Crown Commercial Service (CCS), the largest public sector procurement service in the UK, which helps public sector buyers with £12bn of spend every year. Clearly, the Government is

alive to the need to make procurement more accessible to SMEs, but the process can still be complex and time-consuming.

The public sector, through initiatives like the CCS, has made improvements in its approach to how it selects commercial partners, offering public sector buyers wider and better choices. Measures like this are welcome, and must be built upon with a new ethos for digital transformation across government.

Part of the solution is for large companies to team up with SMEs to help them navigate the systems. One example is Atos' SME Harbour scheme, which aims to boost the participation of small and medium-sized enterprises in the organisation's projects – and has delivered successfully for a number of clients, via its effective scouting, vetting, and nurturing of SME partners. Atos uses subject experts to understand solutions proposed by potential SMEs, followed by trialling partners on a case-by-case basis, before qualifying them for an internal database of project contractors.

The public sector can learn from the increasing trend of collaboration between large companies and smaller innovators. Virgin Trains, for example, recently launched a start-up accelerator called Platform-X in an attempt to find ‘industry-changing innovations’¹⁷. One of the specific aims is to find the ways to improve customers' online experience. Virgin doesn't take an equity stake, but aims to support the start-ups with mentoring, office space, and through easing the procurement process.

Looking abroad, Telefónica's Wayra accelerator in Spain aims to build partnerships with entrepreneurial companies which can turn into commercial relationships. Startups that graduate from Wayra get access to ‘fast track procurement’ allowing them to register as a supplier in just 48 hours. Clearly the government will not be able to copy every model from the private sector, not least as corporates with such schemes occasionally take an equity stake in the smaller company, but the power of building lasting partnerships should be taken on board by civil servants responsible for procurement.

¹⁶ Industrial Strategy: Building a Britain fit for the future <https://www.gov.uk/mwg-internal/de5fs23hu73ds/progress?id=jMiB1XRcHJxCJWD3447DwzyCYQI-V8MxmrUI54a6SHE,&dI>

¹⁷ <https://www.virginstartup.org/news/platform-x-new-accelerator-virgin-startup>

Principles for partnership

Based on the views of business leaders, and real world examples, we have developed nine principles for effective partnerships between public and private sectors to deliver technology-driven solutions. The Government should:

- ① Seek to grasp the opportunity for harnessing private-sector technologies to improve public services.
- ② Set the strategy and environment for innovation, rather than focussing on the delivering specific technologies.
- ③ Adopt an agile approach to project outcomes and utilise methodologies that incorporate the fast-paced nature of technological change.
- ④ Clearly identify the productivity growth and savings opportunities with policies and outcomes that can then be partnered to appropriate technology providers, and can draw upon external expertise to develop an evidence-based approach for investment.
- ⑤ Partner with organisations through competitive procurement processes, on the basis of both best value, but equally appreciation and capability, to bring innovation and deep digital knowledge and competency.
- ⑥ Establish key performance indicators that map to both the industrial digital landscape, the new age of collaboration working, and identify and measure goals in this new digital world.
- ⑦ Anticipate, and develop mitigation procedures, for a number of potential issues along the project cycle.
- ⑧ Engage across departments to assess opportunities for scale purchasing and diffusion.
- ⑨ Continuously engage all stakeholders, to manage expectations, assess targets, and monitor project outcomes.

Conclusion

The IT research firm Gartner is credited with popularising an idea called the 'Hype Cycle', in which new technologies pass through a stage of inflated expectations, followed by disillusionment, before finally reaching the point where real gains are realised, known as the 'plateau of productivity'.

In the context of the delivery of public services – particularly digital services – we have heard the hype about the efficiencies that can be gained, and the possibilities for improving everything from transport to health services that come from the vast stores of data held by the public sector. We have felt the disillusionment, with widely-publicised failures such as the eBorders programme or the NHS national database of patient information.

We are hopefully now on the 'slope of enlightenment', where we have accumulated knowledge – and learned from failures – about the possibilities of using technology to improve services, and are extending its reach into new areas.

Technology has a significant part to play in solving the productivity puzzle, but to do that, the Government needs to approach the task in a new way. It needs to be outcomes-focused, an intelligent digital client that feels comfortable redesigning the process of engagement with the digital industry, and is receptive to innovative new services that support Government policy.

The way forward is for the Government to embrace the advances that have been made in the private sector, without attempting to replicate everything from scratch. This can be done by using the public sector's considerable buying power to set the right atmosphere for innovation, working with the best technology providers, whether they are large companies or SMEs.

This should be seen as an on-going partnership between public and private, improving services – including for business users – reducing costs and stimulating further positive ripple-effects across different sectors. To unlock the potential of digital technology both in public sector services and delivery, Government needs to be open to a partnership model which enables innovation

The imperatives, including high public debt and an ageing population, are pressing. But the gains are also potentially considerable, freeing up funds for the government to pursue the key productivity-boosting measures outlined in the Industrial Strategy.

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