BUYING INTO THE FUTURE

HOW TO DELIVER INNOVATION THROUGH PUBLIC PROCUREMENT

Johnny Hugill, Ramraj Puvinathan
FOR THE MODERN STATE, THERE ARE FEW POLICY PRIORITIES AS IMPORTANT AS HOW IT BUYS INNOVATION AND TECHNOLOGY. THIS REPORT PROVIDES A FRAMEWORK FOR GOVERNMENTS AROUND THE WORLD.
FOREWORD

IT HAS BEEN TWENTY YEARS SINCE TONY BLAIR’S FIRST DIGITAL REFORMS, AND NEARLY TEN YEARS SINCE THE CREATION OF GDS BY DAVID CAMERON. IN THAT TIME, GOVERNMENT HAS GONE FROM PUTTING PDFS ON SLOW-RUNNING AND LABYRINTHINE WEBSITES TO USING MACHINE LEARNING ALGORITHMS TO DETECT CRIME ONLINE. IT HAS SPENT BILLIONS OF POUNDS BUYING NEW TECHNOLOGIES TO DIGITISE PUBLIC SERVICES. FEW - FROM HOSPITALS TO WELFARE SERVICES - ARE TODAY UNTOUCHED BY DIGITAL TECHNOLOGY.

IN ONLY TEN YEARS, STARTUPS HAVE MUSHROOMED, PROVIDING NEW SERVICES AND SOLUTIONS IN DOMAINS WHERE CIVIL SERVANTS WORK EVERY DAY.
There have been many successes, some public like GOV.UK; others have been more discrete, like the construction of Parliament’s petition website, which was able to operate the world’s largest ever petition without serious discontinuity of service. Unfortunately, the government has also overseen a number of more challenging digital procurements: from the £113m spent on the Army’s recruitment website, to the recent problematic roll-out of the Home Office’s app to register EU nationals.

But just as government has improved, so the challenges have increased. The landscape of technology suppliers has undergone a radical and unprecedented change over the last ten years.

Thanks to new tools and new methods, small and highly-skilled teams can today build end-to-end digital services – once the monopoly of much larger organisations – at a fraction of the traditional cost. Cloud technology means that products built by smaller companies are as safe and scalable as those created by larger companies. An increase in funding, especially venture funding, has made smaller suppliers more financially robust (and less leveraged by debt than many larger vendors). New data laws mean that everyone has to store, protect and manage data, especially personal data, in the same way. And techniques like escrowing code mean that public services do not need to be affected by what happens to companies who developed the code.

This is a new phenomenon, in terms of public sector timescales. In only ten years, startups have mushroomed, providing new services and solutions in domains where civil servants work everyday: from health, to transport, to security, to education, to work, to payments. But the public sector still struggles to harness fully the transformative power of these solutions. It is still stuck with purchasing practices of the previous century, made for last century’s technology products and firms.

Procurement continues to favour insiders and incumbents. These larger organisations know how to navigate complex processes, execute heavy tenders, and can afford the pitfalls of long and uncertain sales cycles. They often hire people who have worked on the inside. They look and sound like the government officials they are selling to.

In turn, smaller and more agile organisations struggle to sell to governments. In fact, most often, they do not even know where to look, how to explain their products or speak a language that government officials understand. Many startups often perceive the whole tendering process as burdensome, and even biased, and so do not even explore the opportunity of public sector work.

This has to change. Procurement should not only adapt to these new suppliers of digital services: it should attract them, seduce them, and appeal to them. This would create more competition in a sector where efficiency and cost-effectiveness matter and ensure that governments – and ultimately citizens – benefit from innovation.

We founded PUBLIC because we saw that things were about to change. Citizens want better services. Officials want to be able to use better technologies. Politicians want better outcomes at lower prices. People everywhere understand that the current state of the market serves very few. But it felt like there was something missing. A bridge between the outside and the inside. A funder, an accelerator, a convener and an honest – sometimes even brutally honest – friend to both government and startups.

Since PUBLIC’s creation, this change has only accelerated. Government has embraced a number of major innovation initiatives, including the GovTech Catalyst Fund, NHSX, and most recently, the Crown Commercial Service’s new startup-friendly procurement framework, Spark.

More companies are being created explicitly to bring new technology products to public services. More companies like Adzuna in DWP or Faculty in the Home Office are proving that
small, innovative teams can ‘out-innovate’ larger incumbents. Apolitical allows officials to learn from governments elsewhere, so they can avoid common mistakes.

Our GovStart accelerator programme, which started in the UK and now operates in Paris and Berlin (with an offshoot in Copenhagen), has become the world’s largest public sector-focused startup programme. Two dozen new companies go through every year: all of them using new technology to transform vital public services. When they sell their products and services to governments they show how much better things can be - for citizens and officials like - and, importantly, how much cheaper things can be, too.

In Paris, at the annual GovTech Summit, which we host with French President Emanuuel Macron, we bring together thousands of innovators, buyers, policymakers, and investors to talk exclusively about how technology can transform public services. Boundaries between the public and start-up sectors will be broken down further at PUBLIC Hall in London, Europe’s first co-working space for GovTech, located only one minute away from Downing Street. We now plan a European network of such hubs.

But the experience of GovStart has also taught us that things are not moving fast enough. The lacunae between what technology can do and what governments are willing and able to do is still enormous. The biggest problem, unfortunately, is procurement. Simply put, procurement systems are not fit to allow the government to make the most out of new and innovative technologies.

Staff are not generally sufficiently skilled to know what technology can do and what it cannot. They do not - or cannot - rely on help from GDS. Different departments use wildly divergent standards when it comes to buying technology, despite the effort to create and enforce common standards. Many departments and agencies pay companies to build products that already exist in the market - often under the false pretence that their needs are unique.

Local government has been left to find its own way and so progress is very uneven. Only under the new Health Secretary Matt Hancock has digitisation of healthcare become a priority. And across public services, too few startups are given a chance to do more than win a few pilots and participate in marginal innovation initiatives, which rarely scale to meaningful commercial relationships.
Frustratingly, the obsession with ‘hype’ technologies such as blockchain or artificial intelligence can obscure the more pressing need to create and manage core digital services, such as well-functioning databases, or fix procurement practices and systems.

To avoid this problem, governments need to have a ‘dual track’ approach - they must think both about the need to change business processes and how new technology - and especially startups - can help to do so, rather than look at either in isolation. And they have to understand which suppliers in the market can help with which need. Those companies that know how to transform large organisations are rarely the most innovative. In turn, innovators are often not best-placed to manage large-scale transformation projects.

Getting large companies who themselves are struggling to innovate - often spending millions on external consultants to better link up with startups - to advise government on how to work with innovative companies is totally misguided - and, sadly, a regular, multi-million pound occurrence.

Government’s current efforts have to be scaled up. Innovation must be brought in from the margins and placed where it needs to be - at the centre of how the public sector operates. Brexit or no Brexit, unless the government embraces the reforms necessary to keep up with the pace of digital change, it cannot hope to improve services, cut costs, or deliver on the kind of outcomes that taxpayers now expect.

Oliver Dowden, the UK’s de facto GovTech Minister has been clear that he wants reform. The introduction of the Spark initiative under his auspices is one of the most interesting innovations in government procurement since G-Cloud first opened up public sector sales for smaller companies. His colleague John Manzoni, the Chief Executive of the Civil Service, has overseen an enormously ambitious programme of building technical and commercial skills within government, including the launch of a new Assessment and Development Centre in 2016.

In this report, we show how government can accelerate change. Much as the UK has led the world in applying behavioural insights to policy through the Behavioural Insights Team, the Cabinet Office needs to create a similar capacity to innovate in procurement, made up from officials, but also entrepreneurs and technologists. We also provide a framework for procurement ‘Innovation Zones’ - sectors designated to trial and implement techniques that can stimulate a wave of new market entrants. We argue that government needs to introduce new spending targets and monitoring techniques for startups - in addition to existing SME spend targets. And we argue that government itself needs to act more like a modern day startup accelerator or incubator to truly get the most out of these new technology companies.

We flesh out these recommendations in the report, along with eleven others, to provide a single framework for how government procurement can be modernised to fit the needs of today’s digital economy.

GovTech is totally changing the design and delivery of today’s public services. But with reform of public procurement, it could do so much more. Procurement reform may seem dry and uninspiring, but there is no more important opportunity for accelerating change across every area of public service business.

The dividends - for citizens, for government, for the tech sector, and for the entire UK economy - will be felt for many generations to come. Let us together seize this remarkable opportunity.

Daniel Korski and Alexander de Carvalho
Co-Founders of PUBLIC
EXECUTIVE SUMMARY

TECHNOLOGY IS COMPLETELY TRANSFORMING HOW THE MODERN STATE OPERATES. FROM HEALTH AND SOCIAL CARE, TO EDUCATION, TO POLICING AND JUSTICE, TO PUBLIC TRANSPORT, TO WASTE MANAGEMENT, EVERY ARM OF GOVERNMENT IS BEING SHAPED BY NEW TECHNOLOGIES.

Today there are few priorities as important for government as how it buys the technology products and systems to deliver these services. However, the commercial processes that it uses to achieve this have failed to keep up with the pace of change in today’s digital economy. Indeed, in many ways, procurement looks like an analogue system for a digital age. In this report, we provide a framework for how procurement can be modernised to better suit the needs of today’s technology innovators and entrepreneurs.

Explains why working with startups is so important for government, providing eight reasons why procuring more products and services from startups could supercharge the UK economy.

Analyses contract data at three major central government departments to show how few startups and small businesses are actually winning technology contracts.

Presents new survey data to highlight the key barriers for startups when trying to work government. We found that 92% of startups think that working with government is more difficult than working with the private sector.

Breaks down the procurement process and provides tips for startups. This includes when startups should engage in dialogue and how to execute tenders.

Provides case studies of government innovation from around the world. This includes initiatives from Australia, Canada, USA, India, and the EU.

Outlines 15 recommendations for how government can reform procurement to meet the needs of today’s startups. This covers recommendations for procurement strategy, new contracting procedures, better market engagement strategies, and building digital skills in government.
RECOMMENDATIONS
IN SECTION 6, WE OUTLINE 15 BOLD AND IMPACTFUL RECOMMENDATIONS FOR HOW GOVERNMENT CAN WORK WITH STARTUPS AND INNOVATORS. THESE ARE SUMMARISED BELOW:

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<th>Recommendation</th>
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<td>Government should designate procurement ‘Innovation Zones’, with a package of incentives for new market entrants.</td>
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<td>Government should set up a ‘Procurement Innovation Team’ to champion new models of procurement and market engagement.</td>
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<td>Government should set a target for 10% of technology spend to go to startups by 2022, and implement a new ‘suitable for startups’ tag on all procurement portals.</td>
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<td>Government should establish a new ‘GovShares’ programme to generate revenue from IP that it co-develops with the private sector.</td>
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<td>Public authorities should work with ‘Innovation Brokers’ to help them to make the most out of emerging technology markets.</td>
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<td>Government should commission a review of GDS ten years after its creation to evaluate its progress and define its key strategic priorities going forward.</td>
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<td>Public authorities should replace outdated and ineffective market engagement models with new processes that suit the needs of today’s technology companies.</td>
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<td>Government should create and roll out a single online system for accessing and bidding for public sector contracts.</td>
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<td>Public authorities should use a wider range of metrics when evaluating the financial health of startups, including runway and capital raised.</td>
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<td>Public authorities should increase the use of Dynamic Purchasing Systems over frameworks where possible.</td>
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<td>Public authorities should use Innovation Partnerships to co-develop innovative solutions with the market.</td>
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<td>Public authorities should use the startup-friendly Design Contest procurement process to run contract competitions.</td>
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<td>Policymakers and procurement officials should work more closely to close the gap between policy and commercial functions.</td>
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<td>Government should introduce new incentives for procurement officials to deliver innovation through procurement.</td>
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<td>Government should bring together existing training programmes into a ‘School for Technology and Government’ to bring innovation-focused training to the civil service.</td>
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INTRODUCTION

There are few things as important in government as how it spends its money. And in a world that is becoming increasingly digitised, spend on technology is becoming one of the most important priorities of all.

Today, every government department, local council, police force, emergency service, hospital, and school relies on digital products and services every day. Making the right decisions when buying technology is one of the most important things that a government can do.

The government spends around £284 billion a year (or a third of its annual public expenditure) on the things it buys.1 It is no surprise, then, that the OECD describes it as the ‘cornerstone of strategic governance’,2 while BEIS claims that ‘decisions on procurement are among the government’s most significant interventions in the economy’.3

Crucially, procurement is more than the transaction between a single buyer and a single supplier. It refers to the full lifecycle by which a public sector organisation articulates its needs, adopts strategies to fulfill those needs, and how services and solutions are ultimately delivered and evaluated. Each public authority has a different programme of objectives, different priorities, and different capabilities.

Recently, procurement has received a spike in public and media attention. This has been caused, in part, by a number of high-profile failures in government procurement. Most notably, in January 2018, Carillion, a large construction firm and strategic supplier to government, entered into liquidation - the largest ever trading liquidation in UK history. Carillion had 420 active contracts at the time of liquidation: its collapse represented a serious risk to thousands of people who relied on the services delivered under those contracts.4

In March 2019, Interserve, another strategic supplier to government, entered in administration, having been awarded a reported £660m worth of public contracts.5 Public and media interest in government procurement is only set to intensify.

These failures, and others, have sparked unprecedented political scrutiny of public procurement. The Government has conducted a review of procurement practices and the Labour Party has announced that it would ban the outsourcing of all public services for society’s most vulnerable, which would see restrictions in procurement in key areas in health, social care, and prisons, across both central and local government.6

Public procurement is increasingly being scrutinised and represents genuinely contested political ground.

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5 The Guardian. 2019. Interserve given ‘public contracts worth £660m in run-up to collapse’.
6 The Guardian. 2019. Labour ‘will ban’ outsourcing of public services to private firms.
This report does not aim to navigate this contested ground. Rather, we aim to show that, whatever you think of the appropriate scale and scope of public procurement, it can be reformed to deliver better outcomes for citizens. In particular, our focus is on the procurement of technology and innovation, and how it must be modernised to keep up with the pace of the change in the UK’s emerging digital economy.

In at least some areas of government, there is a clear rationale for purchasing technology goods and services from external suppliers. In an innovative economy, the use of competitive markets enables government to choose from a range of products which can reduce costs and improve outcomes. Few people today believe that the government should produce medicines or armaments. And if they do not, governments need to buy the required products and services. The same is the case for technology.

Where the line is between what government should buy and what it should do and produce itself is a matter of political contention. But what is certain is that the government can only justify buying from private companies if it acts intelligently, has the requisite capacity, including technical and commercial knowledge, and is able to buy from a well-functioning marketplace.

Currently, the public sector outsources the vast majority of its business to large, and often unproductive, suppliers over younger and smaller companies. As such, the public technology market does not reflect the levels of dynamism, creativity, and entrepreneurship found in the UK’s wider technology ecosystem. That is a problem.

In our analysis across three key government departments, we found that SMEs only won 8.1% of technology spend. By relying on a small group of providers, the government has so far failed to develop a public sector marketplace that is capable of delivering all of its technology needs.

But there is a way forward. As we show in Section 2 of this report, lowering the barriers that prohibit startups from selling into the public sector can improve the competitiveness of public sector markets and, critically, improve outcomes for citizens.

The recommendations in this report should be of interest to all sides - and those in the public sector that take no side - of the political debate. Whether you believe that outsourcing works but needs reform, or whether you believe there should be strong restrictions on outsourcing in high-risk sectors, it remains the case that, in some areas, especially some technology areas, government will rely on solutions provided by private companies. We provide a framework for how to buy technology better, in a way that maximises the benefits for the users of public services, and for the wider UK economy.
WHY IS PROCUREMENT IMPORTANT?

Annual government expenditure on procurement (£284b) is higher than the total annual spend of any private company in the UK. It is one of the most central and important components of the UK economy. Not only is this a vast amount of money, but it is money that is being spent on some of the most important services in people's lives, including health and social care, public transport, welfare, policing, and emergency services. Simply put, every citizen in the UK depends on the services provided by public procurement.

It is also, of course, taxpayer's money, with procurement spend largely generated by collecting tax revenues. Wasteful or poorly executed procurement, therefore, represents a direct waste of taxpayer's money. This means that procurement has to always successfully represent citizens' interests and what they care about. As Sir Michael Barber explains in his ‘Public Value Review’: ‘Delivering world class public services involves turning public expenditure into outcomes that citizens value’.7

Due to the digital transformation of our economy, the kinds of goods and services that government buys are totally different than they were even ten years ago. World-class public services today means, amongst other things, taking advantage of the latest advances in technology and data science to offer citizens better, faster, more affordable, and more accessible services than ever before. From collecting taxes, to distributing welfare, to engaging with citizens, to administering healthcare, to keeping people safe, modern states are now looking to embrace new digital and data-driven solutions to major public sector problems. The UK cannot fall behind on this, because these technology platforms systems are now the cornerstone of what an effective government looks like.

Indeed, government’s own Transformation Strategy 2017-2020 highlights the potential of digital technologies to change how we understand service delivery:

‘BY HAN RING DIGITAL TO BUILD AND DELIVER SERVICES, THE GOVERNMENT CAN TRANSFORM THE RELATIONSHIP BETWEEN CITIZEN AND STATE’.8

The shift towards new models of delivering public services should, in principle, open up public procurement to a new wave of technology suppliers. In almost every other consumer market, new market entrants have used technology to transform traditional business and operating models, and deliver better and cheaper services for consumers. Indeed, many of these startups (including Revolut, Monzo, Airbnb, Deliveroo, JustEat, Uber, Lyft, Netflix, and Instagram, to name but a few) are now the leading companies in their respective markets.

There is a natural expectation, then, that we will see a similar trend in public sector markets. That is, that there will be a wave of new and innovative suppliers delivering technology services in a better and more affordable way, ultimately replacing the incumbent suppliers that are unable to keep up with the pace of change. In the same way that startups have created new

7 Sir Michael Barber. 2017. Delivering better outcomes for citizens: practical steps for unlocking public value, 5.
digital sectors in financial services (FinTech), education (EdTech), and advertising (AdTech), there will be a shift towards new models of digital government - GovTech.

In its broadest sense, ‘GovTech’ refers to cutting-edge technology solutions developed by startups that are transforming public services. GovTech startups, therefore, are perfectly positioned to work with government to deliver radically improved public services, and establish themselves as the new market leaders.

But despite the presence of a highly productive UK GovTech startup ecosystem, government has so far failed to embrace new models of digital government - GovTech.

DESPITE THE PRESENCE OF A HIGHLY PRODUCTIVE UK GOVTECH STARTUP ECOSYSTEM, GOVERNMENT HAS SO FAR FAILED TO FULLY EMBRACE NEW MODELS OF DIGITAL GOVERNMENT

from succeeding in public procurement. The adage that ‘nobody got fired for hiring IBM’ remains true today.

This is a particular shame given the UK’s position as one of the leading tech startup ecosystems in the world. The UK is a world-leader in growing and developing highly productive small businesses. There are roughly 5.6 million small businesses in the UK, which accounts for 99% of all businesses. Most notably, the UK has witnessed rapid growth in the number of startups it produces every year. In 2018, 11,864 software development and programming businesses were set up by Companies House, a 14% rise on the previous year. Likewise, British technology startups raised £2.49 billion in growth investment in the same year - more than any other country in Europe. As a result, the UK has one of the world’s largest, well-funded, and most successful startup ecosystems in the world.

Indeed, this broadly reflects the fact government has repeatedly attempted to position itself as a highly innovative and productive digital economy. The government’s Industrial Strategy, its long-term plan to raise productivity in the UK, allocated £4.7b to research and development activities. This includes a £1b ‘Sector Deal’ for Artificial Intelligence (AI), in which the UK government has committed, amongst other things, to fund 1,000 further PhDs at UK universities, and provide £300m of R&D investment in AI.

All of the pieces are in place: a government willing to embrace and invest in innovation and technology; one of the most productive and dynamic startup ecosystems in the world; and a global trend of startups breaking into, and capturing, major consumer markets. However, for government to assemble these pieces and make the most of the value of new tech startups, it must radically rethink how it engages with the innovators in the sector.

This report provides a framework for how government can use procurement as an engine for greater innovation. We first show why working with startups is so important for government. We then analyse actual contract data to show how few startups are actually winning contracts, before presenting new survey evidence to suggest why this might be.

The final chapter of the report includes new recommendations for how government can reform procurement to meet the needs of today’s startups. Some of these are bold, and would represent a considerable change in government policy and approach. But a bold approach is necessary, given the failure of the current system.

Procurement is one of the most important things that our government does. In the context of today’s digital economy, new technology startups and entrepreneurs must be at the heart of it.

11 City AM. 2019. The number of new tech startups in the UK grew 14 per cent last year.
13 Industrial Strategy: Building a Britain fit for the future.
This explainer is not intended to be exhaustive: rather, its aim is to show that there have been a number of recent efforts to drive greater innovation and technology adoption in government. These range from new policies, to legislative change, to investment initiatives, to commercial vehicles. The challenge is to find a single strategy that can bring all of these initiatives into one single, unified vision.

The concepts in this section are broken down into five main themes:

1. THE RULES
2. THE IDEAS
3. THE PLAYERS
4. THE INNOVATION LANDSCAPE
5. THE RESEARCH

1. THE RULES

Public procurement in the UK is guided by three main factors: regulations, capabilities, and culture. Each of these affect how government procures goods and services from startups and small businesses.

**Regulations**

There are national and international regulations and policies governing how procurement works in the UK. These include the Public Contracts Regulations (2015), membership of the WTO’s Agreement on Government Procurement (GPA), and policies implemented by the Crown Commercial Service and the Government Commercial Function.

**Public Contracts Regulations (2015)**

Public procurement in the UK is governed by the Public Contracts Regulations (2015) (PCR 2015), which are derived from the related EU Directives.1 Under these regulations, public sector buyers must advertise any contract over a certain threshold in the Official Journal of the European Union (OJEU), as well as on national contract portals.2

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2 The Public Contracts Regulations 2015.
Existing regulatory provisions are further guided by a number of broad contracting principles, including value for money, accountability, transparency, competition, and social value. Ultimately, the Regulations highlight the important role of the public sector as an actor in the economy, as well as its capacity to promote small companies and innovation.

The UK’s legal framework itself does not act as an impediment to increasing startup access to public contracts. In fact, we show in the following sections of this report that there is still significant scope for government to be more creative and strategic with its implementation of the Regulations.

WTO General Procurement Agreement (GPA)

As noted above, public procurement is ultimately governed by regulations conceived and implemented by the EU. Britain’s departure from the EU will not immediately result in wholesale changes to how the public sector buys goods and services: the government has confirmed that the existing regulations will remain in place until the end of 2020.³ Moreover, the UK has secured continued membership to the WTO General Procurement Agreement (GPA), which it is currently a signatory through its membership of the EU. Accordingly, businesses will continue to have access to public procurement markets in the EU27 and 20 more countries worldwide.

However, Brexit offers government an opportunity to rethink public outsourcing and reform the procurement system to keep up with the pace of change in today’s digital economy.

Capabilities

The skills and capabilities of procurement officials also shape how public authorities buy technology. Delivering improved outcomes to citizens requires procurement officials to have an informed understanding of changing markets, as well as considerable commercial acumen. Currently, the growing complexity of the procurement process demands increasingly specialised knowledge. Developing the skills of public sector officials to keep up with this change will require both political intent and the commitment of financial resources.

Brexit offers government an opportunity to rethink public outsourcing and reform the procurement system to keep up with the pace of change in today’s digital economy.

Culture

Finally, procurement is guided by a number of deeply-ingrained cultural dynamics, including long-standing attitudes, unwritten rules, and institutionalised processes. This culture is largely shaped by resource constraints and a pressure to ensure greater cost-efficiency.

³ Cabinet Office. 2019. Procurement Policy Notice - Preparing for the UK to leave the EU.
The government has committed to opening up procurement for smaller companies, and has promised a package of measures to achieve this objective. However, the structure of government organisations can make it difficult to institute widespread reforms quickly. Across the public sector, there are thousands of civil servants with buying responsibilities or involvement in contract management. Consequently, government faces a challenge in bridging the gap between centralised policymaking and implementation. This transformation in procurement culture can only come from widespread political buy-in from both policymakers and buyers.

2. THE IDEAS

Value for money

Public sector outsourcing seeks to deliver value for money for the commissioning authority and, ultimately, the taxpayer. HM Treasury defines this as:

‘Securing the best mix of quality and effectiveness for the least outlay over the period of use of the goods or services bought. It is not about minimising upfront prices’.

The government aims to secure value for money by organising competitive tender processes to mobilise a diverse marketplace. HM Treasury notes that ‘any decision to outsource should then be made to achieve value for money for the Exchequer as a whole’.

Recently, the collapse of Carillion has demonstrated the danger that lowest price tenders pose to the sustainability of public services. According to research conducted by the CBI, two thirds of businesses believe that the lowest initial bid cost was the determining factor in awarding contracts. A narrow focus on short-term cost savings fails to address the quality of the service and its total life cost. Improving outcomes for citizens requires the government to focus on long-term value.

SECURING VALUE FOR MONEY

COST:

The key factor is whole life cost, not lowest purchase price. Whole life cost takes into account the cost over time, including capital, maintenance, management, operating and disposal costs. For complex procurements, whole-life cost can be very different from initial price.

QUALITY:

Paying more for higher quality may be justified if the whole life cost is improved, for example, taking into account maintenance costs, useful life and residual value. The purchaser should determine whether increased benefits justify higher costs.

PERSPECTIVE:

Each public sector organisation’s procurement strategy should seek to achieve the best value outcome for the Exchequer as a whole, not just for the organisation itself. This should be designed in before the invitation to tender is published.

COLLABORATIVE PROCUREMENT:

In the vast majority of cases, standardising and aggregating procurement requirements will deliver better value for money.

5  Managing Public Money, 54.
7  Managing Public Money, 97.
MEAT

Regulation 67(1) of PCR 2015 establishes that contracts should be awarded to the most economically advantageous tender (MEAT). This criterion requires procurers to consider quality as well as cost when awarding contracts.

While price is the easiest metric to compare multiple tenders, it is just one consideration among many. However, there is considerable evidence to suggest that even when a tender is judged on multiple criteria, cost is given a significantly higher weighting than other criterion during the tendering process.

3. THE PLAYERS

Crown Commercial Service

Recent years have seen a shift towards greater centralisation of the commercial function within government. In 2013, the National Audit Office warned that the Cabinet Office will have to ‘win hearts and minds’ and demonstrate that it has the capability to deliver a high-quality central procurement function. Aiming to do this, in 2014 the Cabinet Office set up the Crown Commercial Service (CCS), the government’s collaborative purchasing organisation. This centralised procurement function is responsible for delivering and implementing procurement policy on behalf of the government. Serving over 17,000 customers (just under half of the entire public sector) ranging from schools, to NHS trusts, to central government departments, it provides oversight and direction to procurement activities across all levels of the public sector.

CCS aims to make it easier for public bodies to purchase common goods and services efficiently, whilst ensuring compliance with regulations. In 2017/18, £13b of public expenditure was channelled through CCS commercial vehicles, comprising of 1,260 individual procurements. Unlike traditional frameworks, CCS commercial channels helped generate £601m in efficiency savings. Likewise, it has sought to improve engagement with the private sector through ‘Meet the Buyer’ events, organising conferences, and producing online guides for companies engaging in public procurement.

Significantly, in 2019 CCS announced the release of ‘Spark’, the government’s new Technology Innovation Marketplace, which will enable buyers to purchase new technologies through a Dynamic Purchasing System. As we explain below, if CCS executes Spark successfully, it will be one of the most startup-friendly commercial vehicles used by any government in the world.

CASE STUDY

SPARK A DEDICATED COMMERCIAL VEHICLE FOR STARTUPS

In March 2019, CCS launched a new Dynamic Purchasing System (DPS), Spark. This new startup-friendly DPS aims to provide a streamlined route to market for new and emerging technology products, such as AI, Smart Robotics and IoT devices. To be eligible, suppliers need to demonstrate that they can provide at least one new/innovative technology for one or both ‘Radical’ and ‘Disruptive’ innovation.

Unlike traditional frameworks, DPS agreements are open-ended, in that they allow for suppliers to join at any time during the lifecycle of the DPS. They are also flexible, as suppliers can change their offering as market conditions evolve or new technology products are developed.

Spark aims to make it easier and low-risk for public authorities to find and purchase emerging technology goods and services. For buyers, Spark includes a filter system to make it easier for customers to identify suppliers with the right skills and capabilities. There are two key filters areas, Subject Area (e.g. Transport) and Delivery Method (e.g. Artificial Intelligence and Automation). Buyers can use the filter to produce a shortlist of relevant suppliers to invite to a competition.

Similarly, a notification system allows suppliers to be aware of opportunities related to their Subject Area or Delivery Method. Once a proof-of-concept is completed, the supplier is migrated onto a larger CCS framework. This mechanism makes it easier for startups to scale across the public sector. The estimated value of Spark is £20m in the first year, growing to £40m in year two and £50m in year three.
Finally, CCS has purchased a new end-to-end eSourcing procurement platform to process higher levels of government spending in the next few years. There are currently 104 purchasing frameworks listed by CCS, including the Digital Marketplace and the Research Marketplace DPS.

Cost-efficient and outcome-based procurement depend on the commercial capabilities of the Civil Service. The Chief Commercial Officer, Gareth Rhys Williams, is responsible for managing the Government Commercial Function (GCF) - a cross-governmental network of 4,000 civil servants and procurers to institute commercial reform across government. The GCF sets out guidelines in its commercial operating standards for good commercial performance to ensure consistency in purchasing activities across government.

The GCF is also responsible for developing the government’s commercial strategy and providing direction on how it should be implemented. It supports public officials on complex procurement activities, provides departments with market and supplier intelligence, and creates training programmes to improve commercial capability across government.

Departmental procurement functions

Each central government department has its own commercial function responsible for purchasing goods and services. The level of outsourcing varies from department to department. Likewise, there is a disparity between the types of technology services and goods bought by each department. Each department has its own targets for improving spend with SMEs, laid out in their respective ‘SME Action Plans’. In Section 4, we look at these differences in government expenditure on technology products across four key departments.

Devolved administrations

Under the devolution settlements, public procurement is a responsibility for the devolved governments in Scotland, Wales and Northern Ireland. These administrations advertise and purchase goods and services on their own online platforms. It has been widely noted that devolved authorities are likely to have greater freedom to set a procurement policy agenda in the context of Brexit.

Wider public sector

Despite the growing centralisation of public procurement, local authorities continue to purchase the vast majority of their own goods and services. In fact, procurement accounts for 47% of local government spend as opposed to 28% at the central government level. Encouragingly, the Local Government National Procurement Strategy identifies digital technology and innovation as two ‘enablers’ of improved service delivery. However, SMEs and startups tend to struggle to win public sector contracts. According to research by the FSB, only 20% of local government spend went to SMEs in 2017, with the figure standing at just 11% for Housing Associations.
CASE STUDY

POLICE TRANSFORMATION FUND: DEVELOPING WORLD-CLASS POLICE TECH CAPABILITIES

In 2016, the government launched the Police Transformation Fund (PTF), updating their existing programme, the Police Innovation Fund. The aim of the PTF is essentially the same as the previous programme: to drive innovation in UK policing. However, the size of the PTF is much larger, with a total of £700m over four years (to 2020), representing a serious commitment from government to embrace new technologies and operating models in policing.

The programme operates with the same model as the GovTech Catalyst Fund: Police & Crime Commissioners are invited to bid for funding to support local forces, with many projects involving a lead force and a consortia of partners. This funding usually covers new technology and innovation, but is also applicable for more general transformation projects.

The programme has been structured into two separate phases. Phase 1 (2016-2018) saw 98 projects benefited from £223 million of funding. During this phase, roughly 40% of bids received funding. For Phase 2 (2018-2020), investment will focus on the national programmes and meeting the demands of serious and organised crime.

A new oversight board - the Police Reform and Transformation Board (PRTB), made up of the most influential policing organisations in the UK - was formed, and plays a role in funding allocation decisions regarding the PTF. It plays a superintending (rather than a direct commissioning) role in regard to the four national programmes that are funded by the PTF. This is a model of funding and oversight that could be replicated by other authorities in the public sector.

Procurement in the NHS is especially complex, with an organisational and delivery structure consisting of 7,454 GP practices, 207 clinical commissioning groups, 152 acute hospital trusts, 54 mental health trusts and 35 community providers with diverse degrees of digital capability. The fragmentation of this system has led some commentators to argue that there is not enough centralised decision-making in the procurement of healthcare products and services. Most notably, the Lord Carter Review in 2016 observed that:

‘Whilst there have been excellent improvements by some Trusts, most still don’t know what they buy, how much they buy, and what they pay for goods and services’.27

Despite this, the UK has a strong tradition of procuring technology and innovation in its healthcare system, and boasts the strongest HealthTech startup ecosystem in Europe. This has been supported by a wave of new policy and commissioning initiatives, most notably under current Health Secretary Matt Hancock. These include the Academic Health Science Networks, run in partnership with leading UK universities, the roll-out of ‘Global Digital Exemplars’ by NHS England, and, most recently, the establishment of NHSX, in February 2019.

NHSX aims to bring together experts in technology, data, and cyber security to help the NHS to become the world’s most digitally advanced healthcare service. It is the most ambitious and extensive technology initiative undertaken by any UK government department.

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The Government Digital Service (GDS) is responsible for managing the digital transformation of government. It sets the direction for the procurement of commodity technology products, digital services, and cloud hosting through the management of the Digital Marketplace. As part of its guidance on managing public money, GDS applies a commercial spend control policy on digital and technology purchasing.28

‘GOVERNMENT DIGITAL SERVICE HAS A MANDATE TO REVIEW AND APPROVE/REJECT ALL TECH-RELATED SPENDING INCLUDING:

- All digital projects utilising identity assurance for the general public, domain name registration, and any external facing digital transaction, websites or mobile apps
- Digital expenditure over £100,000
- Expenditure over £1 million for services delivered by independent shared service centres
- Expenditure over £5 million for everything else’29

The government’s strategy towards public procurement centres around making the process ‘simpler, more open and less bureaucratic – so all businesses, no matter what their size have a chance of success’.32 The government hopes that a more open procurement system will improve the wider economy and ensure that it secures value for money in its purchasing activities. Consequently, it has set clear targets to improve SME access to government contracts.

These measures have included a 33% spend target, the appointment of a Small Business Crown Representative, and streamlining of pre-qualification questionnaire (PQQ) processes.

There are no spend targets related directly to startups, rather than SMEs. This is largely because startups have become a much more central and widely-established part of the British economy since the announcement of the initial spend targets.

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32 HM Government. 2013. Making Public Sector Procurement More Accessible to SMEs, 8.
In 2015, the government announced that it would award 33% of central government expenditure to SMEs by 2020. This ambitious target was subsequently revised to 33% by 2022. The target aims to increase competition in public sector markets to harness the innovation potential of younger suppliers. However, it is growing increasingly unlikely that the government will meet its objective. Central government spending with SMEs fell from its peak at 27% in 2014/15 to 22.5% in 2016/17. In 2018, the Public Accounts Committee found that ‘the government has failed to use its unique position in the market to encourage competition in the market’. As a result, only 37% of respondents to the techUK survey believe that the government will achieve its 33% target in the next five years. In fact, as we outline below, targets now differ from department to department.

**Small Business Crown Representative and SME Champions**

To help to achieve these spending targets, the government established an SME Advisory Panel of 24 entrepreneurs in November 2016. The panel is led by a Small Business Crown Representative who supports cross-governmental initiatives to improve SME access to government contracts. Through webinars and engagement events, the Crown Representative has sought to improve communication between government and small businesses.

A core objective of the SME Advisory Panel is to improve market engagement with SMEs, such as organising ‘Meet the Buyer’ events. Likewise, central government departments have appointed internal SME Champions who are responsible for providing oversight on departmental objectives.

<table>
<thead>
<tr>
<th>Department</th>
<th>SME Spend Target</th>
</tr>
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<tbody>
<tr>
<td>DWP</td>
<td>26%</td>
</tr>
<tr>
<td>MOD</td>
<td>25%</td>
</tr>
<tr>
<td>MOJ</td>
<td>33%</td>
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<tr>
<td>HO</td>
<td>28%</td>
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<tr>
<td>DCMS</td>
<td>33%</td>
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<tr>
<td>MHCLG</td>
<td>25%</td>
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<tr>
<td>BEIS</td>
<td>33%</td>
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<tr>
<td>DFID</td>
<td>40%</td>
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<tr>
<td>DHSC</td>
<td>23%</td>
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<tr>
<td>DFT</td>
<td>33%</td>
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<tr>
<td>HMT</td>
<td>17%</td>
</tr>
</tbody>
</table>

Only 32% of SMEs believe that the government has acted effectively on its political commitment to helping small businesses to break into the public sector over the last five years.

33. Spend Matters. 2018. Government spend with SMEs – target, aspiration or ambition?
36. Procuring for Innovation and Growth, 6.
SMEs in the supply chain

The government has made a concerted effort to improve the position of SMEs in the supply chains of large contractors. It has made proposals for large suppliers to advertise subcontracting opportunities on Contracts Finder and make it easier for subcontractors to report poor payment practices by prime contractors.\(^4^0\) Moreover, government has threatened to exclude suppliers from contract opportunities if they are unable to pay suppliers promptly.\(^4^1\)

Market engagement

Procurement experts have long advocated that public sector buyers engage with the market at an early stage. This is usually achieved by commissioners advertising their intention to tender future procurements through a ‘Prior Information Notice’, but can also be conducted through events and webinars.

Despite these efforts, the startups that we interviewed repeatedly mentioned poor pre-procurement engagement as a key challenge that the government must address to improve startup access to tenders. Market engagement is crucial to creating awareness of public sector opportunities among startups and encouraging them to bid for contracts. As we explore in Section 4, improving market engagement with startups will help to create a more competitive marketplace, in which the government can take advantage of emerging technologies to improve public services.

Mystery Shopper / Public Procurement Review Service

The Public Procurement Review Service, previously known as the ‘Mystery Shopper’ Service, allows government suppliers to raise concerns about poor public procurement practices. This includes any stage of procurement, from advertising of contracts, to the management of contracts, including payments to suppliers and subcontractors.\(^4^2\) Once received, PPRS publishes the results of the investigations, make sure only the contracting authority is named, while the company who has raised the issue is kept anonymous. It is used to challenge procurers to be more transparent and open, as well as provide on-time payments.

GOVTECH CATALYST

The GovTech Catalyst is a recent Cabinet Office initiative that serves to identify important public challenges and match them with innovative tech-based solutions offered by private companies, backed by £20m in funding. Challenges submitted come from a variety of sources, with 60% of the first set of challenge submissions submitted from central government departments, and 25% coming from local authorities.

The challenge process can be broken down into two phases, with the first focusing on exploring the technical and commercial feasibility of the project, and the second resulting in a purchasable product or service that the challenge owner is confident will help the underlying service needs. In phase one, public sector bodies can submit their request during a challenge submission window. Next, once the challenges have been reviewed, assessed and approved by the GovTech Catalyst team, competition slots are scheduled and competitions are run in accordance with the SBRI competition process.

Businesses are invited to apply and if they are found to have a winning pitch, are provided with a portion of the £20m to develop their solution. At the end of phase one, the success of each solution is reported on, and if deemed applicable, phase two is begun. In phase two, the challenge owner supports the competition winners in recreating phase one prototypes, and they to continue to iterate until the product or service is made successful in an operational environment. At this point challenge owners begin the business case for purchase, following their individual procurement processes. To date, the Catalyst’s challenges have varied from tackling online Daesh imagery to using geospatial imagery to improve the building of new housing.\(^4^3\) While it is targeted towards startups, the Catalyst is open to private companies of all sizes.

\(^{4^0}\) Oliver Dowden. 2019. Speech at CBI.  
\(^{4^1}\) Oliver Dowden. 2019. Speech at CBI.  
\(^{4^3}\) GOV.UK. 2019. GovTech Catalyst Information.
Streamlined contracts

In response to complaints of excessive documentation by small companies, the government has focused on creating clearer and shorter tenders. In 2018, CCS in collaboration with GDS and the Government Legal Department (GLD) launched a new, simplified Public Sector Contract to streamline the process for businesses applying for government opportunities.44 As we will show in Section 3, startups continue to perceive government tendering as excessively bureaucratic and resource-consuming.

Contracts Finder

A competitive market requires transparency of contracting opportunities for potential suppliers. This is particularly important for startups who lack experience in working with government and the resources to regularly monitor government business opportunities. In 2011, the Coalition Government launched Contracts Finder to improve transparency and the visibility of public sector contracts to smaller suppliers.

In 2018, there were over 38,000 users registered on Contracts Finder, of which 64% were SMEs.45 This platform aims to address the information asymmetries faced by SMEs by acting as a single-source platform for government contracts. As defined by the Public Contracts Regulations 2015, it is obligatory for commissioners to publish all central government contracts over £10k, and above a threshold of £25k for local authorities and NHS trusts. But as we will show later in this report, the majority of government contracts are still not published on Contracts Finder, which has undermined its purpose to create fairer procurement structures. While the creation of Contracts Finder was a step in the right direction, small suppliers continue to struggle when searching for suitable opportunities..

E-procurement - Digital Marketplace

In 2014, the Government Digital Service launched the Digital Marketplace to transform the way that the public sector purchases IT and digital services. The Digital Marketplace represented a significant step in opening up procurement to smaller suppliers. The government has provided £11m of funding to export the marketplace globally and create new opportunities in emerging markets.46


G-Cloud

CCS introduced the G-Cloud framework in 2012 to improve competition and create a fairer buying process by improving the visibility of smaller suppliers in the public sector marketplace.47 It aims to make it easier for buyers to find the most appropriate supplier to fulfill its business requirements. Since its inception, G-Cloud has generated over £4b of sales, with 45% of sales by value being awarded to SMEs.48 Now in its eleventh iteration (from April 2019), each G-Cloud framework lasts 12 months, with a new variant being introduced every six months. 90% of the 3,505 suppliers on G-Cloud 10 are classified as SMEs.49

Our survey of startups found that, although acceptance rates onto G-Cloud are relatively high, it can still be very difficult to win business through the framework. Some commentators have argued that an overabundance of suppliers has resulted in a lack of status and limited exposure for startups in the marketplace. As such, buyers are unlikely to take a risk on smaller suppliers due to their low profile in the marketplace.50 We discuss these criticisms and others in Section 4 of this report.

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AN OVERABUNDANCE OF SUPPLIERS HAS RESULTED IN A LACK OF STATUS AND LIMITED EXPOSURE FOR STARTUPS IN THE MARKETPLACE

Digital Outcomes and Specialists

The Digital Outcomes and Specialists (DOS) 3 framework features 2,953 suppliers, 94% of which are SMEs. The framework is split into four lots with an overall value of £1.2b: digital outcomes; digital specialists; research studios; and research participants. The scope of services procured on this framework usually covers single digital consulting projects or hiring contractors with specialist digital skillsets.

51 PublicTechnology. 2018. Digital Outcomes and Specialists 3 adds almost 1,000 suppliers.

Science and Technology Committee - Digital Government Inquiry

The Science and Technology Select Committee has launched an ongoing inquiry into the role of digital government in transforming public services and the relationship between government and citizens. Procurement has figured significantly, as respondents highlighted lacklustre reforms and the falling government spend with SMEs. One contributor characterised government technology procurement as ‘oligopolistic’. Others identified key challenges including, legacy contracts, differing buy-in across departments, and lack of skills in procurement teams.

We welcome the Committee’s willingness to engage with industry representatives and small companies to identify the challenges imposed by existing procurement structures. The government should continue to consult technology companies and trade bodies to understand the motivations of startups in public sector technology markets.

Office for AI Procurement Strategy

The Department for Digital, Media, Culture and Sport (DCMS) has partnered with the World Economic Forum (WEF) to develop the world’s first AI procurement policy. Together, the two organisations are currently writing guidelines for how governments across the world should harness the potential of AI for the benefit of...

55 Disclaimer - PUBLIC contributed evidence to the inquiry.
citizens. This is borne out of a recommendation by the House of Lords Select Committee on AI, which suggested that the public sector should use procurement to develop AI in the UK.\textsuperscript{56} We welcome the ambition to position the UK as the global leader in AI and develop a procurement policy which can be exported globally.

**Government Innovation Strategy**

Following on from its Technology Innovation in Government Survey, published in August 2018, GDS is currently producing an Innovation Strategy. Currently, there is no coordinated approach to how government should use emerging technologies. GDS has engaged with GovTech startups and sector experts to identify barriers to using emerging technology in government, including procurement processes, a lack of an innovation culture among civil servants, and legacy IT contracts. The Strategy, championed by the Minister for Implementation, Oliver Dowden, will offer guidance on how the government should approach these challenges and engage more effectively with the burgeoning GovTech ecosystem. This cross-departmental blueprint is a step in the right direction towards realising the potential of emerging technologies to deliver public services.

**The Outsourcing Playbook**

In February 2019, the Cabinet Office and the GCF published its ‘Outsourcing Playbook’ to provide guidance to departments on how to work with external suppliers. The playbook was designed in collaboration with suppliers and provides a comprehensive overview of the tools available to commissioners. It also offers a series of best practice recommendations to be implemented across government, including a general framework for how to approach outsourcing decisions. This is a positive commitment to improving contracting processes for small companies and transitioning to outcomes-based commissioning. The Playbook introduces 11 new policies that central departments are expected to follow. We welcome the measures announced in the Playbook, including the requirement to regularly publish upcoming requirements in procurement ‘pipelines’.\textsuperscript{57}

**OECD ICT Commissioning Playbook**

Finally, GDS has collaborated with the OECD to publish the ‘ICT Commissioning Playbook’ for reforming technology procurement, with contributions from nine other countries worldwide. It aims to share experiences of procurement in the context of digital transformation in government to facilitate a transition towards agile procurement.

With greater government interest in the relationship between procurement and innovation than ever before, there is clear policy impetus for the UK to build on its existing work and go further. With the right vision and direction, procurement in the UK can soon become more innovative and startup-friendly than anywhere else in the world.

\textsuperscript{56} Artificial Intelligence Committee. 2018. AI in the UK: Ready, Willing and Able?, 22.

\textsuperscript{57} Government Commercial Function. 2019. The Outsourcing Playbook, 12.
2. WHY SHOULD GOVERNMENT WORK WITH STARTUPS?

This report argues for a simple but important conclusion: that the UK government should contract with more technology startups. In fact, it goes beyond this: it argues that procuring goods and services from more startups should be a key strategic priority for government, and that its progress should be regularly monitored and assessed. Doing so will improve public services by allowing the government access to better and cheaper products.

Pleasingly, this view is slowly becoming more mainstream, including within government itself. The shifting intent towards working with more startups has resulted in a new wave of policy announcements and startup-friendly initiatives, most of which we reviewed in the previous chapter.

In many respects, the UK government has made a more concerted effort than any other country in the world to engage with smaller and younger suppliers. From the GovTech Catalyst Fund, and Scotland’s CivTech programme, to the startup accelerators run by the NHS and the MOD, to the numerous business incubation and acceleration hubs across local government, there are many pockets of market-led innovation in the UK public sector.

These initiatives are a great start. However, more needs to be done. In particular, government is still lacking a strong vision for why startups (rather than small businesses more generally) are so important in public procurement. Without this vision in place, government is still some way off implementing a comprehensive, end-to-end strategy for actually supporting them.

WHAT IS A STARTUP?

First, we need to clarify what we mean by ‘startups’, and how they differ from small businesses. In government circles, SMEs and startups are often conflated. But they are not the same kind of organisation.

Defining the term ‘startup’ is complex, and there is still no accepted single definition used across business, academia and public policy. But at the broadest level, a startup is a new and innovative market entrant searching for rapid and significant growth through a scalable business model. Importantly, a startup is not the same thing as a small business. Nor is it the same as a newly-founded business.

1 Sometimes ‘startups’ are referred to as ‘scaleups’ when they reach a certain scale (a common metric is 20% annualised growth for 3 years). In this report, the term ‘startups’ will also encompass companies in the ‘scaleup’ stage of their life-cycle.
It is true that startups are, for a while, small businesses. And that they stop being startups if they reach a certain scale (this is why Uber, Instagram and Netflix are no longer startups). And it is also true that they stop being startups if they have been operating for a long period. However, it is certainly not the case that all small businesses - or all new businesses - are startups.

There are roughly 5.6 million small businesses in the UK.\(^2\) The majority of these are service businesses - everything from restaurants, to hairdressers, to plumbers, to florists. These are not startups, except in a few unusual cases. A hairdresser is not likely to be a new and innovative market entrant searching for rapid and significant growth through a scalable business model.

In his seminal article on startups, Paul Graham - serial entrepreneur and co-founder of Y-Combinator, one of the world’s most renowned startup accelerator programmes, describes the growth potential of startups in the following way:

‘For a company to grow really big, it must (a) make something lots of people want, and (b) reach and serve all those people.’\(^3\)

As Graham points out, hairdressers usually have criterion (a) fairly well-covered: ‘almost everyone needs their hair cut’. The problem for a hairdresser is criterion (b). Reaching and serving a significant proportion of the market of people who need their hair cut is extremely difficult, and the customer base is almost entirely fixed by the location of the store.

Along the same lines, there is a difference between startups and small businesses in their top objectives. Small businesses are driven by profitability and stable long-term value (without necessarily aiming for rapid or significant market growth), while startups are focused on top-end revenue and growth potential (without necessarily focussing on profitability in the short-term). This is why many startups and, indeed, in some markets, almost all startups, are supported by venture or angel investors, or some other form of patient private equity or debt financing.\(^4\) Given that startups focus on the long-term growth potential of their business, many rely on this external capital throughout multiple phases of this life-cycle to allow them develop a scalable and innovative long-term solution while making losses in the short-term.

Most small and medium-sized suppliers of digital and data services to the UK government are not really startups. By way of example, the top five SME suppliers on the UK Digital Marketplace in 2018 were:

<table>
<thead>
<tr>
<th>SME NAME</th>
<th>GOVERNMENT SPEND</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Equal Experts</td>
<td>£37m</td>
</tr>
<tr>
<td>2. Methods</td>
<td>£20m</td>
</tr>
<tr>
<td>3. Solirius</td>
<td>£17m</td>
</tr>
<tr>
<td>4. 6point6</td>
<td>£15m</td>
</tr>
<tr>
<td>5. UK Cloud</td>
<td>£14m</td>
</tr>
</tbody>
</table>

**Equal Experts** (founded in 2005) is a technology consulting company that develops bespoke software solutions for its clients, offering a range of technology services in user experience, product management, idea inception, and delivery.

Similarly, **Methods** (founded in 1990) is a digital transformation partner for government, having delivered bespoke consulting projects to over 300 UK public sector customers. **Solirius** (founded 2007), **6point6** (founded 2012) and **UK Cloud** (founded 2011) are all technology consulting companies of some

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\(^3\) Graham, Paul. 2012. Startups = Growth.

\(^4\) It is worth mentioning here that some successful startups do manage to operate without raising this external capital early in their journey, and achieve scale by generating short-term revenue that is reinvested into the company (this is called ‘bootstrapping’).
form, primarily describing themselves as ‘partners’ for digital transformation projects.

These companies have all been operating long enough to establish sustainable and profitable business models, but have not achieved rapid market growth (and hence are still SMEs). This is largely because of the nature of their respective business models: they offer consulting and advisory services for government customers on a case-by-case basis. Although they all represent success stories for small businesses in the UK, none of them have developed a novel or highly innovative operating model that can be scaled to rapidly capture a significant market.

Government commits a considerable amount of its technology spend to these kinds of SMEs (although it should still do more). It has failed, however, to do the same for the UK’s startups; it has failed, therefore, to exploit the potential of the country’s thriving technology startup ecosystem. Stories of startups working with government really are few and far between and, if they succeed, many (if not most) struggle to scale beyond a few pilots or contracts.

WHY WORK WITH STARTUPS?

It is now broadly accepted in public procurement that a healthy and productive supplier base should include more small businesses. Most notably, it has been widely argued that procuring goods and services from SMEs can guarantee greater competition (by having a more diverse supplier base) and value for money, and so will result in better public service outcomes for the UK taxpayer.5

The rationale for working with startups is less established. But there is significant evidence showing that high-growth startups are key drivers of economic growth. A 2014 report by Sherry Coutu (reviewed again in 2016) estimated that even a 1% increase in the UK’s high-growth startups could drive an additional 238,000 jobs and £38b to GVA within three years, leading to £96b per annum in the medium term.6

This is backed up by research by Octopus Investments, who found that in 2016 startups represented about 1% of UK businesses, yet accounted for 3% of UK total jobs in the same year. Most importantly, 20% of all new jobs created were in startups.7 The evidence suggests that high-growth startups represent a crucial component of the modern UK economy. Public procurement could be a highly effective tool for supporting these companies, and one that is currently under-utilised.

We have identified eight reasons why governments should procure more from technology startups. We show how startups support greater innovation at every level: in public service outcomes, markets, processes, and working cultures in government.

Some of these reasons refer to the UK’s broader aim of establishing itself as a successful digital economy going forward. That is, some of our justifications for procuring more from technology startups are tied to broader policy questions, rather than the case-by-case justification of favouring technology startups for specific contracts.

Using public procurement as a mechanism for achieving wider policy outcomes is often referred to as ‘Sustainable Procurement’, where commissioning decisions are influenced by the wider impact of buying patterns on a society (usually in achieving social or environmental impact).8 Sustainable procurement is becoming a more mainstream practice in commissioning services around the world, including within UK government.

5  Telegraph (Oliver Dowden - Minister for Implementation). 2018. ‘Small businesses are the backbone of our economy.’
In March 2019, Cabinet Minister David Lidington announced the UK’s commitment to using public procurement as a tool to better support ‘social enterprises and other organisations who are best placed to deliver social outcomes and promote good work by businesses’.9 The aim of this policy is to ensure that the evaluation of tenders includes an assessment of how the winning company will help the UK to deliver improved social outcomes. This includes assessing the environmental sustainability of a received bid, promoting more diverse supplier bases - including those owned by under-represented groups, and evaluating the safety of supply chains - to reduce the risk of modern slavery and cyber security issues.

Similarly, the government has a list of Government Buying Standards (GBS) for a number of categories of goods and services, which it encourages buyers to use whenever engaging in a procurement process. The justification for these standards is to ensure that ‘organisations meet their needs for goods, services, works and utilities in a way that benefits not only the organisation, but also society and the economy, while minimising damage to the environment’.10

Moreover, as long as security protocols are followed, cloud solutions are less exposed to cybersecurity risks, which has become a greater concern in the UK public sector, following a string of recent ransomware attacks (most notably the 2017 attack on the NHS).

The largest public cloud provider, AWS, provides the infrastructure for thousands of high-growth startups across the country. Companies such as Klarna, WeTransfer, TransferWise and Showpad, and many others have achieved significant scale and enormous market growth by leveraging AWS’ cloud infrastructure.

In March 2019, Cabinet Minister David Lidington announced the UK’s commitment to using public procurement as a tool to better support ‘social enterprises and other organisations who are best placed to deliver social outcomes and promote good work by businesses’.9 The aim of this policy is to ensure that the evaluation of tenders includes an assessment of how the winning company will help the UK to deliver improved social outcomes. This includes assessing the environmental sustainability of a received bid, promoting more diverse supplier bases - including those owned by under-represented groups, and evaluating the safety of supply chains - to reduce the risk of modern slavery and cyber security issues.

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The benefits of cloud computing are well-established. In addition to eliminating the need for in-house infrastructural investment, access to a public cloud allows for improved manageability and less maintenance, but also for small companies to more rapidly adjust resources to meet fluctuations in demand. As such, small companies using a scalable cloud system can realistically take on the computing requirements of large government contracts.

So there is strong precedent - and a recent wave of policy impetus - for using public procurement as a mechanism for promoting wider strategic government objectives.

We argue that working with more startups is a further key metric for the ‘sustainability’ of the UK economy. In the same way that contract value has been opened up to social enterprises and drivers of social value, it should also be opened up to startups and drivers of innovation.
Below, we survey eight key reasons for engaging with more startups through public procurement. Some of these reasons relate to the delivery of higher quality public services (often at a lower cost), while some relate to the role of public procurement in stimulating a high-growth digital economy in the UK.

1. **DELIVER BETTER TECH PRODUCTS AND SERVICES**

2. **LEVERAGE NICHE AND DEEP CAPABILITIES**

3. **ALLOW SMALL TEAMS TO CREATE AND INNOVATE**

4. **PROMOTE MARKET COMPETITION**

5. **STIMULATE AND SUPPORT STRATEGIC MARKETS**

6. **BECOME THE WORLD-LEADING HUB FOR GOVTECH**

7. **SUPPORT THE EXPORT OF UK BUSINESSES**

8. **CHANGE WORKING CULTURES IN GOVERNMENT**

### 1. DELIVER BETTER TECH PRODUCTS AND SERVICES

In almost every major commercial market, technology startups are transforming traditional business and delivery models. There is a reason for this: in each of these sectors, startups are delivering better, faster and more affordable products and services.

Nowhere has this been clearer than in the FinTech sector (technology startups offering financial services). Last year, 14% of the total banking revenues in the UK were captured by startups (defined here as small technology companies founded after 2010). This trend will only grow over the coming years, with UK tech startups Revolut, Monzo, Starling Bank, TransferWise and Pockit now all representing world-leading FinTech success stories.

In the same way that new market entrants have transformed the UK financial services sector (and, indeed, in almost every other major consumer market), new startups have the potential to use technology to transform the delivery of public services. These companies are making use of cutting-edge technologies, and are often delivering services where there has traditionally been a market gap.

If we can take one lesson from recent trends in consumer markets, it is that technology startups have the potential to totally transform the delivery of goods and services. Government needs to undergo this digital journey too. And it would be remiss to fail to appreciate the potential impact of startups in achieving these digital aims.

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CASE STUDY

IN-Q-TEL INVESTING IN SECTOR-LEADING STARTUPS

In-Q-Tel is a not-for-profit venture capital firm that partners with the CIA and other intelligence agencies to invest in market-leading startups that can support the US government intelligence services.

It is a leading example of how a government agency can pursue a venture model to drive greater internal innovation, while simultaneously stimulating investment activity in the national economy.

In-Q-Tel invests in scalable and commercially viable VC-backed startups to identify and adapt commodity tech products that can be modified, tested, and delivered for use within critical national security infrastructure. This provides a model for In-Q-Tel (and the CIA) to find and deliver innovative technology solutions quickly and cost effectively.

Its track record as an investment fund is extremely impressive. To date, In-Q-Tel has made 175 investments in security startups, and has achieved a 59 successful exits, including the high-profile IPOs of MongoDB, Pure Storage, and Cloudera.

There are two key benefits to this model of supporting technology startups. First, the intelligence and security services in the United States benefit from a close connection to the dispersed and rapidly evolving tech sector, to develop state-of-the-art security capabilities and technologies. Second, In-Q-Tel stimulates the investment ecosystem by providing a kite-marking service and quality assurance for all of the companies that it invests in. This explains why the market responds so well to its investments: for every dollar invested by In-Q-Tel, companies receive an average of nine additional dollars in venture investment.

IN ALMOST EVERY MAJOR COMMERCIAL MARKET, TECHNOLOGY STARTUPS ARE TRANSFORMING TRADITIONAL BUSINESS AND DELIVERY MODELS

2. LEVERAGE NICHE AND DEEP CAPABILITIES

One of the main reasons that startups can deliver better products and services is that they offer genuine expertise in fields where expertise is hard to find. This is an important point: startups tend to operate in niche vertical markets, or they have a niche technological solution that can be applied to multiple markets.

This is because most startups are designed to solve a particular business challenge, or fill a market gap that is currently not being met by established corporate companies. The result is that startup founders and their teams often possess deep expertise in their chosen market or technology niche, and are able to outperform larger technology companies and consultancy services, which develop multiple broad technology products across a number of domains.

It is no surprise then that many great UK GovTech companies have been started by former practitioners, or founders with deep sector or technical expertise. This includes founders like Marc Warner, of artificial intelligence startup Faculty, who has a PhD in Quantum Computing; Dr Stephanie Eltz, Dr Anas Nader and Dr Govin Murugachandran who have all founded leading HealthTech companies (Doctify, Patchwork and Flynotes respectively); and Toby Mather, a former foreign language teacher and Co-Founder of Lingumi, an EdTech platform specialising in language development and acquisition.

Today’s startup founders represent some of the most knowledgeable and technically talented people in their chosen sector. Leveraging this deep sector and technical expertise will translate into enormous advances in public service outcomes.
3. ALLOW SMALL TEAMS TO CREATE AND INNOVATE

Next, there is a growing body of evidence showing that smaller teams tend to be more innovative and creative than larger, more established firms. Most recently, a new study in *Nature* analysed more than 65 million papers, patents and software projects, and found that smaller teams produce much more disruptive and innovative research than larger teams. In particular, the study found that smaller teams were far more likely to introduce new ideas to science and technology, while larger teams more often developed and consolidated existing knowledge. Interestingly, this research broadly confirms what has been proposed by similar (but significantly smaller-scale) innovation studies, from over 30 years ago. Add to this the related field of evidence outlining how startups tend to produce more patents and more innovations than larger firms by unit of input invested in R&D.

There are a number of possible explanations for the stronger relative innovation output of smaller firms. First, larger teams are more likely to suffer from coordination and communication problems, which can undermine the process of securing buy-in for unconventional projects and processes. This is related to the fact that smaller teams have leaner management structures, capable of driving major institutional change more rapidly and with fewer barriers.

Large teams with well-established operations and processes in markets can also struggle to test new operating models, because they are concerned with delivering existing projects according to a proven models. By contrast, smaller and newer teams have more to gain and less to lose, and are more likely to undertake new, untested opportunities, many of which are not at all related to accounted-for formal R&D expenditures.

So, there is strong evidence that smaller market entrants are more likely to innovate: and there are good reasons for explaining why this is the case. In this context, it is possible to understand the global trend of gradual productivity slowdown in terms of the consolidation of established but unproductive firms. Recent research from the OECD argues that the global productivity slowdown can be linked to a noticeable decline over time in both the pace of laggard firm’s catch-up to the global productivity frontier and a failure of new entrants to access or markets, or for markets themselves to change in any meaningful way. A productive public sector can only be sustained by the dynamism and innovation offered by new market entrants.

4. PROMOTE MARKET COMPETITION

A key justification for working with more SMEs (and for having a more diverse supplier base in general) is that it encourages greater competition in public sector markets. Greater market competition has long been recognised as a crucial component of a healthy outsourcing system. Most recently, the Government Commercial Function’s ‘Outsourcing Playbook’, published in February 2019, outlined that: ‘healthy, competitive markets matter because they support our ability to achieve value for money for taxpayers’. The March 2019 ‘Unlocking Digital Competition’ report by Jason Furman has brought the question of competition in digital markets

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more sharply into focus. This report reviews the concerning trend towards greater consolidation in the digital economy – in particular the threat of monopolies in the ownership of consumer data. A central recommendation of the report is to encourage greater competition in digital markets, ‘allocating market share and resources to the most productive firms, and creating an incentive for both incumbent firms to innovate over time and innovative new firms to enter’.

Competition in public sector markets encourages greater contestability for public sector contracts. In June 2018, the Public Administration and Constitutional Affairs Committee undertook a review of public procurement following the high-profile collapse of Carillion, and argued that ‘the combination of limited competition and high barriers to entry generates worse outcomes for government; and that increased participation of ‘new entrants’ is crucial to guaranteeing greater contestability for public sector contracts.

This is particularly true of startups. Startups deliver new and innovative products and services to consumers. They develop novel technologies, find new delivery channels, and conduct business in creative and unexplored ways. Having a healthy pipeline of innovators and change-makers will encourage companies in public sector markets to ensure that they are keeping up with the pace of change, and that they are delivering high-quality and low-cost digital public services.

It is widely accepted that promoting competition in public procurement delivers better value-for-money for the taxpayer: ensuring that this competition includes market-leading technology companies will help the taxpayer’s pound to stretch even further.

5. STIMULATE AND SUPPORT STRATEGIC MARKETS

The UK government has enormous purchasing power. Government spends £284b a year on buying goods and services from external suppliers,\(^\text{21}\) which amounts to around 13.7% of the UK’s entire GDP.\(^\text{22}\) Simply put, public procurement remains one of the single most important and powerful market mechanisms in the UK economy. By using its purchasing power effectively and proactively, government can act as a ‘smart buyer’ to attract and develop the commercialisation of key strategic sectors. In this way, public procurement can become an additional support mechanism for the UK’s existing R&D efforts, as well as for delivering high-quality public services.

This is particularly important in light of the fact that the inability to find a sufficient customer base is the greatest single reason for failure of new tech startups. A survey conducted by CB Insights\(^\text{23}\) found that 42% of startup founders cite a ‘lack of a market need’ for their product as the primary reason that their company failed.\(^\text{23}\) There are hundreds of startups emerging in the UK every year who could provide genuinely transformative digital public services: unfortunately, they fail before they can reach any significant scale because they cannot get enough customers in time.

There is strong precedent for government acting as an ‘anchor customer’ to stimulate market innovation.\(^\text{24}\) The most famous story comes from Silicon Valley, which has since established itself as the world’s leading technology and venture investment hub. The early growth of Silicon Valley was largely the result of local technology firms winning government contracts and grants. Fairchild Semiconductor, the first major ‘startup’ of today’s Silicon Valley, won its first business through government contracts, building chips that helped send American astronauts to the moon, and developing technology for the US military.\(^\text{25}\)

Around the same time, many local firms in the microwave electronics, missile, satellite, and semiconductor industries managed to successfully achieve rapid growth and product development, supported by a demand for customised government-standard technology. The first IPO from Silicon Valley was in 1956 for a company called Varian, which sold microwave tubes for military applications.\(^\text{26}\)

There are a number of reasons why government procurement can be such an effective mechanism for stimulating markets. In the case of Silicon Valley’s fledgling startup ecosystem, government contracts allowed high-tech companies to acquire their first customers, tackle highly complex product requirements and standards, optimise batch-processing and supply chains, and validate their products for follow-on customers and investors. For today’s tech startups, governments can be ideal first customers. Not only do they offer regular, long-term financial commitments, but they also make for perfect reference customers, both in terms of attracting follow-on customers and investors, and in terms of allowing them to scale up and validate their operations in a highly complex and regulated environment.


\(^{22}\) Government procurement: The scale and nature of contracting in the UK, 7.

\(^{23}\) CB Insights. 2018. 287 Startup Failure Post-Mortems.

\(^{24}\) Examples of such case studies can be found in: Nesta. 2007. Driving Innovation Through Public Procurement.


It is worth thinking about these arguments in terms of the UK’s key strategic technology and market priorities. Take the £1bn ‘Sector Deal’ for AI, in which the UK government has committed, amongst other things, to fund 1,000 further PhDs at UK universities, and provide £300m of R&D investment in AI.27 A highly-effective, but currently entirely unexploited, mechanism for supporting and championing high-growth AI companies in the UK would be to award them with government contracts.

There are two reasons for this. First, because AI has the potential to deliver unprecedented levels of efficiency, quality and accessibility in UK public services. Second, because it would offer a clear strategic advantage for the UK in terms of growing and scaling the best ecosystem of AI companies of anywhere in the world. Companies like Faculty, Babylon, CityMapper, and Adzuna are all leading UK AI companies that have benefited significantly from working with government: scaling these efforts up on a larger scale could be the crucial differentiator for the UK in its efforts to be the most-advanced AI economy in the world.

6. BECOME A WORLD-LEADING HUB FOR GOVTECH

More broadly, smarter use of public procurement can be used to help the UK to establish itself as the world-leader in GovTech. This could be crucial to its strategy of developing genuine speciality sectors, through which it can attract talent, companies and investment.

The growth of the UK’s FinTech sector - now the most mature and well-funded FinTech ecosystem of anywhere in the world - shows how important it is to develop strategic advantages in high-growth sectors. FinTech is now a productivity powerhouse for the UK economy. In addition to contributing to 14% of the country’s total revenue from financial services, the FinTech sector currently employs 76,000 people, which has been projected to rise to over 105,000 in 2030.28

As outlined in the previous chapter, GovTech is an enormous emerging market, but it is still in its relative infancy. Moreover, there is no single government around the world that can

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lay claim to being the undisputed leader in GovTech. As such, the UK has the opportunity to establish itself as the first serious mover in the GovTech sector, and set the standard for economies all over the world to try to replicate.

The UK has a unique combination of proximity to talent and knowledge, access to capital and investment appetite, as well as a sophisticated modern regulatory and political system, all of which position it perfectly to become the global first-mover and leader in GovTech.

This is precisely how the UK became a world leader in FinTech, starting in London and then expanding to other cities, such as Manchester, Newcastle, Edinburgh, Leeds, and Bristol.

7. SUPPORT THE EXPORT OF UK BUSINESSES

So far, we have argued that procurement can help to stimulate and support technology markets, and give the UK key strategic advantages in specific sectors. It can also be used as a mechanism to support the UK’s global export strategy: allowing these high-growth domestic companies to scale to foreign public sector markets.

Our point here is simple but important. The UK government remains one of the most trusted and respected institutions in the world. As such, its purchasing power extends beyond stimulating markets at home: it also has the ability to encourage foreign governments (and investors) to work with British startups by kite-marking them as trusted suppliers.

If tech companies can successfully sell to institutions such as the NHS, Transport for London, or the UK police and emergency services, they will have a much stronger chance of succeeding in foreign markets. Take Babylon again as an example: since working with the NHS, the company has managed to scale internationally, and has since established partnerships with healthcare providers in China, the USA and the Middle East. If the UK becomes the genuine market leader in GovTech, it can be exported all over the world.

8. CHANGE WORKING CULTURES IN GOVERNMENT

Finally, startups can help to drive important cultural and organisational changes within UK government. Exposure to new ways of working and highly innovative products and services will allow government to ensure that it manages to stay up-to-date with current trends in technology and innovation.

It is no surprise that large organisations that work with startups are more likely to be successful than those who do not. Moreover, high-performing large companies are twice as likely to report being risk-seeking with external partners when pursuing innovation. The evidence seems to suggest that, for large and highly complex organisations to be successful in the modern economy, they must embrace working with startups in some form.

This idea is often referred to as ‘open innovation’ – “the paradigm that assumes that firms should use external ideas as well as internal ideas, and internal and external paths to market.”

As government attempts to develop the skills and working cultures to be fit for the modern economy, working with external innovators can play an extremely significant and useful role.

29 CIO. 2016. Startups and diversity driving innovation - 2017 CIO Agenda recommends new technology procurement strategy.
Two types of innovation

It is worth contextualising these arguments with a final clarification. So far, we have referred to two distinct types of innovation, and shown how the procurement of startups can help to deliver greater innovation in both senses.

First, we have referred to the procurement of innovation (reasons 1-4 above): second, we have referred to procurement for innovation (reasons 4-7 above). Startups are crucial for the successful procurement of innovation insofar as they offer innovative and high-tech solutions to improve the delivery, quality and accessibility of public services. Procurement for innovation relates to using procurement as a policy tool to stimulate innovation in key markets, policymaking and within government itself. Startups are central to these processes for the reasons that we outlined above.

32 This distinction has been laid out by many commentators, most notably: Obwegeser and Müller. 2018. Innovation and Public Procurement: Terminology, Concepts, and Applications, 2.

Procurement of innovation

Procuring innovative solutions to improve the delivery, quality and accessibility of public services.

Procurement for innovation

Using public procurement as a policy tool to stimulate innovation in key markets, especially public sector markets.

Procuring more goods and services from technology startups helps to drive innovation in public services, but also stimulates innovation in the UK economy more broadly.
Governments will clearly benefit from working more systematically with startups. Doing so, however, means answering a different, but related question: should government build and maintain its own technology systems, instead of procuring commoditised technology products and services from startups in the market? And if they should build some things and not others, how can government make the right distinction between these categories?

When it comes to products and services that rely on technology - there are some things startups can do better than government ever could. As such, adopting a blanket ‘build-over-buy’ mentality would result in the government developing systems that were worse and more expensive than what is widely available on the market.

The reasons for this are broadly the same as the reasons outlined above: startups in private markets tend to be more agile, more innovative, and can deliver greater levels of highly technical and niche expertise. There is also the price of hiring technical talent in-house. Government will always struggle to pay developers and data scientists the £100k+ salaries on offer to the best-of-the-best in private sector technology markets. Indeed, this pressure has been exacerbated by the recent changes to the IR35 status of contractors in the public sector, which has made it even more expensive and difficult for government to hire the requisite technical talent to build in-house technology systems.

Beyond that, as we have outlined above, procurement represents an extremely powerful mechanism for supporting the growth of British technology companies. Removing that lever entirely by bringing all technology services in-house would undermine the UK’s strategy of establishing itself as one of the world’s leading technology ecosystems. Instead, we recommend that it should seek to retain its purchasing power, and use it to support sustainable long-term aims.

There are of course, some services that cannot realistically be delivered by smaller tech companies, and should be built and maintained by government, or co-built with larger providers and systems integrators. Indeed, the Government Outsourcing Playbook recognises the importance of undertaking careful and detailed analysis before making ‘build-or-buy’ decisions: in order to inform the development of options in the Strategic Outline Case (SOC).

The Outsourcing Playbook advises that outsourcing products and services with any of the following characteristics might be ‘more challenging’:

1. Core to departmental purpose and objectives
2. Complex or high risk and without proven market capability
3. Novel and therefore with a limited market to source from
4. Experienced many operational difficulties in the past
5. Poorly understood and/or not well defined
6. Disproportionate effort and cost to bring back in house in future.

These principles can be sensibly applied but, in their existing format, are far too broad in scope. They can be invoked too easily to convince government to build its own technology solutions from scratch, when it makes little sense to do so. Examples of this abound, from the NHS to the Home Office.

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33 HR Director. 2019. Looking ahead to the 2019 contracting market.
35 Outsourcing Playbook, 19-20.
CASE STUDY

HIGHER EDUCATION DATA FAILING TO GET THE MOST OUT OF THE MARKET

In 2018, the Office for Students tendered for a digital platform to help students to make more informed decisions when choosing their university courses. The aim of the platform was to support prospective students, especially those from disadvantaged backgrounds, to use data to make better higher education decisions.

The contract was structured in two phases (Alpha and Beta), with a total value of £600k. It was advertised on the Digital Marketplace and received 32 applications, of which 30 were from SMEs.

These 30 SMEs included a number of impressive UK tech startups. Most notably, Coursematch, who have already developed a tool that matches students with universities and courses based on a number of different data points, including crowdsourced student data. It also offers students the ability to create new virtual networks based on their courses, universities, and interests. At the time of application, the platform had been rolled out to over 30,000 students across the country.

Disappointingly, the contract was not awarded to one of these startups: rather, it was awarded to Methods, the digital consulting partner, who had no such commoditised product already developed. Methods had carried out an initial consulting engagement before the contract, which was referred to as the ‘Discovery’ phase.

The result of the process, then, was to pay an established consulting company to develop a digital platform that had already been built and strongly validated by a UK startup.

In general, government operates according to the rule that highly bespoke or unique technology systems should be built in-house. This is broadly the underlying justification for principles 1, 2 and 3 above. Systems that are ‘core to departmental purpose and objectives’ will have unique business process requirements that are not (and, indeed, cannot be) replicated anywhere on the market. Similarly, complex, high risk, and novel systems will require features that may need to be built from scratch, and may not be appropriate for outsourcing.

It is true that some technology systems will have features that are so unique that it is impossible to find them anywhere on the market. It is important, however, that this justification is not invoked too liberally, as a blanket rule for favouring building over outsourcing. In particular, governments must undertake a deep and thorough assessment of what is available on the market before concluding that their required system is novel or unique.

This necessitates a real understanding of recent trends and developments in technology markets, and of what the current ‘art-of-the-possible’ looks like. In short, government cannot decide that there is a ‘limited market to source from’ until they really understand what the market can deliver (for more on this, see Recommendation 7 on page 86). In reality many of the judgments are made by officials who do not have the training or experience to know what is or isn’t available in the market or through limited forms of market engagement that reveal little.

There is also a further question about whether any of the technology systems required by government need to be truly ‘bespoke’. Features such as log-in pages, authentication processes, and databases are widely commoditised, often by new and innovative technology startups.
While the business requirements for major core technology systems in government are sometimes unique, many of the main features can usually be architected by integrating multiple products already available in the market.

Another principle that is too broad is Principle 4 - that outsourcing may be challenging if a contract has ‘experienced many operational difficulties in the past’. The fact that a contract has been poorly managed in the past should, in general, be sufficient motivation for it to be built in-house going forward. Rather, it should merely be motivation for government to ensure a more rigorous process around outsourcing and management decisions relating to that contract in the future.

Principle 5 - that a contract is ‘poorly understood and/or not well defined’ - is another problem that can be mediated by better market-led investigation. If government is not in a position to closely define what it needs, that should be cause to undertake proper market exploration, rather than to take upon itself a project to develop a currently undefined solution. As we showcase throughout this report, there are many ways that government can do more to learn about what it needs by consulting with the market.

Most notably, government can engage in ‘challenge-based’ procurement exercises. This allows public authorities to approach the market with a broad challenge or problem area to be solved: they then receive proposed solutions from the market, and evaluate which proposal best fits their requirement. Within traditional procurement practices, proper market engagement can fulfill this function. Consulting the market can be a crucial mechanism for supporting government to understand exactly what it needs - and exactly what is possible - from a new technology product or service. A poorly defined project scope should be used as an opportunity to develop ideas in consultation with the market, and not to build blindly.

CASE STUDY

KANSAS CITY TRIALLING FRONTIER IDEAS THROUGH PARTNERSHIPS

Kansas City municipal government is exploring how new technology can improve city operations through a 12-week in-house partnership with local businesses. This initiative provides a new and radical model for how government can work with the market to better understand and solve public challenges.

A new scheme allows Kansas City to experiment with new products and services designed for the public sector without any contractual obligation. About 30% of participants have been awarded city contracts.

Success stories have included a new procurement management system, an iPad app that reduces human error from first responders when treating cardiac arrests and a software programme that helps city officials manage strategic planning.

Applicants to the programme are assessed on how useful the project could be to the city, and whether the business is ready to start quickly.

Entrepreneurs are assigned a contact point from the department their service is intended to be used by, along with an office inside City Hall. Additional support is provided by the Innovation Partnership Program team.

The product is tested and adjusted over the 12 weeks, culminating in a demo day where participants discuss the impact of their services. City agencies then decide if they want to hire the company on a long-term basis. About 30% of participants went on to be hired by Kansas government agencies in the first three years of the scheme.
Principle 6 - that a contract would require ‘disproportionate effort and cost to bring back in house in future’ is probably the most important justification for insourcing. This could include the desire to avoid long-term ‘lock-in’ with a particular supplier, which can result in perverse incentive structures that encourage suppliers to deliver poor quality services.

A further justification frequently used by government is that it wants to retain sole ownership over the intellectual property (IP) relating to many of the technology systems that it uses. Sometimes government might want to retain IP as a matter of public interest: this could relate to issues of national security, or more broadly, the desire to prevent IP from being commercialised in private markets. But beyond that, government has been pursuing an active policy of building the value and scale of intangible knowledge assets owned by the public sector. The scope and ambitions of this policy are outlined in the HM Treasury review of public sector intangible assets undertaken following the 2018 Budget. At its broadest level, the aim of the policy is to ensure that government can deliver the best possible public services, while also providing an additional revenue stream by commercialising its IP.

According to the most accurate estimates, the total value of public sector intangible knowledge assets in the UK has more than tripled in real terms over the last two decades - from £40b in 1995 to at least £150b in 2015. At 9% of its GDP, the UK public sector has the fifth largest stock of intangible knowledge assets in the world.

Despite the high relative value of its intangible assets, government often fails to keep up with the private sector’s ability to commercialise IP. Estimated financial returns on public sector intangible knowledge assets (between 3.3-5.7% of the value of the assets) are some way below the average benchmark (12.6%) in the private sector. Indeed, much of the most successful case studies of IP commercialisation have involved partnerships with private sector organisations. This includes Axelos, a joint venture formed with Capita with the objective of scaling and developing the PRINCE2 IT accreditation developed by government. Since the spin-out to Axelos, PRINCE2 has now been expanded internationally into over 150 countries, and is used by some of the world’s largest private companies.

There is certainly strong justification for the public sector to retain IP in some special cases. But these justifications should be clearly understood before a decision to build a technology system in-house is taken: there should be a clear societal, economic, or financial benefit to the public sector owning the IP. As we have seen above, in general, private sector organisations are more effective at commercialising IP than government.

We recommend, therefore, that to make the most out of commercialising valuable knowledge assets, government explores more creative and flexible ways of partnering with private sector organisations. This could include licensing and revenue share agreements with private sector organisations that go on to commercialise IP developed during procurement, rather than an assumption that government should always retain the IP (for more on this, see Recommendation 4 on page 80). As such, when valuable IP is generated during a procurement process, especially where government has contributed to the generation of IP, government will be able to commercially benefit without having to restrict outsourcing decisions on this basis.

As we have demonstrated, in general, the rules used to govern outsourcing decisions are too broad in scope. As such, they can lead to governments making the decision to build technology systems in-house when there is a weak financial, economic, or societal business case for them doing so. Market failure and market gaps are wholly justifiable.

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37  Getting smart about intellectual property and other intangibles in the public sector, 10.
38  The estimates taken for the returns of public sector intangible knowledge assets are taken from HM Treasury’s analysis in The Greenbook as a lower bound, and of the value of the returns realised by Ploughshare Innovations (a government military spinout) as an upper bound.
reasons for in-sourcing technology systems: but they should only be used if government has a deep and thorough understanding of what is actually available on the market. This is particularly true for emerging markets in technology and data science, where the pace of change in private sector markets has been immense, and so processes for scouting and understanding markets must be updated.

Similarly, government realising the benefits of valuable IP developed during procurement is important. However, except in some special cases relating to national security and critical infrastructure, government should prioritise models of commercialising, rather than owning IP. This would result in better IP outcomes for both the public and private sectors.

To that end, we have developed a set of alternative principles for when public authorities should favour building their own technology systems over outsourcing to private markets:

1. Develop the business processes that are core to departmental purpose or objectives in-house, but look to the market for commodity features that can contribute to the wider technology system.

2. Engage with the market - through pre-market engagement or market-led procurement processes - for requirements that are poorly defined or understood.

3. Re-evaluate market engagement and procurement procedures for a contract where there has been significant operational difficulties in the past.

4. Perform a deep and thorough assessment of commodity technology markets - especially emerging technology markets - before assessing whether there is a sufficient market for outsourcing.

5. Build technology systems in-house if they will require disproportionate effort and cost to bring back in house in future.

6. Focus on building back-end technology and data processing systems, and look to the market for innovation in front-end features.

7. Seek to maximise the societal, economic, and financial benefits of intellectual property generated during procurement by selecting the right commercial partnership with the private sector.

The UK has one of the most advanced and well-supplied technology markets in the world. The focus of public procurement should be to get the most out of this market wherever possible, delivering better quality and value-for-money in our public services.
There is also a separate question, relating to the role of major IT companies and systems integrators in government outsourcing. Again, there is a clear role for these kinds of actors: but, as with the decision of whether to build or buy, government should be more rigorous in assessing which contracts truly require systems integrators. Moreover, government should require integrators to capitalise on the commodity tech products and services that startups can provide within their programmes of work.

Broadly, there are two main reasons why an outsourcing contract might require a systems integrator. First, the requirements of the contract, especially the integration into existing legacy systems, may be so complex that a technology startup could never realistically deliver them. Second, the value of the contract, and the associated risk, may be so high that it could not be properly absorbed by a startup.

There are many examples of such contracts, and here systems integrators have a central role to play. But neither scenario in itself necessitates a fully bespoke build. Government should require systems integrators to apply the same criteria that they use when considering what to buy and what to build. That is, integrators should be expected to leverage commodity products in the market, including from startups, to deliver the contracts they are engaged for. Indeed, as we explore later in this report, one way of driving greater innovation in public services is by encouraging prime contractors and startups to form partnerships that are mutually beneficial, but guarantee maximum value for the public sector.

One recent example where government seemed to fail to get the best out of the market is the Home Office’s commissioning of a digital platform for EU residents to register their residency in the UK. The contract was awarded to a consortium of consulting companies and systems integrators - specifically Accenture, BJSS, Capgemini, Deloitte Digital, PA Consulting and Worldreach - and failed to make use of the UK’s well-covered market of digital identity services, with world-leading companies such as Onfido, Yoti and EYN.39 A closer relationship between integrator and the startup community is necessary if government is to get best outcomes and best value across all of their outsourced contracts.

**WHAT IS CLEAR IS THAT CURRENTLY GOVERNMENT IS FAILING TO GET THE MOST OUT OF THE MARKET. THAT NEEDS TO CHANGE**

**CONCLUSION**

The UK boasts one of the most productive and exciting startup ecosystems of anywhere in the world. It attracts more venture investment than any other country in Europe, boasts four out of the world’s top ten universities, and is the home of hundreds of high-growth tech startups.

So far, the UK government has failed to fully exploit the potential of these new companies, with only very few ever having successfully won a government contract. This needs to change. If it does, the benefits to the UK will be tremendous.

The challenge of finding the right balance between in-house development, systems integrators and newer, younger companies is a difficult one, and requires case-by-case examination.

What is clear is that currently government is failing to get the most out of the market. That needs to change.

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39 Consultancy.org. 2019. EU settled status application system branded ‘shambles’.
3. HOW DOES GOVERNMENT SPEND ITS MONEY ON TECHNOLOGY?

IN THIS SECTION, WE EXAMINE HOW GOVERNMENT IS ACTUALLY SPENDING ITS MONEY ON TECHNOLOGY PRODUCTS AND SERVICES. TO DO THIS, WE HAVE ANALYSED HUNDREDS OF SOFTWARE AND IT CONTRACTS ACROSS CENTRAL GOVERNMENT TO CAPTURE THE SCALE AND NATURE OF ITS TECHNOLOGY SPEND. IN PARTICULAR, WE ASSESS THE CURRENT OPENNESS OF CENTRAL GOVERNMENT DEPARTMENTS TO STARTUPS AND SMES, AS WELL AS GENERAL TRENDS IN MARKET CONSOLIDATION AND MONOPOLISATION.

We took a sample of 453 contracts for IT and software products and technology services awarded by the Ministry of Defence, Ministry of Justice, and the Department for Work and Pensions between 2015 and 2018. These departments were selected due to their significance to core public service delivery, as well as their ongoing commitment to innovation.

Our analysis covers the composition of the supplier market to these departments, including how many are startups, small businesses, or micro-businesses. We also analyse the effectiveness of the ‘Suitable for SMEs’ tag, showing that the majority of contracts that are advertised as applicable for SMEs are, in fact, awarded to large companies.

Before presenting our analysis, it is worth mentioning an important caveat: the public sector technology market is opaque, with limited public information on how much the government spends on technology products and services. The data that is available is not entirely comprehensive, with often absent or redacted contract information making it difficult to have a complete picture of government’s ongoing contractual arrangements. A full explanation of our methodology and data sources can be found in the Annex of this report.

MARKET ANALYSIS

Unsurprisingly, we found that the contract data supported our hypothesis that the majority of government technology spend goes to non-SME providers - with 91.9% of IT and software in these departments going to large companies.

We also found that only a small proportion
of the overall contracts were classified as ‘Suitable for SMEs’. Moreover, we also found SMEs winning several contracts that had been actually been designated as unsuitable to them. This misclassification acts as an easily avoidable barrier to startups who rely on accurate government information to determine the suitability of contracts.

**Department for Works and Pensions (DWP)**

In 2017/18, the DWP had the largest budget - £183.7bn - of any central government department, of which £177bn was spent on benefit, pension and Social Fund payments.\(^2\) By contrast, the department spent only £2.2bn on procurement of goods and services, which made up just over 1% of total spend.

We analysed 166 relevant contracts for technology goods and services with an overall value of c.£761m. Of these, 71 contracts worth c.£53m were classified as suitable for SMEs. Only 0.5% of these contracts were won by micro-businesses with a further 15% and 21.5% awarded to small and medium companies. Additionally, 19 contracts, with a value of c.£13m, were awarded to SMEs despite being classed as unsuitable for them.

Notably, Adzuna, a GovTech startup, won an initial £5.8m contract to provide a free-to-use, national jobs board, previously known as ‘Universal Jobmatch’. GovTech startups are tackling some of the core issues of the department including, financial inclusion, identity services and payment of benefits and pensions. With the roll-out of Universal Credit, tech startups can play a key role in delivering benefits efficiently and securely to recipients.

### ADZUNA’S ‘FIND A JOB’ CONTRACT IS A BIG STEP FOR GOVTECH

In March 2018, Adzuna, an AI-powered search engine for job advertisements, was awarded the contract to replace the UK government’s job search platform, Universal Jobmatch. This service connects millions of jobseekers with thousands of employers online and through job centres across the UK.\(^3\) In gaining this contract, worth £2.5m per annum, Adzuna dislodged a major international incumbent supplier whose platform used much less sophisticated technology.

Previously, Universal Jobmatch had been subject to multiple complaints including, challenges during login, difficult to navigate and repeat job entries. In contrast, Adzuna’s ‘Find a Job’ service offers a simple and powerful search, thereby matching jobseekers to employers’ available roles quickly and effectively. Jobseekers create individual accounts to which they can upload CVs, create relevant email alerts and view their previous account activity. It has a higher number of vacancies available than Universal Jobmatch, provides easier registration for jobseekers without the need to use the Government Gateway authentication service. It also makes it easier for employees to post jobs on the platform.\(^4\)

Adzuna was launched in 2011, and now operates in 16 countries worldwide. Adzuna’s data also powers the Number 10 Dashboard, used by the Prime Minister and senior officials to keep track of economic growth on a daily basis.

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\(^4\) PublicTechnology. 2018. Adzuna’s contract for government jobs service valued at £5.8m.
Ministry of Defence (MOD)

The Ministry of Defence has the second largest procurement spend of central government departments in 2017/18 with c.£24.3b. Their technology expenditure includes cloud and digital, network services, software and technology products and services. With responsibilities ranging from national security to crisis response, procurement at the MOD involves technological advanced requirements. Indeed, the defence and military sectors have long been seen as pioneers in adopting and developing innovative technologies. The Defence and Science Technology Laboratory (Dstl) exists to ‘maximise the impact of science and technology for the defence and security of the UK’. Recent initiatives, such as the Defence and Security Accelerator (DASA) and jHUB Defence Innovation centre, further demonstrate a genuine commitment to innovation in these high priority sectors. However, we found that very few technology contracts were being awarded to micro and small businesses by the department.

We analysed 285 contracts totalling c.£1.05b. 92 of these contracts were designated as suitable to SMEs (32.3%), making up an overall value of c. £105m. Nearly half (48.3%) of the overall value of contracts available to SMEs were won by large IN companies, with only 10.7% and 3.8% going to small-sized enterprises or micro businesses respectively. SMEs won a total of 67 contracts which were designated as unsuitable to them worth an overall value of c.£30m.

CASE STUDY

DASA BUILDING A PIPELINE OF WORLD-CLASS DEFENCE STARTUPS

The Defence and Security Accelerator (DASA) was launched by MOD in December 2016. It helps government develop new ideas, products and services in line with UK security and military objectives. A cross-government innovation vehicle, DASA offers business support, access to end-users, technical expertise and potential funding for businesses and researchers to develop innovative solutions. Significantly, companies participating in DASA retain all intellectual property rights for products developed during the programme. By January 2019, DASA had received nearly 1600 proposals from over 730 different organisations, 60% of which were SMEs. It has awarded £50m of contracts to over 350 proposals, of which 55% of funding was won by SMEs.

DASA has been proactive to make its programme visible and accessible to startups. It organises a country-wide roadshow, hackathons, competitions and pitch panels for businesses to explore and develop ideas. Competitions have ranged from £1m for innovative methods to prevent injuries to service personnel through the use of wearable hardware and data science, to £2.25m available to fund technological ideas that have the potential to drive innovation in UK space.

Moreover, an Open Call for Innovation allows innovators who have an idea outside the scope of DASA’s themed competitions to pitch for funding at any stage during the year. Between April 2017 and October 2018, the Open Call funded 28 projects, totalling £2.36m. There are two tracks: one open to potential innovations at an early stage of development, and a second seeking rapid impact innovation which must have an impact within three years.

5 House of Commons Library. 2019. An introduction to defence procurement. 4
7 GOV.UK. 2019. About - Defence Science and Technology Laboratory.
Ministry of Justice (MOJ)

The Ministry of Justice procures a wide range of technology products and services to support its delivery of a modern courts and justice system, and an effective prison and probation service.

Most notably, the department has been scrutinised for its failure to purchase a cost-efficient electronic monitoring service. The NAO labelled the severely delayed project to deliver a new generation of GPS-based electronic ankle tags as ‘an overly ambitious strategy...that failed to deliver against its vision...and failed to achieve value for money’. The contract, supplied by four large suppliers, is already running six years late at a cost of £60m to the taxpayer.

For the MOJ, we analysed 233 contracts, totaling c. £1.57b. We found that only 83 contracts worth c.£101m were categorised as suitable for SMEs. Micro businesses won 9.4% of the expenditure, while small and medium-sized companies received 26.2% and 27.6% each. SMEs further won 49 unsuitable contracts at an overall value of c.£65m, which made up 51% of the total award value to SMEs by the department.

Market composition

Our data analysis demonstrates considerable market consolidation in public sector technology markets. Large suppliers won 91.9% of technology spend across the three departments. The remaining spend was staggered across medium, small and micro-sized businesses. Medium-sized businesses won 66% of the remaining technology spend in DWP, 60.5% in MOD and 44.9% in MOJ. By contrast, small and micro-sized companies have struggled to win public sector expenditure. This shows that, even of the meager 8.1% of spend directed to SMEs across the three departments, the majority has gone to well-established medium-sized companies.

‘Suitable for SMEs’

Overall, only 7.6% of contracts we analysed were classified as ‘suitable for SMEs’. Of these, the majority of spend was awarded to large and medium-sized businesses. 81.8% of expenditure designated as ‘Suitable for SMEs’ was awarded by DWP to businesses in these 2 categories. Similarly, 85.5% of spend from the MOD and 64.4% from the MOJ were awarded to large and medium businesses. This mirrors the trend towards market consolidation and highlights a preference for larger companies even where smaller businesses are invited to compete.

Significantly, misclassified contracts accounted for 39.7% of SME award value from DWP, 20.7% of SME contract spend with MOD, and as much as 51% for MOJ. It is concerning that procurement officials are not categorising contracts accurately. Poor data has a significant impact on how the market behaves.

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NON-SME VS SME TECHNOLOGY SPEND.
All 3 Departments. 2015-2018.

8.1% OF TECHNOLOGY SPEND WAS AWARDED TO SMES

COMPOSITION OF SME SPEND
All 3 Departments. 2015-2018.

MISCLASSIFIED CONTRACTS AS A PROPORTION OF SME SPEND.
All 3 Departments. 2015-2018.
PROPORTION OF CONTRACTS CLASSIFIED AS ‘SUITABLE FOR SMES’.
All 3 Departments, 2015–2018.

7.6% OF CONTRACTS WERE CLASSIFIED AS ‘SUITABLE FOR SMES’

COMPOSITION OF SUPPLIERS AWARDED CONTRACTS CLASSIFIED AS ‘SUITABLE FOR SMES’.

**DWP, 2015–2018.**
- Large: 63.0%
- Medium: 21.5%
- Small: 15%
- Micro: 3.8%

**MOD, 2015–2018.**
- Large: 48.3%
- Medium: 37.6%
- Small: 10.7%
- Micro: 3.8%

**MOJ, 2015–2018.**
- Large: 36.8%
- Medium: 27.6%
- Small: 26.2%
- Micro: 9.4%
Poor quality data

One of the biggest barriers to effective procurement is the quality of data available to public officials. Indeed, the Public Accounts Committee has flagged low-quality government data as a ‘perennial concern’ in public procurement.\(^{10}\)

Officially, the UK endorses the principles of open contracting. It follows the Open Contracting Data Standard, a global best practice for data transparency, when publishing new contracting data on Contracts Finder.\(^{11}\) While this has been a welcome development, our analysis found that data entry is generally limited and incomplete across central government departments. This is concerning as poor quality data makes it difficult for stakeholders to have a complete picture of the procurement landscape.

High-quality procurement data is important so that public sector organisations have a comprehensive understanding of where their money is being spent. Moreover, the government’s ability to design accessible tenders is dependent on its understanding of the composition of existing technology markets. Better knowledge of the number of bidders and size of competitors can help government identify key areas for reform and in particular, tackle the barriers startups face from entering the public sector market. This transparency can enable commissioners to make more informed decisions and develop long-term strategies towards procuring innovation. The government’s Transformation Strategy acknowledges that data is ‘the foundation upon which everything else rests’.\(^{12}\)

Transparency

Readily available data is critical to delivering public services that are transparent and accountable to the taxpayer. We have seen some progress on data transparency through the introduction of the Digital Marketplace. G-Cloud provides quarterly data on awarded contracts, including the name and size of the contractor, the value of the contract and its length. Yet, the Public Accounts Committee found that ‘Parliament and the public do not have access to straightforward, comprehensive and comprehensible information about government contracting’.\(^{13}\)

Far too often, public officials are failing in their duty to publish above-threshold tenders on Contracts Finder, as required by PCR 2015.\(^{14}\) Likewise, award notices are often not published in the public domain. The IfG found that across government there are 22% fewer contract award notices published than tenders between 2015 and 2018.\(^{15}\) Where they are published, the reader is offered little more than the name of the winning supplier, the length and value of the contract, and whether the contractor is an SME or VCSE. Even then, the size of the contractor is not further differentiated between micro, small and medium businesses in the data available. This makes it difficult to have a complete image of government procurement. In our analysis, we have broken down government expenditure on technology according to whether it is a micro, small or medium business to identify how much money is being spent with the most disadvantaged vendors.

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10  PAC. 2018. Strategic Suppliers. 5.
14  Cabinet Office. 2016. Procurement Policy Note: Legal Requirement to Publish on Contracts Finder.
Opacity is a barrier to startups

Startups need information on existing contracts and future opportunities to build a coherent picture of government and its operational needs. One of the consequences of an opaque market is that under-resourced companies have a limited comprehension of the customer’s needs, and are therefore unable to respond to government demand. Many startups told us that they found the public sector confusing and difficult to navigate. This means that startups who want to compete have to spend more time and money when bidding for contracts. Greater transparency can therefore help to stimulate competition in public sector markets and reduce the likelihood of single bidders to government contracts.\(^\text{16}\)

If suppliers are aware of upcoming tenders, they can be more prepared for a tender opportunity to be published. In turn, this can help to reduce costs for government departments who have a wider supplier base to buy from. In fact, the Open Contracting Partnership found that single bidder contracts are on average 7.1% more expensive than contracts with two or more bidders.\(^\text{17}\) A more competitive marketplace of technology suppliers can help government secure better value for money.

THE ANALYSIS WITHIN THIS SECTION CONFIRMS OUR HYPOTHESIS THAT IT IS DIFFICULT FOR SMALLER TECH COMPANIES TO SELL TO GOVERNMENT

CONCLUSION

While there is a diverse range of companies supplying central government departments with technology products and services, the vast majority of public spend continues to go to large-sized companies. Indeed, the data demonstrates that central government departments have not capitalised on the growing UK technology ecosystem to support the delivery of public services.

The analysis within this section confirms our hypothesis that it is difficult for smaller tech companies to sell to government. Even for the modest spend outcomes with SMEs, the vast majority goes to medium-sized businesses, which are often well-established and undynamic.

Perhaps most worryingly of all, government seems to be classifying and advertising its contract opportunities poorly, with little correlation between a contract being listed as ‘Suitable for SMEs’ and it actually being awarded to an SME.

\(^{16}\) Government procurement, 57.
\(^{17}\) Open Contracting Partnership. 2017. Greater transparency in calls for tenders could save Europe billions.
4. Barriers to Innovation in Public Procurement

Despite small pockets of innovation, government is failing to engage with startups, or to fully embrace new and innovative uses of technology. This section explores why so few startups and entrepreneurs are winning government contracts.

To do this, we present a number of barriers to innovation in public procurement. These are barriers both for government and for startups. For government, there are systemic procedural or cultural barriers to embracing innovative market entrants in the procurement process. For startups, procurement remains highly complex and impenetrable, and public sector markets continue to be highly consolidated and largely undynamic.

The majority of the barriers that we identify in this section are based on the views of actual tech startups across the country. To collect these views, we conducted a survey of tech startups who have worked or have tried to work with the public sector. Although there is already a rich and well-established literature dedicated to analysing the barriers of SMEs in public procurement, our analysis represents, for the first time, the views of actual high-growth tech startups.

The barriers that we have identified can be segmented into four broad categories:

- **Strategy:** A vision and strategy for promoting more startups and innovation in public sector markets.
- **Market Engagement:** The techniques used to gain the widest possible reach when advertising new opportunities.
- **Contracts & Frameworks:** The actual commercial vehicles and processes used when tendering and awarding contracts.
- **Skills & People:** The digital skills, appetite and incentivisation structures necessary to deliver innovation in procurement.

Solving many of the problems listed in this section will require bold thinking and genuine political intent at all levels. In Section 6 of this report, we offer some recommendations for how government can start tackling many of these barriers, and in doing so lay the foundations for a procurement system that fits the needs of today’s startups.
STRATEGY

A lack of unified government strategy is probably the single greatest obstacle to improving startup participation in public procurement.

The public sector is a complex, bureaucratic, and unwieldy organisation with over five million employees.1 Within government, there are conflicting internal goals and objectives. It is regulated not only by rules and legislation, but also by deep-rooted and institutionalised attitudes towards risk.

Beyond a few ambitious targets, there is a lack of a coordinated strategy towards improving startup participation in public procurement. Likewise, there is an absence of a unified view of the value that innovation and emerging technologies can provide to the public sector.

A. THERE IS INSUFFICIENT POLITICAL WILL ACROSS THE PUBLIC SECTOR

Transforming public procurement begins with policymakers who can demonstrate a commitment to improving the system. Yet, the startups that we surveyed do not believe that there is sufficient appetite among senior officials for public procurement reform and policy change. In fact, 97% of respondents believe that the government needs to do more to work with startups. Likewise, many startups complained that there was a lack of political will to reform the procurement process.

This, of course, is not true of all of government. All of the senior government officials that we interviewed recognised the challenge of driving innovation in procurement and conveyed their concerns about low levels of public expenditure with startups. However, while the political will exists at the highest level, there is a broader organisational uncertainty on the right approach to implement innovative procurement. This lack of clarity has a far-reaching impact on the wider public sector, where public authorities often fail to consider startups as viable suppliers.

Government, therefore, has failed to effectively communicate its buy-in from the top-down. Organisational cultures can only be transformed by a genuine commitment from the highest levels of government. To that end, central government, especially the Government Commercial Function, needs to demonstrate a clearer commitment to working with startups and relay the benefits of GovTech across the public sector.

B. GOVERNMENT DOES NOT UNDERSTAND STARTUPS

In government, there is a misunderstanding of what GovTech startups are and the benefits that they can offer. Of the startups that we surveyed, 42% believe that the government’s failure to understand technology is a key barrier for startups. As a result, public officials often treat startups like any other business and fail to take into account their unique and important characteristics. As mentioned in Section 2, the challenges faced by startups and traditional small businesses are largely dissimilar and require distinct approaches.

Traditionally, procurement processes were designed to facilitate interactions between government and large companies. Well-resourced companies have the capacity to hire qualified bid-writing teams and pursue multiple contract opportunities. In contrast, startups and small businesses cannot afford to sustain the repeat transaction and opportunity costs involved during the procurement process. Likewise, they usually have scarce in-house resources with sufficient training in bid writing and contract management.

As noted in a 2017 Boston Consulting Group survey, successful bidders are not necessarily the most innovative suppliers, but are the best at knowing how to produce competitive bids.

and win contracts.² This has an impact on the way startups perceive government. As a result, startups are discouraged from competing for tenders due to a widespread belief that only large companies are capable of winning government contracts. Echoing these views, one startup founder that we interviewed told us that public procurement is characterised by a ‘bias towards oligopolistic IT suppliers’.

Unsurprisingly, there is plenty of evidence to suggest that government will continue to rely on large and incumbent suppliers, many of whom are still locked into multi-year rolling contracts. Indeed, the evidence in the previous section of growing supplier consolidation in the Cabinet Office, DWP, and MOD shows that startups are probably justified in perceiving an unlevel playing field.

Within central government, departments have high degrees of autonomy and varying objectives, which can undermine attempts to centrally coordinate a commercial strategy. Departments spend billions on their own objectives, managing contract design and delivery independently. Individual departments also recruit and develop their own commercial personnel. Consequently, there has been an inconsistency in the application and adoption of top-down policies introduced by policymakers.

As we have shown, there are many pockets of innovation across the public sector, including accelerators, labs, grants, and funding streams. Yet, there seems to be little coordination between these various initiatives, and no obvious ‘front door’ for startups to navigate them. The Technology Innovation in Government Survey notes: ‘The current picture across central and local government shows lots of positive activity but also that much of it is uncoordinated and fragmented.’ The result for startups is that they do not know how, or where, to approach government. This can be intimidating to startups with little experience of working with the public sector. Greater alignment can facilitate a more coordinated approach to attracting innovative companies to work with the public sector.

For government, this fragmentation across the public sector can make it more difficult for departments and public authorities to understand what best practice looks like, and how they should be approaching the procurement of new market entrants.

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**CASE STUDY**

**APOLITICAL CONNECTING CIVIL SERVANTS ACROSS THE WORLD**

**Apolitical** is a peer-to-peer learning platform for government, helping government transform itself by connecting public servants to the newest and best ideas, skills, solutions and partners. Apolitical equips government to tackle society’s biggest challenges, from climate change to the future of jobs. Apolitical’s first-of-its-kind digital platform is used by public servants in more than 150 countries, from mayors and ministers, through to millennial digital innovators.

Apolitical aims to bring to government the knowledge sharing that we take for granted in other sectors, making it easier to look around the world for smart ideas and fellow government innovators. The online platform is designed around solving some of the critical policy topics of our time, often by using new and innovative approaches. Tools like this can help to promote knowledge sharing and greater coordination between buyers, even in highly fragmented commissioning systems.

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**SUCCESSFUL BIDDERS ARE NOT NECESSARILY THE BEST SUPPLIERS, BUT ARE THE BEST AT KNOWING HOW TO WRITE BIDS AND WIN CONTRACTS**

**D. INVESTORS PERSUADE STARTUPS AGAINST PURSUING PUBLIC SECTOR OPPORTUNITIES**

There is another important stakeholder in these discussions: the investor. Angel investors and institutional venture firms often discourage startups from working in the public sector. There are a number of reasons for this. First, long timeframes to complete applications and award contracts can cause investors to be concerned about the effects on a startup’s remaining runway. In the context of venture financing models, in which startups usually bring in around 18 months of runway during capital raises, a sales cycle that drags over many months is often entirely unsustainable.

Second, the low chances of success for startups in public sector markets also concerns investors, and leads them to dissuade startups from ‘wasting’ their capital in pursuing highly unlikely government opportunities.

Finally, and perhaps most importantly, very few investors have any deep experience or expertise in navigating public sector markets. In fact, most investors, like most startups, generally lack sufficient knowledge of how the public sector operates. This is an important point; many investors are more comfortable with their portfolio startups operating in markets or tackling challenges with which they have some familiarity, or in areas where they have been successful in the past.

This challenge is relatively new and is a difficult one for government to mediate against. The model of a startup being backed, mentored, and guided by an investor or an institutional investment firm is entirely new in the public sector. Failing to convince investors that the public sector is a viable opportunity will result in fewer high-quality startups bidding for government opportunities.

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7 A startup’s ‘runway’ refers to how long the company can survive, keeping income and expenses constant.
MARKET ENGAGEMENT

While there has been a proliferation of small-scale initiatives to support innovation-driven government, startups continue to perceive government as distant and impenetrable. In general, startups lack confidence in the public sector’s willingness to open itself to unproven suppliers, with 72% of respondents citing government risk aversion as one of the main barriers for startups when trying to win public sector contracts.

This is particularly frustrating given that government has made a concerted effort to improve how it engages with the market. Pre-procurement dialogue with suppliers is understood and encouraged across government as good practice. In fact, the Cabinet Office produced a ‘myth-buster’ to clarify the importance of pre-tender consultations. This Procurement Policy Note (PPN 04/12) states that:

‘Pre-procurement engagement with the market (including talking to potential suppliers) is not prohibited by EU procurement law, nor is it subject to any detailed procedures provided that it does not prevent an effective competition taking place once the procurement has started. In fact, engaging with the market before starting the formal procurement process is best practice and helps to maximise value for money.’

Early engagement with suppliers helps contracting officials to access market knowledge, which is often unavailable within the public sector. In turn, this understanding can be used to prepare improved contract specifications and realise cost-saving opportunities. In its ‘Guidance on Innovation Procurement’, the European Commission states that ‘the main purpose of the preliminary market consultation is to check the state of the art.’ But often, pre-procurement dialogue takes place within short timeframes and too close to the publication of contract notices for officials to take into account feedback from startups and consider innovative solutions.

Through proper pre-market engagement, contracting officials can send signals to the market of demand for innovative technology solutions. Startups who may not have previously considered the public sector as an option are therefore better placed to appropriately respond to public procurement opportunities.

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A. MARKET ENGAGEMENT EXERCISES DO NOT FIT THE NEEDS OF TODAY'S STARTUPS

'Market engagement' can refer to two parts of the procurement process, both of which are currently poorly delivered. First, it can refer to the process of gaining market feedback before the issuance of an ITT. This kind of market engagement can be crucial to ensuring that the scope and requirements of the contract are realistic and deliverable, and to ensuring that there is a healthy market to compete for the opportunity. It can also help to build the confidence of startups by making the procurement process more transparent and accessible.

There are a number of mechanisms that can be used to perform this kind of market engagement before the publication of an ITT. The most common method in the UK is a Prior Information Notice (PIN), which indicates an authority’s future intent to issue an ITT, and invites feedback from the market.

The second kind of market engagement refers to the process of properly engaging and advertising to the market when actually issuing an ITT. This is an extremely important component of conducting a successful tendering process. Public authorities can only select a winner from the suppliers that make an application for a given contract, so gaining wide market reach at this stage is crucial.

As part of the official procurement process, both kinds of market engagement are regulated according to PCR 2015. As such, a fully compliant procurement process must be compliant in its approach to market engagement. In line with PCR 2015, market engagement must be run in a way that is open, transparent, and fair to all suppliers. However, a narrow interpretation of procurement rules and regulations can often result in an arms-length approach towards engaging with startups. This can often mean that public authorities are unwilling to engage with suppliers outside of the traditional routes of engagement and dialogue: the concern is that engaging with the market through non-traditional techniques will unfairly favour certain suppliers over others.

Any market engagement notice must be published on OJEU and on national contract portals, to ensure an open, fair, and transparent procedure. They then may be also advertised through more informal networks, including by email and social media. The problem with these traditional advertising and engagement channels is that they have limited impact for startups. There are a number of reasons for this. First, most tech startups will be unaware of the existence of these traditional channels, and as such will be unable to find any opportunities. Second, the process of issuing an engagement invitation has limited impact on small companies, who are often unaware of their existence and unlikely to find them. These kinds of engagement techniques fail to understand how modern tech startups operate, and how to actually engage with them. This point is extremely important for driving greater innovation in procurement: market engagement can only ever be successful if government is engaging with the right kinds of suppliers in the process.

As such, government often fails to really make the most of market engagement exercises to attract a wider and more diverse supplier pool. As one public procurement expert told us, ‘government officials don’t see market engagement as anything more than a tick-box exercise’. Every startup that we interviewed told us they had never before been consulted by procurement officials and would welcome any efforts to improve commercial dialogue between government and startups. Consequently, startups are rarely engaged when government releases new contract opportunities. In contrast, large incumbent suppliers are familiar with the traditional routes of engagement, but are also able to leverage long-term relationships in the public sector to bolster their chances of engaging in and winning government contracts.

Failure to undertake proper market engagement might explain why public sector contracts are becoming less competitive. Research from Spend Network has found that there has been a 476% increase in single-bid tenders (tenders receiving a bid from only one supplier) between 2012-2017. This figure should be extremely alarming for government. It shows that public authorities are failing to properly engage with suppliers during procurement, and indicates a worrying trend towards highly uncompetitive tendering.

In Section 6, we provide a new framework for how government can engage with startups in a more effective and meaningful way.

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CASE STUDY

USAF PITCH DAYS A NEW MODEL FOR ENGAGING WITH THE MARKET

In March 2019, the US Air Force held its inaugural pitch day where 51 innovative companies were offered contracts worth around $8.75m. The opportunity gives small businesses access to the defence and military market as well as non-dilutive capital, which offers funding without an exchange of equity. The competition is modeled private sector investment pitch competitions for startups, which can deliver a streamlined approach to government purchasing and end lengthy contractual processes typically seen in the military. To be eligible, competitors must be US based, for-profit companies with fewer than 500 employees.

At the first stage, the Air Force published a list of challenges online on the Department of Defence’s Small Business Innovation Research (SBIR) website. For the initial pitch day, the Air Force published challenges around three themes:

- Command, Control, Communications, Intelligence and Network
- Special Warfare Technologies
- Digital Technologies

Next, prospective suppliers were invited to submit proposals and 15 page pitch decks over a four week application period. The USAF received 417 submissions, which it reviewed and invited the 59 most promising candidates to pitch live to them. At the pitch day, selected companies presented their solutions to a judging panel. 51 winners were awarded with $158,000 with same-day payment via credit card and one page contracts. These companies will be given five months to build a proof of concept, before competing for further funding from the agency. The next pitch day will have $30-40m available for businesses to solve challenges in the space sector.

B. THERE IS A LACK OF GUIDANCE FOR STARTUPS

Startups are generally unfamiliar with procurement mechanisms and marketplaces. The dearth of information available to small companies further hinders their ability to access public sector opportunities. Research from Finland found a strong correlation between the capacity of SMEs to gather relevant information and the likelihood of them submitting bids. There is limited advice available on official contracting websites and portals to assist small companies in navigating procurement processes effectively. In a survey undertaken by the Federation of Small Businesses (FSB), only 12% of SMEs reported having been provided with guidance on bidding for public sector opportunities.

Furthermore, there is often a lack of information available online to elucidate the range of funding and innovation opportunities available to startups. Recent initiatives, such as the introduction of chatbots by the Yorkshire Purchasing Organisation, can help improve existing opaque processes and make it easier for SMEs to bid for contracts. Easily accessible information should be available online to guide startups through the procurement process.

ONLY 12% OF SMES REPORT HAVING EVER BEEN PROVIDED WITH GUIDANCE ON BIDDING FOR PUBLIC SECTOR OPPORTUNITIES

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15  UKAuthority. 2018. YPO launches procurement chatbot.
BUYING INTO THE FUTURE: HOW TO DELIVER INNOVATION THROUGH PUBLIC PROCUREMENT

CASE STUDY

STIR GETTING INNOVATIVE TEAMS INTO GOVERNMENT

Founded in 2015, Startup in Residence (STIR) Amsterdam is a collaboration between startups and local government to tackle a variety of social challenges through innovative solutions. Modelled on the STIR programme in San Francisco, it aims to help local authorities gain access to the rapidly growing market of technology solutions to solve government problems.

It encourages innovative public officials to experiment with alternative approaches to local challenges. For startups, it offers an opportunity to understand the needs of government customers and build a relationship with public bodies. It aims to drive the local economy, stimulate public/private collaboration and help small businesses scale up with government as its first customer or investor. During the six-month programme, participants receive half a day of training per week, which ranges from intellectual property management to financial administration to workshops about how the City of Amsterdam procurers. If the local authority decides to purchase the product from the partner startup at the end of the programme, the startup is the preferred supplier for two years.

34 startups from across Europe, including SwiftComply, Kopol and Happitech, have participated in the four STIR Amsterdam cohorts. These small businesses have worked with local government authorities to solve a number of challenges that include: improving air quality in the city, reducing food waste and smart management of the city’s road network. As a result of its success, the STIR programme has now been rolled out to an additional 11 government agencies in the Netherlands.

‘MY COMPANY BID FOR THREE CONTRACTS, AND EACH TIME IT WASN’T MADE CLEAR TO US WHY WE HADN’T BEEN SUCCESSFUL’.

STARTUP FOUNDER

C. THERE IS A LACK OF POST-PROCUREMENT FEEDBACK

When they are unsuccessful, startups want to learn from their mistakes to improve their chances of success in future tenders. However, public authorities often do not provide unsuccessful bidders with prompt and complete feedback. This is a missed opportunity for small companies to benefit from a direct feedback loop and apply the lessons learned to future bids. Indeed, detailed feedback can improve the quality of bids put forward by small companies and lead to more standardised submissions among startups.16

Our survey found that 31% of startups think that this is one of the main barriers for startups when trying to win government contracts. This is supported by the fact that members of the FSB reported a wide disparity in the quality of feedback provided by authorities to tenderers.17

Moreover, poor feedback can reinforce the notion that startups have little chance of ever winning public sector contracts, thereby discouraging them from bidding again.18 Positive interactions and openness can help foster an environment of trust, which boosts confidence in public contracting. The public sector will lose out on innovative solutions if startups are deterred from submitting future bids due to a lack of feedback.

17  Unstacking the Deck: Balancing the Public Procurement Odds, 10.
18  Unstacking the Deck, 10.
SURVEY RESULTS

Only 6.1% of startups find it easy to work with government.

On a scale of 1-5, how difficult is it to keep up to date with government contract opportunities?

1. Very easy: 0%
2. Easy: 3%
3. Reasonable: 27%
4. Difficult: 47%
5. Very difficult: 27%

How do you keep up to date with government contract opportunities?

a) Word of mouth / personal networks: 70%
b) Contracts Finder: 48%
c) Departmental tendering portals: 24%
d) Tender Electronic Daily (EU): 22%
e) Other: 21%
f) BD platforms: 6%
WHAT ARE THE MAIN BARRIERS FOR STARTUPS WORKING WITH GOVERNMENT?

- 71% Think government is too risk-averse
- 68% Think tenders are too time-consuming
- 63% Think tenders are too complex or unfamiliar
- 51% Think contract opportunities are too difficult to find
- 43% Think government does not understand technology
- 31% Think post-procurement feedback is not of a high enough standard

G-CLOUD

- 42% Only 41.6% of startups think that g-cloud makes it easier to win government business

GOVERNMENT VS. PRIVATE SECTOR

- 92% Do you think working with government is more difficult than private sector customers? YES

CAN GOVERNMENT DO MORE?

- 97% 97% of startups think that government need to do more to work with startups
CONTRACTS AND FRAMEWORKS

Contracts and frameworks are systematically structured in a way that favours large incumbent suppliers over startups. Simply put, achieving innovation through public procurement depends on the reformulation of these commercial vehicles.  

The government has done a lot of good work over the past decade to improve the design of tenders and contracts. The introduction of e-procurement through the Digital Marketplace and Contracts Finder has transformed the way that government conducts public procurement. But despite the progress achieved through these initiatives, startups continue to find contracting processes opaque, complex, and difficult to navigate. From having difficulty finding suitable contracts, to struggling with complex tendering systems, to being arbitrarily ruled out by rigid financial requirements, the contracting process creates multiple barriers for startups.

A. STARTUPS STRUGGLE TO STAY ON TOP OF CONTRACT OPPORTUNITIES

Startups must be able to find public sector contracts to be able to win them. Indeed, 51% of startups that we surveyed believe that the difficulty of finding contracts is one of the main barriers when trying to win government business.

England’s main government tendering portal, Contracts Finder, was set up in 2011 to promote greater transparency in the procurement process and to encourage SME participation. This database acts as the primary source for innovators to identify business opportunities in the public sector. 48% of startups we surveyed use Contracts Finder to stay on top of public sector opportunities. The statutory requirements on Contracts Finder, as set out in PCR 2015, make it mandatory for Central Contracting Authorities to publish all contracts worth over £10k and over the threshold of £25k for Sub Central Contracting Authorities and NHS Trusts. The creation of a single online platform to advertise commercial opportunities has been a positive step in the government’s digitisation strategy, by increasing the visibility of contracts for startups and SMEs.

However, startups continue to find it difficult to keep track of possible business opportunities. Unlike large companies, they lack the in-house resources to monitor tender opportunities on a regular basis. Likewise, the volume of opportunities listed on Contracts Finder makes it cumbersome for startups to sift through the thousands of contracts being advertised and identify relevant opportunities. The government cannot take advantage of emerging technologies if opportunities are inaccessible to prospective suppliers.

Furthermore, the platform has been undermined by the failure of commissioners to advertise all tender opportunities on the platform. The Institute for Government found that only 39% of English tenders in 2018 were published on Contracts Finder. Indeed, research from Spend Network estimated that this figure was significantly higher in 2017, with 73% of tenders not advertised during that year.
In particular, the MOD, local authorities and the NHS bodies all operate separate procurement portals. This limits the visibility of contract opportunities to prospective suppliers. Likewise, these failures to act transparently undermines government values and public trust in the civil service. In fact, 70% of startups told us that they found contract opportunities by word of mouth or personal networks. These challenges are compounded by the absence of a centralised portal to bid for contracts. In fact, there are over 300 different portals in Britain to apply for contracts. Small companies need to sign-up to these portals individually to submit bids, which creates extra burdens for under-resourced companies. Such fragmentation has a negative impact on startups who are unable to take a consistent approach to submitting bids.

65% of startups told us that they found contract opportunities by word of mouth.

65% OF STARTUPS TOLD US THAT THEY FOUND CONTRACT OPPORTUNITIES BY WORD OF MOUTH

B. TENDERING IS TIME-CONSUMING AND COMPLEX

In Section 1, we commented on some of the reforms introduced by the government, especially relating to the streamlining of PQQs. However, the general perception of startups is one of inordinate paperwork and labyrinthine procedures.

One startup founder told us of their experience with large amounts of paperwork, much of which was irrelevant to the actual requirements of work:

‘The contract took a whole day to read as it was boilerplate and not customised for our actual piece of work, so I was reading clauses about the delivery and return of goods, even though we were set to provide a SaaS platform’.

Bureaucratic formalities act as a significant barrier to startups by taking up valuable resources. It is no surprise, then, that 92% of survey respondents indicated that public sector contracts were more difficult than commercial opportunities in the private sector. Likewise, many SMEs find the length and excessive details in contracts to be unnecessarily confusing when compared to the value and size of the contract. 63% of startups believe that the complexity of tenders is locking them out from winning business. The degree of up-front work required affects the likelihood of startups bidding for government opportunities. It is particularly discouraging to find innovating suppliers are alienated by procurement language and perception of a closed-shop approach by government.

C. CONTRACTS ARE DESIGNED TO FAVOUR LARGE SUPPLIERS

Contract design has a significant influence on the decision-making of a startup. Firstly, startups have to determine if the contract is within their capacity, with overly prescriptive and narrow tenders often discouraging startups from competing for opportunities. This is because a startup might be able to deliver a particular service for government, but not be able to meet all of the additional ancillary requirements and obligations. As a result, many procurement commentators have long advocated for contracts to be more flexible

26 This figure comes from analysis from Spend Network, a public contract database that has gathered contracts published on over 300 different public procurement portals.
28 Barriers to innovation through public procurement: A supplier perspective. Technovation, 34, 634.
and outcomes-based. One way of doing this, as we show in our Recommendations, is to utilise challenge-based procurement mechanisms, which begin with a specific challenge to be solved, without being overly prescriptive with respect to the methods used.

Likewise, the size of tenders has a significant impact on the decision-making processes of startups. Despite reforms to reduce documentation and disaggregate large contracts, major multifaceted digital transformation contracts are still common. The smaller the firm, the greater the difficulty of participating in large contracts.

While disaggregation is a welcome corrective to existing contract design, public sector buyers should be aware that contracts can also be too small, creating a disincentive to innovation. In Section 6, we offer recommendations for how public authorities can structure contracts in a way that incentivizes startups without overburdening them.

D. FINANCIAL AND REGULATORY REQUIREMENTS SQUEEZE OUT STARTUPS

Disproportionate turnover requirements at the pre-qualification stage can result in startups being excluded at a preliminary phase of the procedure. These specifications are a core element of public sector tenders, and help buyers to determine the capacity of a supplier to deliver a service. These requirements usually include metrics that guarantee the ‘economic health’ of a supplier, as well as examples of successful past performances. The most common of these is a check on minimum annual turnover, usually over a two-year period, with requirements capped at twice the value of the contract in question. Under Regulation 58 in PCR 2015:

The minimum yearly turnover that economic operators are required to have shall not exceed twice the estimated contract value, except in duly justified cases, such as by reference to special risks attached to the nature of the works, services or supplies.

These checks, of course, are a necessary part of performing thorough supplier due diligence. However, qualification standards are often disproportionate to the bid value and ‘risk profile’ of the contract, which can lock out new and inexperienced market entrants. This is particularly true for contracts for the provision of software services, where the size and financial maturity of a company does not dictate its ability to roll out a digital product or service. As mentioned in Section 2, cloud computing has become an enabler for smaller companies to operate digital services at scale, without the need for significant financial investment.

Frustratingly, this practice ignores the advice on turnover requirements given by the Cabinet Office. They specifically advise that ‘contracting Authorities should not impose arbitrary minimum requirements which may have the unintended effect of barring new business.

30 Barriers to innovation through public procurement: A supplier perspective, 634.
32 Barriers to innovation through public procurement: A supplier perspective, 634.
BUYING INTO THE FUTURE: HOW TO DELIVER INNOVATION THROUGH PUBLIC PROCUREMENT

from bidding. To keep contract opportunities open and realistic for startups, selection criteria must be both appropriate and proportionate to the contract. Here, traditional models used for works and services contracts are often not applicable. For software contracts, smaller companies can scale to deliver major digital services, and should not be excluded due to arbitrary staffing or financial considerations.

Indeed, sometimes financial requirements can even contravene the rules laid out in PCR 2015. It is not uncommon to see turnover requirements that far exceed double the value of the contract. Sadly, this practice is one of the most obvious ways of stifling innovation and preventing new market entrants. If only incumbent suppliers can meet financial requirements, then only incumbent suppliers will win contracts.

E. LATE PAYMENTS POSE A SERIOUS FINANCIAL RISK FOR STARTUPS

Late payments can have serious consequences for startups, who depend on a steady cash flow to survive and scale. The BEIS Committee found that ‘bad payment practices have led to the failure of many SMEs and have prevented others from growing and improving their productivity’. This has been compounded by the ineffective nature of the government’s reforms and its Prompt Payment Code.

In fact, there has been a 198% increase in the number of firms the Cabinet Office failed to pay on time between April 2016 and June 2018. It is essential that public authorities pay startups on time, as they will often not have the runway to be able to absorb long-standing late payments. It is also crucial to creating an environment of trust and confidence for startups, and growing a public sector market that startups want to engage in.

F. FRAMEWORK CALL-OFF CONTRACTS LACK TRANSPARENCY AND CAN PROHIBIT NEW ENTRANTS

Frameworks are umbrella agreements whereby government set out the terms and conditions under which individual contracts (call-offs) can be awarded during a specific period of time. Framework agreements are competed on by suppliers through a conventional tendering process, including advertisement on OJEU. At the end of this competition, the framework is closed to new suppliers for the duration of the contract period.

There are two main problems with frameworks that can hinder startups’ ability to access public sector business. First, frameworks can pose a kind of ‘transparency black hole’, with individual call-offs rarely advertised in OJEU (and indeed, with no legal obligation to do so). This means that a significant amount of public sector opportunities are not being advertised, but are only being offered to a narrow group of suppliers on a particular framework agreement. As one respondent to our survey complained:

‘The bulk of the work that happens on frameworks is hidden from the main portals. Therefore there is limited visibility of contracts or ability to compete with incumbents’.

Second, frameworks have fixed lengths, which locks out new market entrants for the duration of the agreement. This is a particular problem for startups, given the pace at which new companies are being founded and scaled. As such, there are hundreds of new and highly credible GovTech companies on the market who have been locked out of major framework agreements, simply because they did not exist at the time the agreement was advertised. In an age in which companies can get from launch to high levels of scale within a year, multi-year framework agreements are a clear way to lock out innovative new market entrants. The move towards Dynamic Purchasing Systems (DPS) in some departments is a welcome one: in our Recommendations, we show how this move should be extended
to cover more framework agreements.

The largest digital framework agreements are G-Cloud and DOS3, with 3,505 and 2,953 suppliers respectively.38 These systems represent a significant improvement compared with traditional framework agreements, but they both still have their problems. First, the overabundance of suppliers on these platforms result in a low status for startups in the marketplace. 100% of startups who applied to G-Cloud in our survey were successful in winning a place on the platform. However, only 42% of those businesses believe that G-Cloud makes it easier for small businesses to work with government.

Similarly, with (broadly) one year application cycles, these fixed term agreements can still lock out new businesses, and restrict the service offerings of existing businesses. Although one year is much shorter than traditional frameworks, it is still a long-time in the life-cycle of a tech startup. Indeed, given the pace of change in software development, it is highly likely that a startup will be able to offer a new and improved product or service during that time, compared with the specifications that were agreed at the beginning of the framework. A more dynamic and flexible system would allow greater accessibility for new market entrants.

Delivering successful procurement outcomes requires procurement departments with the right skills and expertise. This represents a considerable organisational and staffing challenge. At HMRC alone, there are over 12,000 people involved with the procurement process and management of contracts in some capacity.39 Successful commissioning of innovation therefore depends on attracting, retaining and developing commercial talent who understand technology.

Indeed, the NAO stresses the importance of ‘organisational capability’, whereby commercial personnel ‘know what is going on, the levers at their disposal and how their actions affect the overall outcome required’.40 However, there have been long-standing concerns over commercial skills in government. Gareth Rhys Williams, the Chief Commercial Officer, admits the government has ‘underinvested’ in the commercial skills set.41 Recently, the government has deployed significant resources to improve the commercial capabilities of buyers, such as setting up a Commercial Fast Stream in 2015.42 Ultimately, the skills and attitudes of procurement officials have a significant impact on the likelihood of startups winning contracts. Unfortunately, widespread risk-aversion and a limited understanding of technology has resulted in a somewhat narrow and inflexible approach to public procurement.

A. STARTUPS FACE A RISK-AVERSE PROCUREMENT CULTURE

As we mentioned in Section 1, the framework used by government to conduct procurement is governed by a series of regulations and policies, including PCR 2015 and the Treasury’s Green Book. As we argue above, the way that these rules have been interpreted and implemented has contributed to an overly risk-averse purchasing culture.


This argument is not new. In 2011, the House of Lords Select Committee on Science and Technology noted that ‘there is a widely-held view that officials working in government departments are risk averse...there is a perception within government departments...that choosing an innovative, as opposed to a tried and tested, solution is risky’.43

The government’s cautious approach to procurement is unsurprising in the face of electoral cycles, budgetary pressures, and growing public scrutiny. Indeed, it is justified, given the importance and public interest of the task at hand. Moreover, the size and complexity of government’s organisational structure can naturally lend itself to conservatism and process-driven commercial practices. In fact, the structure of government commercial functions is almost completely at odds with the operating models of today’s startups. This means that both sides often fail to understand each other, undermining their ability to form meaningful commercial partnerships.

At an individual level, there are few incentives for government buyers to experiment with innovative procurement at their own personal risk. Indeed, the now clichéd adage that ‘no one was ever fired for hiring IBM’ is still largely true today. Startups have to therefore overcome a culture that intrinsically favours large companies.

‘Government needs to stop promoting outputs over outcomes’.

**B. PROCUREMENT OFFICIALS FAIL TO APPRECIATE THE ECONOMIC VALUE OF INNOVATION**

Procurement officials tend to evaluate the quality of a tender according to narrow criteria, which privileges price over other value metrics, especially innovation.

This is a view that has been echoed by the Public Accounts Committee, who claimed that: ‘the current procurement environment encourages Government and suppliers to place too much emphasis on price at the expense of quality’.44 This practice contradicts the guidance of EU directives, which recommend that commissioners award contracts to the Most Economically Advantageous Tender (MEAT).45 Long-term innovation and economic stimulation should both be part of any MEAT consideration. Unfortunately, these considerations are invoked too infrequently, with price often being the main factor in determining the outcome of a procurement process.

This was a view shared by many of the startup founders that we interviewed. As one founder complained to us:

‘Government needs to stop promoting outputs over outcomes’.

To achieve genuine innovation in public procurement, authorities must move away from race-to-the-bottom attitudes over pricing, and instead properly evaluate the long-term economic value of innovation.

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43 House of Lords Science and Technology Committee. 2011. Public procurement as a tool to stimulate innovation, 25.
C. PROCUREMENT PERSONNEL DO NOT UNDERSTAND TECHNOLOGY MARKETS

Procurement personnel need to understand technology markets to take advantage of emerging technologies and diversify their supply base. As one interviewee stressed:

‘If government wants to harness the innovative potential of GovTech, buyers need to be able to understand the art of the possible.’

In a 2017 techUK survey, 65% of civil servants indicated that ‘a lack of knowledge or expertise’ is the greatest obstacle to adoption of technology in the public sector.46 This has partly been driven by the fact that technology markets are changing so rapidly, such that IT category knowledge from ten years ago is largely obsolete.

Indeed, growing investment in innovation has stimulated the creation and development of new technology markets. Technologies such as AI, ML, computer vision, VR and AR are now no longer considered niche or peripheral, but part of the mainstream technology landscape. Yet, if the government is to take advantage of their innovative potential, procurement officials need to develop a deep understanding of these technology markets, as well as a thorough knowledge of the companies using these technologies. In particular, buyers should have a comprehensive understanding of sectors where the UK is already a world leader, including FinTech, HealthTech, satellite applications, and cybersecurity.

This is in line with recommendations made by the NAO, who have outlined that delivering successful digital transformation in government requires ‘ongoing evaluation of emerging technologies and practices’ by procurement staff. 47

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CASE STUDY

PROCURE2INNOVATE: BUILDING A DIGITAL BUYING COMMUNITY

The Horizon 2020 funded Procure2Innovate project aims at improving institutional support for public procurers of technology and innovation. It aims to connect new and existing centers of competence for public procurement in ten EU Member States. There are five competence centres already established in Austria, Germany, the Netherlands, Spain, and Sweden. Procure2Innovate seeks to support these existing innovation procurement competence centres to enlarge their scope, increase their impact, and enhance their services for public procurers. It further aims to establish competence centres in Estonia, Greece, Ireland, Italy, and Portugal, helping them to support public procurers as they become ever more established and experienced in the field.

The project aims to provide assistance to all of these centres to develop expertise in cross-border co-operation and joint procurement. It further seeks to communicate and disseminate tools and approaches developed by these centres at a European-wide level. It organises best practice exchange workshops to allow for networking between centres, which address a wide range of themes including, public funding instruments, legal assistance, and global best practice.

The project engages with external stakeholders by arranging workshops and webinars in collaboration with the European Commission, European Investment Bank (EIB), and national finance institutions. The programme is coordinated by KOINNO, the Competence Centre for Innovative Procurement, with 15 institutional and research partners across ten EU countries. It was awarded c.€2m of funding in January 2018 and will run until the end of 2021.
5. THE PROCUREMENT PROCESS: A BREAKDOWN FOR STARTUPS

**A. CONTRACT NOTICE PUBLISHED**

Formalised pre-market engagement starts with the publication of a Prior Information Notice in the OJEU. This is the first opportunity for startups to engage directly with procurers. It may also be a chance for startups to shape the future procurement process, in a way which will open the market up to new and innovative entrants.

**B. PRE-MARKET ENGAGEMENT**

Startups need an effective system for monitoring live opportunities. For regulated EU procurements, contracts are advertised in the OJEU. Startups identify relevant contracts by CPV codes which are relevant to their business. Further search parameters can be added (e.g. country, contract value) to access notices which may be of interest.

**C. SELECTION STAGE**

A separate ‘selection stage’ is undertaken in all but the most straightforward of procurement processes. This stage tests interested parties’ experience and financial capacity, and can be one of the biggest hurdles for startups. However, the tests applied have to be proportionate and should not unnecessarily limit the ability of startups to compete.

**D. NEGOTIATION / DIALOGUE**

The more complex procurement procedures (including CD, CPN and IP) include a further stage in the process for the authority to discuss its requirements and the bidders’ potential solutions, including by way of face-to-face negotiation/dialogue sessions. These processes can give innovative startups an excellent opportunity to build relationships with procurers.
Once tenders are received, the contracting authority has very limited scope to accept any amendments to the solution proposed. It is therefore vital that those terms are acceptable and deliverable by the startup. It would make sense for startups to engage with professional bid writers for this step.

During the tender evaluation, a startup will have little input and may have to wait some time to hear back from an authority. It is important to continue monitoring procurement portals during this stage as clarifications may come back from the authority which need to be answered promptly and thoroughly.

At the end of a regulated procurement process, an authority must notify all bidders of the outcome and provide certain de-brief information to unsuccessful bidders through a “standstill letter”. Startups should use this to improve their performance in future competitions. They may also consider asking for a face-to-face de-brief to obtain further assistance.

Provided no legal challenge is received by an unsuccessful bidder during the standstill period, the authority will be free to sign its contract with the successful bidder. As already noted, there will be limited scope at this stage to make changes to the contractual arrangements agreed through the procurement process.
6. RECOMMENDATIONS

ESTABLISHING THE UK AS A WORLD-LEADING HUB FOR GOVTECH WILL REQUIRE SERIOUS AND SUSTAINED GOVERNMENT ENGAGEMENT. AS WE HAVE SHOWN THROUGHOUT THE REPORT, THERE IS NO SINGLE ACTION WHICH BY ITSELF WILL SEE MORE STARTUPS SELL INTO THE PUBLIC SECTOR AND SO ALLOW PUBLIC SERVICES TO BENEFIT FROM THEIR INNOVATIVE POWER.

But there are a number of urgent actions that government can take to transform public procurement. This ranges from initiatives to support and incubate startups, to guidance on selecting more flexible commercial and procurement vehicles, to schemes to promoting greater digital skills in the public sector.

Our recommendations are based not only on PUBLIC’s GovStart programme, but on evidence from around the world of what works and what does not. We detail a number of proven models - taken both from the private and public sectors - for how to incubate healthy ecosystems of startup companies, and how to engage in effective and de-risked commercial engagements.

Our 15 high-level recommendations can be split up into a number of small constituent initiatives and policy interventions. For each recommendation, we outline which government actors would be principally needed to deliver the policy or intervention (‘Who?’) and how long it would take to successfully implement (‘When?’). We also give a provisional assessment - on a scale of one-to-five - of how impactful the policy or intervention would be (‘Impact’).
It is our intention that these recommendations should be taken together to form a single holistic innovation strategy. Bringing all of these parts together would establish the UK as the single most innovative public commissioning system in the world.
We recommend that government introduces new ‘Innovation Zones’ for technology contracts in certain designated sectors. Innovation Zones would be a small group of sectors where new and innovative market entrants would be more strongly encouraged and incentivised to bid for technology contracts. The aim of this approach would be to provide strong case studies for the benefits of working with startups and entrepreneurs - before adopting these new models of working more widely across government.

Innovation Zones would likely be in sectors with some of the following features:

1. Technology products and services have traditionally been delivered poorly in that sector
2. There is a strong pipeline of new and innovative market entrants in that sector
3. That sector is likely to benefit significantly from new advances in science, technology, and data analytics.

Innovation Zones would include a package of incentives to encourage new market entrants to bid for technology contracts. We recommend the following three key features of Innovation Zones, which would provide financial and reputational incentives for startups to bid for contracts:

- Funding to cover the costs of smaller companies bidding for certain technology contracts (capped at 2-3% of the total cost of the procurement, and graduated in terms of stages for multi-stage tendering processes)
- A clear specification in the contract notice that innovation and cutting-edge technology will be an important part of the quality evaluation criteria
- A commitment to showcasing bids that are classified as highly innovative - both successful and unsuccessful - in a publicly available and updated ‘Innovation Database’.
It would also send a message to the market that the department is genuinely interested in working with new kinds of suppliers. The benefits of the first incentive for startups are clear: not only would it help to support these companies to mitigate against the financial and resource pressures associated with bidding for a contract, it would also send a message to the market that the department is genuinely interested in working with new kinds of suppliers.

Similarly, the second incentive would show a clear commitment to embracing the value of innovation and cutting-edge technology: suppliers offering these kinds of products and services would be emboldened to showcase what they had to offer.

The final incentive is the ‘softest’, but is still important. A frustrating problem for startups engaging in public procurement is that they exert significant effort and resources to a bid, and have nothing to show for it in the end. The purpose of this last measure is to reassure genuinely innovative companies that - even if they are unsuccessful on this particular bid - their product or solution will be showcased publicly as a case study of public sector innovation. This will ensure that their solutions are shared across government, but would also be highly effective marketing and product validation for new startups.

CASE STUDY

**ASPIRE FUNDING BIDS TO PROMOTE MARKET COMPETITION**

In 2004, HMRC (then the Inland Revenue) entered into a contract with Capgemini to deliver a number of IT services to support the department’s core business functions.\(^1\)

The contract aimed to replace a number of different IT services delivered by EDS and Accenture starting in 1994. Before officially re-tendering for the contract in 2002, HMRC undertook a market engagement process in which they found that new suppliers were unlikely to bid for the contract, because they felt that the department was too ‘locked in’ to its current IT systems, and so it would be impossible to displace the incumbents.

To mitigate against this risk, HMRC committed in the official OJEU notice for the contract to reimburse the bidding costs (and later, the integration costs) of new suppliers. The aim of this was to stimulate greater competition by signalling to the market that the department was genuinely open to awarding the contract to a new supplier.

The tender received responses from four bidders, and HMRC paid £8.6m in contributions to cover bidding and due diligence costs. The contract was ultimately awarded to Capgemini over the incumbent suppliers: Capgemini indicated that they would not have replied without the assurance of bidding costs being covered.

\(^1\) The full details of this procurement can be found in: NAO. 2006. HM Revenue & Customs ASPIRE - the re-competition of outsourced IT services.
Achieving wide-scale organisational change can sometimes be best driven by a small, skilled, and highly-focused team at the centre.

We recommend that the Cabinet Office establishes a new team charged with driving greater levels of innovation and creativity in public procurement. Not only would this team develop new models for working with external suppliers, but it would also be the centre of government for understanding the key trends and developments in technology, science, and data analytics markets. This would give it a deeper and focused scope than the current Market and Suppliers Team contained within the Government Commercial Function.

The composition of this team would ideally include procurement and commissioning specialists, (particularly in agile and flexible procurement), technologists and data scientists, experts in emerging technology markets, and entrepreneurs with experience of successfully supporting and scaling startups.

The Procurement Innovation Team would be able to set the vision and strategy for UK government on how it contract with new and innovative suppliers. It would work with public authorities and purchasing organisations across the country to help them to implement these strategies, but also to help them to understand the art-of-the-possible in emerging technology markets. This would ensure that public authorities without the capacity to develop in-house innovation expertise would be able to work with the Procurement Innovation Team to deliver better and more innovative commissioning outcomes.

The Procurement Innovation Team would therefore closely mirror the Behavioural Insights Team (formerly part of the Cabinet Office) in a
number of important ways. First, it would be a small and focused team, tasked with a specific set of narrow but technical policy objectives. Second, the composition of the team would be different from traditional civil service departments: it would include staff with non-standard civil service backgrounds, including academia, technology and entrepreneurship. This is analogous to how the Behavioural Insights Team contains policy specialists and academics from disciplines including behavioural economics, social psychology, neuroscience and anthropology. Finally, it would operate according to the same business model as the Behavioural Insights Team: it would be launched with funding from the Cabinet Office, before sustaining itself by offering consulting and advisory services to other public authorities and international governments.

The last point is an important one. Governments around the world are trying to tackle the challenge of modernising public procurement to keep up to date with the pace of change in the global digital economy. Establishing a centre of excellence in the UK - as we did with Behavioural Insights Team - would provide a significant export opportunity, and a further potential revenue stream, for UK government.

Delivering innovation through public procurement is a complex challenge: but it is one that almost every government is wrestling with. Being the first movers and the global leaders would be of enormous strategic value to the UK going forward.

CASE STUDY

18F HOW A SMALL TEAM TRANSFORMED TECHNOLOGY IN THE US GOVERNMENT

18F is an office within the US General Services Administration (GSA) that works across the US government to improve how it procures technology and digital services.

Established in 2018 under the Obama Administration, 18F aims to bring new ways of working and a new approach to technology in government, by using open source code, contemporary programming languages, and lean startup methodologies. This radical new approach to digital government has resulted in it being widely described as a ‘startup within government’.

The composition of the team at 18F is particularly important, with high levels of technical talent coming from the world leading tech companies in the private sector. This has largely been driven by staff the ‘Presidential Innovation Fellows’ programme, which bring in innovators from outside of government into solve specific policy and delivery challenges.

In a short time, 18F was able to drive a number of important changes in how the US government procured technology. This includes major policy and legislative reform, secured in combination with the US Federal Acquisition Service (the US equivalent of CCS). Most notably, it tackled a key cause of long sales cycles and delayed procurement processes: the fact that typical security certifications for external tech companies to hold government data took 18 months. Reform of this legislation has enabled a new wave of market entrants to compete for government contracts involving the processing and management of data.

ESTABLISHING A CENTRE OF EXCELLENCE IN THE UK - AS WE DID WITH BEHAVIOURAL INSIGHTS TEAM - WOULD PROVIDE A SIGNIFICANT EXPORT OPPORTUNITY, AND A FURTHER POTENTIAL REVENUE STREAM, FOR UK GOVERNMENT
We have argued in this report that startups and SMEs are very different, and need different kinds of support. In particular, we have shown how startups can transform the design and delivery of public services, and how they are also the single most productive engine for creating high-skilled jobs in the UK economy.

It does not make sense, therefore, for government to conflate spending targets with SMEs and startups. There are different motivations for working with them, and they require different kinds of support.

To that end, we propose that government introduces a new target for 10% of all technology spend to go to startups. We also encourage government to stick to its target of awarding 33% of government expenditure to SMEs more broadly: but these targets should be kept separate and evaluated separately.

We have arrived at a provisional baseline of 10% for two reasons. First, this would represent just under one-third of the government’s overall spend target with SMEs. When it comes to technology products and services, startups now represent such a significant part of the SME market that this baseline seems reasonable. Second, this is broadly the current benchmark for startup involvement in the FinTech sector. Last year, 14% of the total banking revenues in the UK were captured by FinTech startups. As outlined elsewhere in this report, FinTech now represents one of the most productive and dynamic parts of the UK economy, and the level of startup involvement should be used as a benchmark for other sectors.

Directing 10% of technology spend to startups would totally transform the delivery of digital public services in the UK. It would stimulate a new ecosystem of highly innovative and productive companies in the market, which would ultimately result in better value-for-money for the British taxpayer.
In terms of signalling an intent to embrace reform in procurement, there are few policy interventions that could be as impactful.

Part of achieving this goal would require government to introduce a new ‘Suitable for Startups’ tag for all contract opportunities listed on online procurement portals.

The effects of introducing this tag would be two-fold. First, it would encourage officials to think more carefully about whether a startup could be applicable when listing an opportunity. Second, it would allow startups applying for contracts to assess more easily whether it has a realistic chance of winning before committing time and resources to applying.
GOVERNMENT SHOULD ESTABLISH A NEW ‘GOVSHARES’ PROGRAMME TO GENERATE REVENUE FROM IP THAT IT CO-DEVELOPS WITH THE PRIVATE SECTOR

WHO: INTELLECTUAL PROPERTY OFFICE, BEIS, HMT

IMPACT: ★★★★★

WHEN: 1-2 YEARS

The ownership of intellectual property (IP) in public contracts remains one of the most important barriers to promoting more innovation in the market. Suppliers continue to be put off by requirements to forfeit IP rights in many co-development contracts, which has resulted in a smaller and less competitive supplier base.

We propose that government establishes a new commercial model to allow the public sector to financially benefit from IP that it develops or co-develops during procurement. This programme - which we have called ‘GovShares’ - would incentivise government to form licensing and revenue share partnerships with contracted suppliers. The exact nature of the revenue share and licensing agreement (location, sole ownership, exclusivity, etc.) would be decided on a case-by-case basis; but the overall aim would be for government to benefit financially in proportion to the contribution it makes during the creation of a technology product or service.

Indeed, there is already precedent for government entering into IP agreements with external suppliers, usually relating to R&D intensive activities, and sometimes (although rarely) executed through longer-term Innovation Partnerships. The purpose of the GovShares mechanism would be to encourage public authorities to use similar commercial models more widely when contracting for products and services, rather than just for R&D activities.

This policy would respect the fact that, for the development of some technology products and services, government is often both a contributor and consumer of IP in the procurement process. There is good reason for government to benefit proportionately to the contribution it makes during this process. As such, it would provide an incentive for government to look to the market for some co-development contracts that it might otherwise be motivated to build in-house.

1 This point has been argued widely: most notably in Mazzucato, M. 2018. The Entrepreneurial State.
It is also important to note that our GovShares model includes a revenue share or royalty agreement, rather than an equity option. There are two main reasons for this. First, it would allow government to benefit from a single product or service, without taking an interest in the entire company that co-created it. This would be a more favourable arrangement for external suppliers, since it would limit government’s right to benefit from products and services to which it had made no contribution. Second, it would generate direct revenue for government, which could be collected and reinvested into public services. This system of direct returns is unlike equity or warrant agreements, in which government would require more patience, and would take on higher risks of poor returns.

Importantly, it would also represent a single and clear policy for all technology in which government has a legitimate IP interest. To guarantee the effective and seamless use of the GovShares vehicle, we make the following recommendations:

1. **When contracting for products and services that require co-development and collaboration, the exact nature and scope of the GovShares agreement should always be specified at the beginning of the contracting process.**

2. **The GovShares agreement, as standard, should include a clause that stipulates that if a supplier fails before completing its contractual obligations, the ownership of the IP should revert to the contracting authority.**

As we outlined in Section 2, there are some instances when it is in government’s interest to retain IP ownership rights over products and services developed during procurement. This usually relates to concerns over national security, or similarly broad strategic interests.

In almost all other cases, government should consider using a mechanism like GovShares when it collaborates with the market; it would generally be the best way of balancing government’s commercial interest in IP generation with its broader strategy of stimulating competitive and dynamic markets in the public sector.
Public authorities should work with ‘Innovation Brokers’ to help them to make the most out of emerging technology markets.

Technology markets are changing at a tremendous pace, and it is difficult for public authorities to keep up. With budgetary pressures, competing departmental priorities, and a common lack of in-house technical expertise, procuring cutting-edge technology can be extremely difficult. This particularly true of the wider public sector, where resource constraints are likely to be especially acute, and technical expertise especially rare.

To solve this challenge, we recommend that public authorities work with ‘Innovation Brokers’ to help them to navigate emerging technology markets. Innovation Brokers can help public authorities to understand and access startup markets, and to design strategies to engage with newer suppliers.

The main way that public authorities can work with Innovation Brokers is through challenge-based procurement exercises. Here, authorities work with an Innovation Broker to set a number of specific challenges that require an innovative technology solution. For example, in 2018, Greater London Authority worked with a number of external innovation partners to solve seven local challenges relating to dementia services, transport, electric vehicles, affordable housing, financial inclusion, loneliness and isolation, and physical activity.

After jointly setting these challenges, the Innovation Broker will then engage with startups to invite them to apply to submit proposed solutions, usually through a grant-funded pilot. The Innovation Broker will then undertake commercial and financial due diligence on all companies that apply, jointly selecting a winner in partnership with the contracting authority.

It is extremely important that authorities work with the right kind of partner. Innovation Brokers should generally have two main capabilities.
First, they should understand the emerging technology landscape, including a genuine understanding of the public sector use cases. Second, they should have a deep and thorough knowledge of the market, including companies that are yet to engage with government. This skill is more rare, since it requires the partner to engage with the startup market on a constant basis. To achieve this successfully, the Innovation Broker must have strong networks across the startup and venture ecosystem, as well as the ability to leverage these networks effectively. This is why, in general, the ideal Innovation Broker will likely resemble a venture capital firm or startup accelerator, more than it will a traditional consulting partner.

If executed properly, a partnership with an Innovation Broker should allow a public authority to build up sufficient institutional knowledge and new market networks to be able to navigate innovation procurement on its own in the future. In this way, partnerships also function as a kind of training exercise for government, as well as a novel way of engaging with the market.

**CASE STUDY**

**GOVTECH PROGRAM**

**LEVERAGING THE POTENTIAL OF UNEXPLORED MARKETS**

In January 2019, the Danish Ministry of Industry, Business and Financial Affairs launched ‘GovTech Program Denmark’ (GovTech-Programmet) - an open call challenge competition, run and operated by PUBLIC, for startups to transform Danish public services.

The programme - the first GovTech initiative ever run in Denmark - features five key challenges for startups to solve, ranging from raising awareness of data ethics to increased accuracy in housing inspections. Startups of all sizes, pre-seed to series C, were able to apply, with successful applicants receiving three months of mentoring and support from PUBLIC, alongside the opportunity to bid for an associated contract with the challenge owners, such as the Danish Safety Technology Authority.

PUBLIC, as an Innovation Broker, is responsible for finding companies on the market, undertaking an invitation and selection, and performing thorough commercial and technical due diligence. PUBLIC then works with both startups and government to secure a potential commercial arrangement. Startups are not required to give up equity or pay for participating in the programme. Furthermore, startups retain all the IP rights for products developed during the GovTech Program.

The programme offers a unique opportunity for startups to engage with the Danish public sector in a direct manner. Selected companies work on a challenge with a government agency, which helps them gain an insight on how government procurement is conducted and the needs of public officials. Moreover, it enables them to develop their public sector networks. Ultimately, the GovTech Program de-risks the interaction between public authorities and tech startups.
GOVERNMENT SHOULD COMMISSION A REVIEW OF GDS TEN YEARS AFTER ITS CREATION TO EVALUATE ITS PROGRESS AND DEFINE ITS KEY STRATEGIC PRIORITIES GOING FORWARD

Nearly ten years after the establishment of GDS, its accomplishments have been extremely significant. It has launched and migrated online government services to GOV.UK, introduced new products like GOV.UK Pay and Verify, designed new rules for procuring IT goods and services, and launched the Digital Marketplace. Perhaps most importantly, the organisation has attracted high-profile interest and attention in digital government. It has attracted a range of highly talented individuals, who, under both political and official-level leadership, have been able to accomplish a number of important achievements.

Indeed, early into its lifecycle, GDS became a model for many other countries around the world, including the United States, Canada and Australia. Since then, it has remained as one of the most authoritative and respected digital government institutions in the world.

However, in recent years, it appears that a number of factors have combined to limit GDS’ ability to push through transformational improvements. A lack of cross-government buy-in and push-back from departments have resulted in GDS’ role in government having to change its approach. It is therefore sensible to step back conduct a GDS 2020 review, to assess the progress and future objectives of GDS, ten years after its initial inception.
This review, just as with the initial review conducted before its creation ten years ago, should explore fundamental questions about how GDS should operate in the future. It should answer questions such as:

- What should GDS focus on?
- Does it need to change its focus?
- What should its key priorities be over the coming years?
- How can it foster better partnerships with government departments?
- What are the implications for GDS following the move of its data functions to DCMS?
- Does it need to re-think its branding?

The Science and Technology Committee, as mentioned in Section 1 of this report, is currently undertaking a review into Digital Government more generally. We recommend following this up with a more focused review of GDS, led by an independent technology expert. Just as the original GDS was created following a review by internet pioneer and then-UK Digital Champion Martha Lane Fox, so we recommend that the government commissions her to conduct this second review, ten years on from the organisation’s establishment.
The way that startups operate is fundamentally different from traditional businesses in the public sector. This means that public authorities need to adopt new models of engaging and working with these startups to get the most out of the market.

To tackle this problem, we recommend that public authorities undertake a fundamental reform in their approach to market engagement.

First, authorities must understand that simply listing a PIN or contract opportunity on Contracts Finder (or any other online portal) is not sufficient to generate interest from the startup market. Indeed, our survey found that 51% of startups think that the difficulty of finding public sector opportunities is a major barrier to greater startup involvement. This is often because very few startups use these channels, or know how to navigate them. For the same reason, sharing a public sector opportunity through a government social media channel is unlikely to help, as these often do not have the desired reach.

To tackle this problem, government must get better at building networks within the startup and venture ecosystem. There are a number of ways that it can do this, many of which would represent a drastic change to how government currently engages with the market.

First, public authorities should host regular roadshow days at co-working spaces across the country (including WeWork, Huckletree, Runway East, Google for Startups Campus, etc.) to encourage new market entrants to consider working with government. Engaging with these co-working spaces is absolutely crucial for government: it is simply where most modern tech startups are located. Indeed, some parts of government - most notably MOD’s DASA - are already undertaking roadshow initiatives. We recommend that this practice is scaled more widely across the public sector.

It is also important that government leverages existing venture and startup community
THE WAY THAT STARTUPS OPERATE IS FUNDAMENTALLY DIFFERENT FROM TRADITIONAL BUSINESSES IN THE PUBLIC SECTOR

networks when attempting to engage with the market. Public authorities should be encouraged to share innovative contract opportunities with venture firms, startup accelerators, and incubators to encourage startups from these networks to apply. Public authorities should also explore advertising opportunities for innovative technologies in popular podcasts, social media groups, and magazines aimed at startups.

Finally, we encourage government to launch a programme of regular flagship events focused on encouraging startups to engage directly with public sector buyers. Traditional procurement events (such as Procurex) are currently failing to fit the needs of startups, as they are dominated (and usually sponsored by) large incumbent suppliers.

In November 2018, PUBLIC hosted The GovTech Summit in Paris, which attracted over a thousand European startups and provided them with opportunity to build networks with policy and procurement officials. We recommend that government launches an event with a similar scope and scale.

Authorities are often hesitant to engage in these kinds of market engagement activities because they are reluctant to contravene the rules laid out in PCR 2015, which require that market engagement is run in a way that is open, transparent, and fair to all suppliers. It is important to stress at this point that the actual guidance from the Cabinet Office specifically encourages authorities to engaging in these kinds of processes. Most notably, its Procurement Policy Note (PPN 04/12) states that:

‘Pre-procurement engagement with the market (including talking to potential suppliers) is not prohibited by EU procurement law, nor is it subject to any detailed procedures provided that it does not prevent an effective competition taking place once the procurement has started. In fact, engaging with the market before starting the formal procurement process is best practice and helps to maximise value for money’.2

Finally, for pre-commercial market engagement practices, government must ensure that it uses the right timescales to achieve the best outcomes. Too often, PINs and other pre-market notices are released too soon before the issuance of an ITT, which means that government does not have enough time to collect market responses and enact genuine changes based on this feedback.

An improved approach to market engagement, which would be fully compliant with PCR 2015 and government’s own internal policies, is likely to be the single most important factor in achieving better procurement outcomes.

Despite the roll out of Contracts Finder and the Digital Marketplace, online procurement is still extremely fragmented. As we mentioned in Section 4, public contract database Spend Network has gathered contracts published on over 300 different public procurement portals. This fragmentation creates two key problems. First, it is extremely difficult for new market entrants to navigate the procurement landscape. From finding opportunities, to registering as an accredited supplier, to executing public sector tenders, this fragmentation creates enormous friction for startups trying to sell to government. Second, it makes it extremely difficult for government to create a single repository for capturing and processing contract data. Joined-up contracting data is crucial for commissioners to make more informed contracting decisions, especially when developing long-term strategies for procuring innovation.

At the moment, the typical ‘user journey’ for a supplier using Contracts Finder results in being redirected to an external departmental or local procurement portal, where the supplier then has to register as a new user before it can even access the ITT documentation. Sometimes, to access ITT material, suppliers might have to email the procurement officials directly, which is a highly inefficient process for all parties.

Instead, we propose a single online portal that would allow suppliers to search and apply for opportunities from within the same system, using a single supplier registration. This would make it easier for startups to find and access public sector contracts, but it would also reduce friction when signing up to submit a tender. Further, providing a more accurate picture of public sector spend would allow new entrants to develop a better understanding of which markets to target, the size of different market opportunities, and what their market share might look like. These kinds of strategic metrics are crucial to the success or failure of early-stage companies.

Given the sheer number of opportunities that would be available on this system, it would
To maximise use of the platform amongst public sector customers, we recommend that it should be free at the point of use for public sector authorities. It should allow sign-in from any verified public sector email address, and the benefits of using the system should be widely promoted by government.

Importantly, a single online portal would allow the government to deliver unprecedented levels of transparency and accuracy in its contracting data. This is particularly important given its commitment to publish procurement data according to the Open Contracting Data Standard, a global best practice schema to publish data on public contracting. The move towards greater standards in public contract data is growing around the world, with countries like Slovenia introducing a new law stipulating that all public sector contracts are invalid unless and until they listed and reported on the appropriate public channels. To keep up with global best practice, a single, centralised online procurement portal would be an important step.

A SINGLE ONLINE PORTAL WOULD ALLOW THE GOVERNMENT TO DELIVER UNPRECEDENTED LEVELS OF TRANSPARENCY AND ACCURACY IN ITS CONTRACTING DATA
Startups are often priced out of contracts at the first hurdle. During PQQs, suppliers have to satisfy ‘economic and financial standing’ thresholds, which are (usually) proportional to the value of the contract or framework.

There a number of different metrics used by public authorities to evaluate the financial health of a prospective supplier. The most common is an audited statement of a supplier’s annual turnover (usually for the last two years): the stipulated turnover requirement should not exceed twice the overall value of the contract. But, as we outlined in Section 2, minimum thresholds can often far exceed the overall contract value.

A further common requirement for suppliers, especially when tendering for larger contracts, is a minimum Dun & Bradstreet score, given by its DUNS Number, which is mandatory for all suppliers working with government.

Both of these mechanisms structurally favour larger incumbent suppliers over startups. First, because financial requirements can be overly burdensome for smaller companies: this despite the fact that most software contracts do not require any considerable resource or capital outlay by the contracted supplier. Second, they are both backwards-looking, insofar as they assess a company’s recent financial past, rather than projecting for its future. As such, they prohibit new market entrants, without past financial activity, from competing for contracts.

This is particularly frustrating given that the Cabinet Office has clearly specified that smaller companies should not be ruled out on these grounds:

“No SMEs, public service mutuals or third sector organisations should be inadvertently disadvantaged by the financial assessment process.”

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WHO: GOVERNMENT COMMERCIAL FUNCTION, RELEVANT PUBLIC AUTHORITY

IMPACT: ★★★★★☆☆☆☆

WHEN: 0-3 MONTHS
CASE STUDY

GEM INDIA’S STARTUP-FRIENDLY ONLINE MARKETPLACE

The Government e-Marketplace (GeM) is an online portal for Indian government agencies and officials to buy products from an end-to-end marketplace. It was initially set up to make it easier to buy core goods and services, such as stationery and office furniture, but it now facilitates all purchases by government agencies in India. Procurement is done through bidding and reverse auction, which significantly reduces lead-time in government procurement. The platform further allows for leasing products. GeM currently caters to 138,000 sellers and 27,000 buyer organizations covering 469,000 products and services. In all, 730,000 orders have been placed so far, with a total value of Rs. 115b (US$ 1.7b). It provides transparency on public procurement and promotes cashless transaction with no intermediaries. In February 2019, there were 1,516 start-ups registered on GeM, who had received more than 5,000 orders.

Significantly, the marketplace is in the process of developing a Proof-of-Concept corner, ‘Startup Runway’, where government officials can try out services and goods offered by innovative companies on a trial basis. Government departments receive messages and alerts about the availability of innovative products on the portal. This is accompanied by a streamlined communication channel for agencies to give prompt feedback. Startups are also given exemption from prior experience and prior turnover stipulations. The Startup Runway offers a launchpad for startups in the country to access government markets. This allows startups to prove themselves as viable suppliers to government buyers before listing their products on the larger Government e-Marketplace.

To overcome this problem, we recommend that public authorities use more flexible and creative ways of conducting financial checks on younger suppliers. Most importantly, this should include a check on a startup’s runway - how long the company can survive, keeping income and expenses constant - as well as checks on how much total capital it has raised.

Not only will this help to avoid the problem of discriminating against smaller and younger companies, it will also represent a financial check that startups are more familiar with navigating. Indeed, this practice seems to be supported by the rules outlined in PCR 2015 (Regulation 102), which state that:

‘Where, for any valid reason, the economic operator is unable to provide the references or other information required by the contracting authority, it may prove its economic and financial standing by any other document which the contracting authority considers appropriate’.

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5 Ziploan. 2019. What is Government e-Marketplace & What Are its Benefits For MSMEs?
We recommend that, when procuring technology goods and services, public authorities should use Dynamic Purchasing Systems (DPS) over frameworks where possible.

The DPS is an OJEU-compliant commercial procedure that can be used for contracting involving common works, services, and goods. As a procurement tool it operates broadly in the same way as a traditional framework agreement, except that new suppliers can join at any time in the lifecycle of the DPS. This is an extremely important feature for startups. Traditional frameworks operate over a fixed lifecycle, with an initial application period at the beginning of the agreement. This means that companies that fail to join the framework at the beginning are locked out for years. Even SME-friendly digital frameworks such as G-Cloud operate with fixed application cycles: a startup will have to wait an entire year to join G-Cloud if it misses this application window. In a climate where technology is constantly evolving, and new startups are spawning everyday, locking out suppliers from government contracts for these time periods is highly counter-productive.

A DPS, on the other hand, allows suppliers to join at any time during its period of validity. Not only does this avoid new supplier lock-out, it also allows existing suppliers to change and update their product offering within the agreement, which again is fixed on traditional frameworks. This allows scope for constant innovation and improvement in an authority’s supplier base.

In 2015, there were a number of updates to the rules governing DPS to make them even more startup-friendly. First, suppliers no longer have to submit an ‘indicative tender’ with their request to join the DPS (which they do with traditional frameworks). This has radically streamlined the application process for new entrants, who now do not need to submit documentation like costings, staffing models, and business plans as part of their applications. Further, the maximum period for reviewing an application is ten working days, which means that startups will know within two weeks whether their application to join the DPS has been successful.

Similarly, rules on an authority’s obligation to publish advertisements when procuring for particular contracts within a DPS have
A DYNAMIC PURCHASING SYSTEM AVOIDS SUPPLIER LOCK-OUT BY ALLOWING NEW COMPANIES TO JOIN AT ANY TIME

been made more relaxed. When using a DPS, authorities now only have to publish an opportunity to all suppliers within the relevant category, and the minimum timescale for running these competitions is also ten working days. A ten day minimum for return of tenders is substantially shorter than the total procurement process when using almost any other commercial mechanism.

In many ways, a DPS solves all of the problems that traditional frameworks pose to new startups. They are easier and faster to join; they allow new companies to join or change their product offering at any point; and they allow authorities to run faster competition processes.

As we have mentioned throughout this report, CCS’ new startup-friendly framework, Spark, is a DPS. This detail will be crucial to its success as an innovation framework. We encourage more public authorities to explore the benefits of using these systems over traditional fixed-term contracts.

CCS currently operates the following ten DPS agreements:

- eSourcing Platform
- Heat Networks and Electricity Generation Assets DPS
- HSCN Access Services DPS
- Public Sector Passenger Transport Services - Taxi & Coaches
- Research Marketplace DPS
- Spark DPS
- Specialist Courier Services
- Standby & Emergency Generator DPS
- Utilities Switching Service DPS
- Vehicle Conversions DPS
The updates to PCR 2015 also introduced a new procurement procedure called an ‘innovation partnership’ (IP). IP is a procedure that can be used when an authority is contracting for ‘an innovative product, service or works that cannot be met by [those]...already available on the market’.8

We recommend that public authorities use this mechanism more widely, as it can be an extremely effective way of co-developing innovative new products and services in partnership with tech startups. This allows for innovative solutions to be researched, developed, prototyped, rolled out, and commercialised all within a single procurement procedure.

For startups, this mechanism can allow them to take on larger co-development products that are typically reserved for major systems integrators and consultancies. For authorities, they provide a de-risked framework for trialling new and innovative ideas with startups and non-traditional suppliers. As such, they can be an extremely effective way of opening up digital discovery projects to startups and innovators: through a partnership that works for both sides.

IPs allow contracting authorities to launch an ITT without pre-specifying the desired product or service, which leaves room for suppliers to design an innovative solution within a contractual partnership. The authority can then enter into a contract with multiple partners within a single procedure, and structure the procedure into successive stages of research and development, without having to go out to further procurement at each stage.

As a result, the authority can decide at any stage to terminate an IP with a partner if the research or prototyping has shown that the product or solution is not viable. The staged IP then continues with remaining partners until the authority has identified a solution which can be further developed and rolled out.9

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8 Legislation.gov.uk. 2015. The Public Contracts Regulations 2015: Regulation 31(2)
9 Bird & Bird. 2018. How to procure innovation?
INNOVATION PARTNERSHIPS ALLOW CONTRACTING AUTHORITIES TO LAUNCH AN ITT WITHOUT PRE-SPECIFYING THE DESIRED PRODUCT OR SERVICE, WHICH LEAVES ROOM FOR SUPPLIERS TO DESIGN AN INNOVATIVE SOLUTION WITHIN A CONTRACTUAL PARTNERSHIP

IPs also represent an interesting model for co-commercialisation between startups and government. For almost all IPs, both government and its private sector partners will have contributed in some form to the final development of the product or service. As such, the final stage of an IP can be the commercialisation of this end product, either through a joint venture or licensing agreement. Increasing the use of IPs, therefore, will allow government to create a new revenue stream through the commercialisation of highly innovative technology assets. We have outlined above in Recommendation 3 why this is so important for government.

Since 2015, IPs have only ever been used 14 times in UK public procurement. This is likely due to the fact that the mechanism still remains relatively untested, and that there has been a lack of top-down executive support for using it from central government. Increasing the use of IPs across the public sector will help to drive a new wave of innovative and creative solutions to some of our most important and complex public problems.

CASE STUDY

BOWEL CANCER SCREENING USING AN INNOVATION PARTNERSHIP TO FIND A BETTER SOLUTION FOR EVERYONE

As part of the NHS’ commitment to improving cancer survival rates through early diagnosis, NHS Arden & Greater East Midlands (GEM) have partnered with the Satellite Applications Catapult and a number of commercial and research partners to develop a new approach to conducting endoscopies.

As an alternative to the traditional endoscopy, which can be painful and time-consuming, this partnership has developed ingestible capsules which record and wirelessly transmit images of a patient’s digestive system. As such, a patient can be screened for bowel cancer just by swallowing a capsule and transmitting the captured footage to their doctor. If used effectively, this process can improve early diagnosis outcomes, reduce the burden on local hospitals, while reducing cost and improving patient convenience.

This project is one of few examples of innovation partnerships being used in public contracting. NHS Arden & GEM worked with a number of different suppliers throughout the lifecycle of the contract: partners for the contract included SMEs such as CorporateHealth, Openbrolly, and Wolfram Research Europe as well as a number of universities and research institutions.

With the imminent roll-out of the capsules across Scotland, this project shows how effective innovation partnerships can be for designing new solutions to long-standing public challenges.
Design contests are a little-known procurement procedure included within PCR 2015. Despite the fact that they are currently barely used, they have the potential to completely transform how public authorities work with startups and innovators. We recommend that government uses them more widely, starting with a flagship design contest procedure issued by central government.

A design contest, as defined in PCR 2015, is a procedure that allows a contracting authority to run a competition for the submission of designs or proposals from the market, before reviewing those submissions with an expert jury, and awarding either prizes or a follow-up contract to the selected winner.

Design contests are barely used in EU or UK public procurement. While there have been some examples in planning and architectural contexts, they have never been used in the provision of more general public goods and services. Indeed, the regulations recommend, but do not require, that the mechanism should be used ‘mainly in the fields of town and country planning, architecture and engineering or data processing’. Last year, however, GovTech Polska, the new government innovation team formed within the Polish Chancellery, launched a GovTech challenge programme. For the first time ever, this programme will use design contests to procure technology and innovation. This represents a momentous step for government innovation, and we encourage public authorities in the UK to take inspiration from this initiative.

A design contest operates like a challenge-based procurement exercise (such as the CLA’s Civic Innovation Challenge, or WMCA’s UrbanChallenge, launched in 2018). The process begins with a public authority defining a specific challenge or gap, for which they require a solution. The authority then invites
submissions from the market as to how best solve this specified challenge, before convening an expert jury to review each submission and select a winner. The design contest procedure is closely modelled on the tried-and-tested approach to running challenge-based innovation programmes.

However, design contests differ from challenge-based programmes in one important way: they allow for the direct award of a follow-up contract after the competition has ended.

A common problem with challenge-based approaches is that they usually result in the award of a grant-funded pilot or proof-of-concept, without any scope for scaling into an actual contract award. With design contests, authorities can specify if they would like to follow-up the competition with a contract award, and can negotiate the exact terms of the contract at the end of the competition. This is extremely significant: design contests provide a compliant mechanism through which small proof-of-concepts can be converted into actual contracts for startups and innovators.

Design contests also offer many other benefits to startups. First, the rules governing application and submission requirements are much more flexible than in traditional procurement procedures. Startups can submit proposals to challenges in many forms, including by designing wireframes, sending a pitch deck, or even by developing an initial version of a solution by using mock-data issued by the public authority. Second, multiple startups can be awarded ‘prizes’, usually conducted at an awards ceremony, so even participants that are not awarded follow-up contracts can benefit from the programme.

GOVTECH POLSKA'S USE OF DESIGN CONTESTS REPRESENTS A MOMENTOUS STEP FOR GOVTECH - WE RECOMMEND AUTHORITIES IN THE UK TO TAKE INSPIRATION FROM THIS INITIATIVE

CASE STUDY - POLAND

GOVTECH POLSKA USING CONTESTS TO DRIVE INNOVATION

Launched in 2018, GovTech Polska is a cross-ministerial innovation task-force, operating within the Chancellery of the Prime Minister of Poland. Its mission is to develop new methods and commercial procedures for developing innovative public sector solutions, and establishing Poland as a leader in GovTech.

The objective of GovTech Polska is to drive greater collaboration between government and the county’s emerging digital economy. Indeed, unlike many other government innovation programmes, including the GovTech Catalyst Fund in the UK, GovTech Polska pledges to award funding and contracts specifically to ‘SME entrepreneurs, start-ups, and the scientific community.

As outlined above, a central part of its approach to innovation so far has been to pioneer the use of design contests in public procurement. This process was developed in partnership with procurement lawyers, technologists, and startup founders to design a process that was compliant with the OJEU directives, but which suited the needs of today’s tech startups.

So far, GovTech Polska has published five challenges with both ministerial and local government partners. These include using image recognition technology to help combat cross-border smuggling and designing a new technology-enabled system for managing municipal waste.
To harness innovation through procurement, government must act as an intelligent and capable customer. Moreover, government needs to be a demanding client, able to challenge suppliers to work in new ways and develop innovative ideas.

The greatest potential for innovation arises at the earlier stages of the commissioning process, when policy is designed and a procurement strategy is formulated. In the next stage, procurement officials draft specifications to let contracts according to the objectives defined by the commissioning team. The choice of an innovative solution is therefore dependent on how procurement personnel interpret the organisation’s goals. Once a contract has been awarded, there is limited scope to stray away from the finer details of the contractual agreement. As the potential for innovation is most pronounced pre-procurement, the acquisition process needs to involve a wide range of voices from the start.

To achieve this, we recommend that government creates a mechanism to integrate commercial specialists and technology experts into the commissioning decision-making process usually run by policymakers. This means that when a public authority plans to contract a technology product or service, it can engage more closely with the commercial function to produce a more collaborative resultant procurement procedure. Indeed, we recommend extending this practice to whenever a department or public authority issues a long-term strategy relating to technology or innovation.

Having cross-functional teams review the early technology commissioning process would enable procurement officials to be aware of the wider objectives of the department. Likewise, including technology experts will help procurement officials and policymakers to recognise overlooked or new technology solutions and design contracts which are more open to small, innovative businesses.

In Section 4, we described how silos between commissioners and procurement officials can often result in frontline bureaucrats being left out from strategic decision-making processes. Linking procurement to the objectives of other functions in the value chain will act as
THE GREATEST POTENTIAL FOR INNOVATION ARISES AT THE EARLIER STAGES OF THE COMMISSIONING PROCESS

CASE STUDY

PRESIDENTIAL INNOVATION FELLOWS A NEW MODEL FOR COLLABORATION

The Presidential Innovation Fellowship is a competitive 12-month secondment programme run by the US General Services Administration. During the fellowship, external technology specialists are brought into government to work on innovation projects across federal agencies. As a rule, all of the fellows must have a background in innovation in either the private or third sectors.

Since its creation in 2012, there have been around 140 participants in the programme, with previous partner agencies including the US Department of Veteran Affairs, the US Department of Transportation and the National Institute of Health (NIH). Fellows work on projects that can either be solely focused on one of the supporting agencies or on delivering technology that has a cross-agency impact for the federal government. Projects have ranged from the All of Us project at the NIH, which involves building the world’s largest biomedical data set to a Digital Health Software Precertification Pilot Program for the Food and Drug Administration.

In July 2016, the Presidential Innovation Fellows and 18F launched the Digital Acquisitions Accelerator, a six-month pilot programme aimed at helping to accelerate the adoption and dissemination of digital acquisition practices in the Federal Bureau of Investigation and the US Department of Treasury. During this programme, they coached cross-functional teams of contracting officers, developers, category managers, and product owners on modular contracting, lean-agile methodologies, and open innovation. The project resulted in the publishing of a Digital Acquisitions Accelerator Playbook to examine the current purchasing landscape and provide a set of guidelines to procuring custom software solutions.

Innovative solutions come from both sides of the organisational divide, with both senior policymakers and low or middle management staff acting as drivers of new ideas. The use of cross-functional teams will help ensure policy, project and procurement teams work together to foster innovation. In turn, it will help government adopt a culture of openness in the development and implementation of innovation policy.

an enabler to promote innovation through the articulation of closely aligned objectives and ambitions. Indeed, in the private sector, high-performing organisations often place an emphasis on aligning procurement efforts more closely with corporate strategic objectives.10

This will motivate procurement officials to feel ownership over the projects from end-to-end, and see the bigger picture. In turn, this will encourage buyers to be more innovative when seeking suppliers to government needs. This can therefore act as the first step to creating a more risk-friendly commercial environment.

There are currently too few incentives for procurement officials to make bold or innovative contracting decisions. To fix this, we recommend that government designs a new package of incentives and rewards to encourage officials to embrace innovation in public procurement.

Throughout this report, we have argued that a risk-averse procurement culture has stifled the government’s willingness to embrace new and unproven suppliers. Procurement personnel can have a tendency to maintain the status quo, which results in government favouring well-established incumbents over new and innovative solutions. To achieve a more startup-friendly environment, we need to see a step-change in the way procurement is conducted by commercial officials.

Employee motivation plays a key role in the success of procurement policy objectives. Currently, there is a lack of incentivisation for individual procurement officials to take risks and seek novel solutions to government challenges. In general, public sector buyers are not rewarded either financially or through career progression for procuring innovation.

The Government Commercial Function offers performance-related pay of up to 20% for employees in senior roles. The performance of procurement personnel is appraised according to their ability to secure value for money for the Treasury. However, there needs to be greater recognition for the innovation of commercial staff at junior levels. We recommend that PRP is extended across the government to motivate commercial and procurement officials to act more innovatively. Performance-related payment can help create a healthier attitude to risk.

Indeed, the private sector has long considered performance-related pay as an effective method to improve employee efforts. Moreover, better pay schemes can also help public organisations to attract and retain high-quality employees.

Bonuses should be accompanied by a highly visible award ceremony for buyers who take risks and seek innovative solutions.

The Treasury should provide the Government

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Commercial Function with a budget to launch an annual Procurement Innovation Prize to recognise procurement officials who have consistently acted innovatively to find and purchase solutions to a government problem. There should be a clear criteria for winners and rules should be easily conveyed to staff through regular internal communication from line managers and the departmental hierarchy. Individuals and teams should be nominated by government agencies. A buy-in from departmental leaders can help signal innovation as a key organisational priority area.

By rewarding successful innovators, awards can be an effective way to ‘nudge’ the way public officials behave. They can help stimulate more innovation in the public sector by inspiring public officials to experiment within their own organisations. In turn, this can help create Innovation Champions who other civil servants seek to emulate.

Rewards can also help inform public officials across government by highlighting individual examples of successful innovations. Awarded innovations should be written up as case studies by government to catalogue findings and lessons which can be used in training or to assist other public officials.

CASE STUDY

DWP USING Idea STREET TO DRIVE INNOVATION

In 2009, DWP found that many of its employees were given little decision-making power, and as a result, they were not engaged with their work. David Cotterill, a former Deputy Director of Innovation at DWP, told Apolitical: ‘Most DWP employees didn’t have a lot of autonomy - they would just have to follow processes. We wanted to find a way to make their voices heard’.

Previously, DWP had solicited ideas about workplace improvement from its 120,000 employees with suggestion boxes - an archaic process that led to little concrete action. To introduce a more interactive way for employees to share their suggestions, the department set up Idea Street, an online idea-exchange game.

’We were trying to subvert the decision-making hierarchy at DWP, which is a very hierarchical organisation. When frontline staff have ideas, they go to groups of committees, and nothing ever gets done. We were trying to allow people to actually implement their own ideas - which they did’.

On Idea Street, employees are rewarded for generating new ideas or developing colleagues’ suggestions with DWPeas, a virtual currency used to make trades in the game. A ‘buzz index’ lists the most popular ideas, and a weekly leaderboard email is sent to employees to generate excitement.

Thousands of ideas have been submitted, and some have been successful: a new way for employees to reserve conference rooms, or an app that analyses the DWP’s data storage. But altogether, they have generated almost £20m in efficiency savings.
Public sector innovation demands the combinations of multiple skillsets. As well as having strong commercial skills, today’s procurement officials need a deep understanding of technology markets to stay ahead of the curve of innovation.

Over the last few years, we have seen the proliferation of training programmes and activities across government, with many of them focused on improving the awareness and adoption of innovation in the public sector. This includes the recent launch of the Emerging Technologies Development Programme. Administered by the GDS Academy, this ten-week programme seeks to position civil servants with existing technical skills as specialist emerging technology advisors across government departments. After completion, specialists are seconded to departments to help advise them on the use of technologies in projects.

We agree with the recommendation put forward in the Technology Innovation in Government that this programme should extended across the public sector. Another welcome initiative is the Digital Buying Community, a network for buyers of digital, data and technology services across central government and the public sector.

However, we will not realise the potential of innovation in the public sector until there is greater commitment and investment into innovation-focused training. We recommend that these efforts should be coordinated through a single training mechanism.

To harness the potential of GovTech, we believe that government should set up a ‘National School for Technology and Innovation’, which offers technology training for individuals at every level of government. The Centre should provide technology and innovation training which aims to:...
Help officials to understand the emerging technology landscape, and how this will shape the future of government.

Share best practice for designing and purchasing technology products and services.

Allow officials to engage with front-line technologists, innovators, and startup founders.

Instruct officials on how to undertake ‘build-vs-buy’ decisions.

Create an open environment for testing new tools and skills.\(^\text{15}\)

Help government to achieve its wider strategy towards technology and innovation.

Take civil servants outside of their comfort zone to tackle traditional problems in new and innovative ways.

Encourage collaboration between agencies and functions across government.

Be a long-term process where individuals have opportunities to regularly update, review, and test their skills.

The training programme should include external contributors such as academics and researchers, but also workshops by startups, GovTech specialists and investors. This will enable frontline officials to interact with innovators, understand their challenges and priorities, and develop an informed understanding of emerging technology markets.

Classroom training should also be complemented by the roll-out of an ‘Innovation Toolkit’, a series of easily accessible online training resources on technology and innovation. Online resources can provide officials with case studies of innovation and data wherever their agency is based across the country.

Finally, on completion of their training, graduates should join a newly created ‘Public Sector Innovation Network’ which can help support the growth and development of innovative officials in a practical setting.

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\(^{15}\) This is motivated by the strong evidence that individuals can learn six to seven times more through practice and feedback than through lectures. For more, see: McKinsey. 2013. Government by design: Four principles for a better public sector.
METHODOLOGY

CONTRACT ANALYSIS

Below we detail our methodology and data sources used when conducting the contract analysis contained in Section 3 of this report.

STEP 1: COLLECTING DATA ON TECHNOLOGY EXPENDITURE

We used contract data mined by Tussell for the Department of Work and Pensions, Ministry of Defence, and Ministry of Justice. Tussell gathered this information from official procurement notices published on Contracts Finder and Tenders Electronic Daily (TED). We chose February 2015 as a starting point for our analysis as the government procurement data is more complete from this point onwards. This is a consequence of the Public Contracts Regulations 2015, which made it mandatory for public sector bodies to publish contracting opportunities above a certain threshold on the Official Journal of the European Union and on Contracts Finder. As the data extracted from Tussell only includes contracts above the thresholds, it does not include all spending undertaken by these departments.

Moreover, this analysis has not included an investigation of indirect spend by government bodies with SMEs due to a lack of accurate data available in the public domain. As the government relies on large suppliers to provide data on spend in their supply chains, it is difficult to determine how much of government expenditure on technology contracts went indirectly to SMEs. Nonetheless, the Crown Commercial Service found indirect spend with SMEs in 2016/17 accounted for over half of overall procurement spend with SMEs across central government.

We used contract data mined from government databases by Tussell and classified under CPV codes relating to the following terms:

CPV Level 1:
- IT services
- IT systems and software

CPV Level 2:
- Systems and technical consultancy services
- Computer-related services
- Data services
- IT services: consulting, software development, Internet and support
- Computer network services
- Servers
- Software package and information systems
- Local area network services
- Data-processing services
- Database systems
- Compliance software package
- Operating systems
- Programming services of packaged software products
- Industry specific software package
- Software-related services
- Data-processing machines (hardware)
- Computer support and consultancy services
- Networking software package
- Systems analysis and programming services
- Custom software development services
- Telephone and data transmission services
- Document creation software package
- Facilities management software package and software package suite
- Internet services
- Internet development services
(etc.)
The award notices provide data on the following:

- Name of contracting authority
- Name of supplier
- Date contracts was published
- Date contract was awarded
- Contract description
- Whether the contract ‘Suitable for SMEs’
- Whether it a framework contract
- Total award value - This is based on the total lifetime contract value (TCV) awarded in that period (not annualised spend)
- Supplier award count for a contract
- Start and end dates for contracts
- Supplier company registration number and SIC code

STEP 2: REMOVING EXTRANEOUS DATA

We went through every contract and removed those which we deemed as not for technology products or services. This included award notices relating to:

1. The recruitment of digital specialists or developers
2. Non-technology services misclassified under the above terms
3. Duplicate entries
4. Framework contracts

Many contracts had data fields missing such as the suppliers’ name or the value of the contract. Where possible, we looked at official award notices to fill missing data fields. We removed contracts where we could not find data on the supplier’s name and the overall value of the contract.

STEP 3: CLASSIFYING SUPPLIERS

We searched for every company to on Companies House to verify the details we had were accurate. Next, we used DueDil to determine the size of the company at the time the contract was awarded. Where available, we used publicly-accessible accounts.

We categorised these suppliers as micro, small, medium or large sized businesses, as defined by the European Union:

<table>
<thead>
<tr>
<th>Size</th>
<th>Staff headcount</th>
<th>Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro</td>
<td>&lt; 10</td>
<td>&lt; £ 2 m</td>
</tr>
<tr>
<td>Small</td>
<td>&lt; 50</td>
<td>&lt; £ 10 m</td>
</tr>
<tr>
<td>Medium</td>
<td>&lt; 250</td>
<td>&lt; £ 50 m</td>
</tr>
</tbody>
</table>

STEP 4: ANALYSIS

For each department, we compared the size of winning companies against whether the contract had been designated as suitable to SMEs. This allowed us to determine how effective the government is at classifying contracts for small businesses. Next, we disaggregated the SME spend to see how much money was won across micro, small and medium-sized businesses to determine the success of the smallest companies in public procurement. Finally, we compared the amount of spend won by SMEs against the total value of technology spend by government to understand the bigger picture. Consequently, we were able to confirm that government expenditure has resulted in market consolidation in public sector technology markets.
STARTUP SURVEY

Below we detail our methodology for conducting the survey of tech startups detailed in Section 4 of this report.

The survey was developed in Typeform and was sent to hundreds of UK GovTech startups. These startups were identified and contacted through PUBLIC’s internal startup networks, referrals via venture investors, the company networks of the FSB, Nesta and the IOD, and PUBLIC’s newsletter and social media pages.

The survey received 67 complete and valid responses after we had sifted through the responses to remove any inappropriate or inaccurate data. Responses were removed if they came from companies that: (i) were not legitimate startups, (ii) were not primarily technology companies, or (iii) had never tried to work with government. Every company was screened individually to ensure that it satisfied all of these criteria.

Questions were asked in a number of formats, with a combination of unstructured answers, yes/no questions, and Likert scale questions. Participants were asked the following questions:

- What’s the name of your company?
- Is your company based in the United Kingdom?
- Is your company a technology company?
- How many people work for your company?
- Has your company ever applied for a UK government contract?
- Has your company ever won a UK government contract?
- How do you keep up to date with government contract opportunities?
- On a scale of 1-5, how difficult is it to keep up to date with government contract opportunities?
- On a scale of 1-5, how difficult is it to complete a government tender?
- Which of the following, if any, do you think are the main barriers for startups and small businesses working with governments?
- Has your company ever applied to the G-Cloud framework?
- Is your company currently on the G-Cloud framework?
- On a scale of 1-5, do you agree with the following statement: ‘G-Cloud makes it easier for small businesses to work with government’?
- On a scale of 1-5, how difficult do you find working with government?
- Do you think working with government is more difficult than private sector customers?
- On a scale of 1-5, do you agree with the following statement: ‘Government needs to do more to work with startups and small businesses’?
- On a scale of 1-5, how concerned are you by how Brexit will affect working with government in the future?
- Would you be happy to schedule a follow-up interview at a later date?
BIBLIOGRAPHY

A-C


Artificial Intelligence Committee. 2018. AI in the UK: Ready, Willing and Able?


Cabinet Office. 2016. Procurement Policy Note: Legal requirement to publish on Contracts Finder.


Cabinet Office. 2019. Procurement Policy Notice - Preparing for the UK to leave the EU.


C-D

Survey of 677 Corporate Strategy Executives.


CIO. 2016. Startups and diversity driving innovation - 2017 CIO Agenda recommends new technology procurement strategy.

City AM. 2019. Number of firms paid late by Cabinet Office nearly triples since 2016 despite late payment crackdown.

City AM. 2019. The number of new tech startups in the UK grew 14 per cent last year.


Computer Weekly. 2016. UK government SME procurement policy - where it worked and where it has failed.


Consultancy.org. 2019. EU settled status application system branded ‘shambles’.


BIBLIOGRAPHY
CONTINUED

E-G

on Innovation Procurement.


GOV.UK. 2018. Digital and Technology Spend Controls.


GOV.UK. 2019. About - Defence Science and Technology Laboratory.


GOV.UK. 2019. CCS - Search frameworks.


G-I


House of Lords Science and Technology Committee. 2011. Public procurement as a tool to stimulate innovation.

HR Director. 2019. Looking ahead to the 2019 contracting market.


Loader, K. 2015. SME suppliers and the challenge of public procurement: Evidence revealed by a UK government online feedback facility.


NAO. 2006. HM Revenue & Customs ASPIRE – the re-competition of outsourced IT services.

NAO. 2013. Improving Government Procurement.


Oliver Dowden. 2019. Speech at CBI.


Open Contracting Partnership. 2017. Greater transparency in calls for tenders could save Europe billions

Pioneers Post. 2019. £49bn of government contracts unlocked for social impact.

Professor Chris Johnson. 2019. Evidence to the Science and Technology Committee.


PublicTechnology. 2018. Adzuna’s contract for government jobs service valued at £5.8m.


PublicTechnology. 2018. Digital Outcomes and Specialists 3 adds almost 1,000 suppliers.
BIBLIOGRAPHY CONTINUED

P-T

Public Technology. 2018. High demand for usage sees CCS more than double spending on new procurement platform.


Sir Michael Barber. 2017. Delivering better outcomes for citizens: practical steps for unlocking public value.

Spend Matters. 2018. Government spend with SMEs - target, aspiration or ambition?


Telegraph (Oliver Dowden - Minister for Implementation). 2018. 'Small businesses are the backbone of our economy'.

The Guardian. 2019. Interserve given ‘public contracts worth £660m in run-up to collapse'.

The Guardian. 2019. Labour ‘will ban’ outsourcing of public services to private firms.

T-Z


UKAuthority. 2018. YPO launches procurement chatbot.


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Mark Lazar | Head of Platform
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Twitter: @PUBLIC_Team
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