techUK

CIVICA

# Rebuilding our foundations

## Why the UK's digital innovation agenda needs a modernised baseline to regain momentum

# Contents

**Foreword** 03

**Executive summary** 04

**Section one** 06
The current state of UK public service technology — rediscovering our momentum

**Section two** 12
COVID-19 — emphasising an increasingly digital society

**Section three** 16
The future

**Section four** 19
Five steps toward public service technology success

**Conclusion** 21

# Foreword

## Georgina O'Toole, Chief Analyst, TechMarketView

**The UK Public Sector remains on a journey. Its mission to modernise public services by drawing on modern digital technologies has come a long way. But progress has been patchy. And there is a long way to go to achieve the highest levels of efficiency and effectiveness.**

We end 2020 in a very different place to where we started it. The COVID-19 pandemic has shifted attitudes to digital, data, & technology. Decision makers in Government – from politicians to senior civil servants – have witnessed technology being used for good. They have also witnessed solutions being implemented in extra quick time, as many of the barriers – or perceived barriers – to progressing with digital projects have been knocked down.

As this research highlights, with citizen expectations at an all-time high, we must keep up the momentum. There is an opportunity to accelerate digital transformation across Whitehall and the wider public sector. But if we are to continue to ride the current wave, at a time when the public purse is stretched, Government and suppliers must work together to ensure that maximum value is realised from future investment.

We will have to, as a matter of urgency, ensure we better understand the extent, location, and type of technical debt and tackle it; money will need to be released to fund new projects. And we will have to ensure that once in place, digital services are trusted and adopted by citizens. That will require building trust, particularly when it comes to the sharing of data. You only have to look at the private sector to see that people are much more willing to share their data, or to see their data shared, if they can see the direct benefit of doing so. And I am a big believer that the streamlining of services, something that a quarter of citizens surveyed in this research highlighted as one of the main benefits of digital technology, is the result that will get citizens onboard.

From personal experience, the siloed nature of UK Government leads to a high level of frustration in so many cases. With that in mind, we shouldn't lose sight of the fact that much citizen interaction happens in the wider public sector – in the NHS, in social care, in local government, in police, in education – and offering citizens a smooth journey requires a holistic approach. So, as is also highlighted in this report, a level of central co-ordination – particularly where data sharing across boundaries is required – should be carefully considered to drive further progress.

# Executive summary

**This has been a year like no other. The ways in which the UK works, the services its public sector has to deliver for the country, and how it engages with partners to help address the current crisis have all changed radically.**

In the words of Julia Lopez, Cabinet Office Minister responsible for the Government Digital Service (GDS) and the Digital, Data and Technology (DDaT) profession, we have witnessed "an unprecedented explosion in the demand for digital and online services". From HMRC's Furlough Scheme, to users for the Vulnerable Persons Services, and visits to GOV.UK, government digital presences have seen a huge rise in traffic.

We've also seen a significant change in our ability to move with speed to deploy and adopt technologies previously thought of as too complex or difficult. The reaction to COVID-19 has proven that it is possible to work in a more innovative and agile way. It has also shown that public service organisations are willing to work more collaboratively.

However, this doesn't mean that pre-existing challenges have disappeared. In fact, as this report outlines, the ongoing crisis has simply emphasised the increasing need to address them. Legacy IT, access to innovation, and getting more value out of public service data all remain high on the agenda. Legacy systems and applications in particular command significant resources and still represent about half of central Government IT spend. Plus, there's the issue of technical debt, where short-term decision-making has left many organisations paying for outdated, unreliable infrastructure. And that's before you consider that these systems can actually hinder innovation, as well as being a pretty sizable security risk.

Then there's the European Union Exit and the end of the Transition Period to consider. Come 1st January 2021, the UK will no longer bound to EU procurement regulations. With this comes the opportunity for a major overhaul of how government bodies procure goods and services, including IT and technology. But this needs to happen now. It can't be reactive, otherwise we run the risk of squandering the opportunity to solve major legacy IT challenges without breaking the bank.

In short, we're entering a period of major upheaval in the world of public service technology. But what does it mean for citizens and the users of these services? How do they feel about the current level of experience, and what do they expect government organisations to be able to offer digitally? More importantly, what can the public sector do now, and in the future, to address the challenges citizens face when accessing these digital government services?

# Executive summary (continued)

techUK partnered with Civica to understand how citizens perceive the current state of public service technology and digitisation agenda. Civica is a global company building smart software to help improve public services. Through this relationship, we surveyed UK citizens and engaged senior figures in the public sector and technology industry to get their perspectives.

The result is this report. It breaks down the survey responses and considers how public service technology organisations can, and should, build the services that meet the demands of UK citizens today.

In doing so, we can identify how the UK can build a strong baseline to regain its place as a digital leader in a tumultuous, disrupted and dynamic world.

# Section one

The current state of UK public service technology – rediscovering our momentum

It's now ten years since the launch of the report that led to the founding of the Government Digital Service. The decade since has witnessed both significant disruption and progression in public sector transformation. As well as the establishing of GDS, we've had the introduction of the Cloud First policy, the creation of the Digital Marketplace, a renewed emphasis on user centricity and the disaggregation of large IT and technology contracts. All of which helped propel the UK to the top spot in the UN's E-Government Rankings in 2016.

However, this progression was hard to maintain. Two years later we were fourth, and in 2020 we ranked seventh. In fact, the 2019 InCISE survey listed the UK 29th for digital services.

**UK's position in the UN's E-Government Rankings:**


It's little wonder that last year the House of Commons Science and Technology Committee's report into Digital Government expressed the concern that "the UK had lost momentum in its digitisation agenda". This sentiment was echoed in the Public Accounts Committee's November 2020 report into digital transformation in the NHS. It stated that *"Improving digital services is at the heart of delivering the NHS's Long-Term Plan, but it remains a huge challenge to deliver."*

However, the experience of 2020 has certainly shown potential for organisations to deploy digital solutions and adapt to new technologies.

So, where does that leave the current state of digital services in the UK? From a citizen perspective, the overwhelming sentiment is that it's satisfactory **but could do better.** When asked which statements best described their view on digital technology in the UK, 44 per cent of UK citizens said public services make good use of digital technology to enhance the lives of UK citizens but it could be improved more.

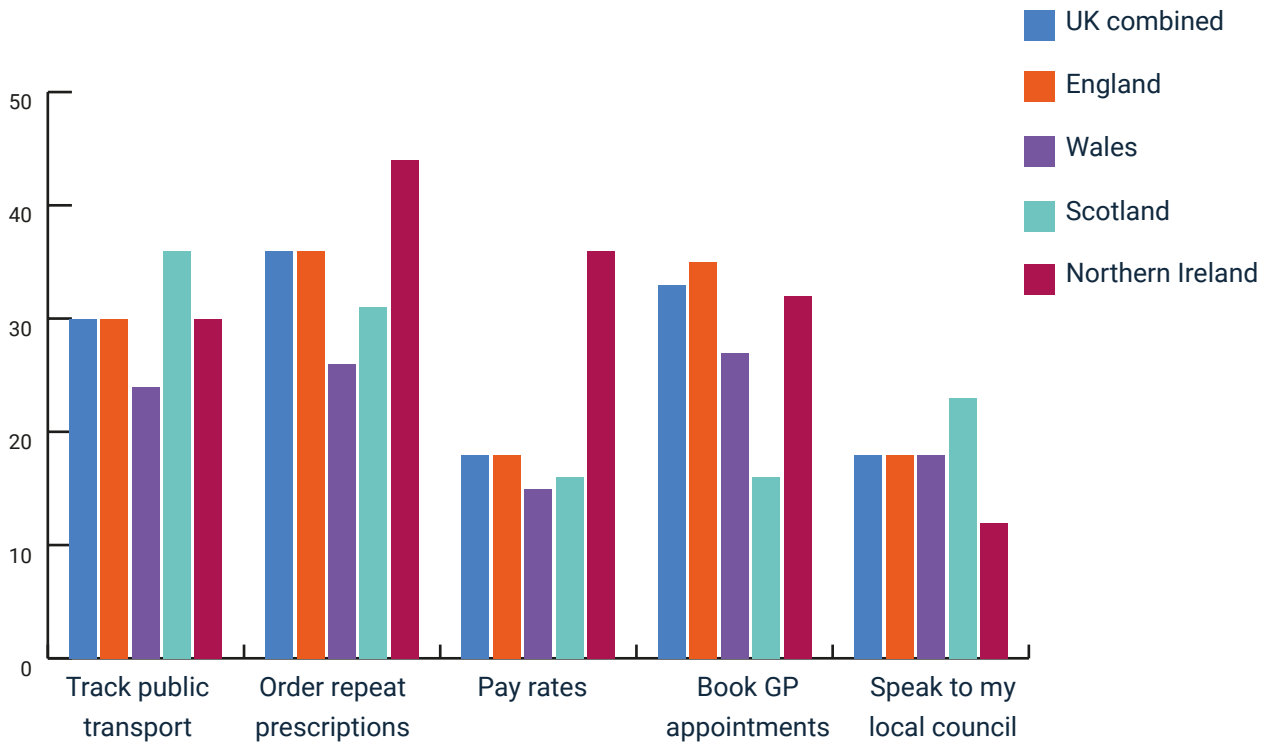
That sense of scope for improvement also came through in the feedback from senior figures. Their elevated perspective meant that they could see that overall progress has been made, but there are inconsistencies. As one noted, "*it has been done at different speeds, across different departments, with different levels of success.*"

Another expert, Lord Clement-Jones CBE, the Chair of the House of Lords Artificial Intelligence Select Committee and Co-Chair of the All Party Parliamentary Group on Artificial Intelligence, said:

> ***"We've seen good initiatives, such as the recent consultation on a national data strategy, the R&D roadmap, artificial intelligence and a number of sector deals, but overall we're still in the foothills."***

The varying levels of progress can be seen in how the different regions use digital services. As an example, close to half of those surveyed in Northern Ireland order repeat prescriptions online, with almost a third booking GP appointments online. In comparison, barely over a quarter of Welsh citizens order repeat prescriptions online, while just 16 per cent of Scots book GP appointments online.

## What digital services are citizens using?



So, what do citizens think is holding back the delivery of full online digital services? Infrastructure issues come out on top, with 38 per cent claiming that poor connectivity and infrastructure such as broadband capacity and public Wi-Fi is the biggest challenge. When we consider the impact of legacy IT, these figures highlight how technology challenges are not just an issue for government departments; they have a direct impact on citizens themselves.

These themes also emerged strongly from interviews with experts. The consensus seems to be that while front-end transformation has powered ahead in recent years, transformation of back-office tech has lagged behind. Those are the systems that really need to be improved if proper transformation of services is to be delivered. As one expert said: *"We're starting to hit the limit of front-end work that can be done without fixing the back end."*

## Building a consistent baseline: the data challenge

Tackling the legacy estate and technical debt is crucial to driving forward public sector transformation. Recent Government and industry efforts to understand, diagnose and ultimately address the issue are welcome. But rather than just focusing on large-scale transformation, we need to look at the immediate challenges with the technologies we're using now.

Currently, more than a third (36 per cent) of respondents had concerns around data sharing from the Government or public service providers. Without a common framework and reliable technologies to underpin it, we won't be able to win citizens' trust. But ultimately, public services will only be able to do that once we've tackled these legacy tech issues. Focusing on modernising legacy applications and increasing investment in these areas not only allows for the better use of data, but can lead to more personalised public service delivery, better informed policy making, evidence-based decision-making, and improved value for taxpayer money.

The lack of interoperability between systems, and uncoordinated or siloed departmental approaches also emerged as major issues throughout our research.

Several of the public sector leaders we spoke to raised concerns about cooperation and coordination between departments. One person said:

> ***"The problem is departmental resistance. There needs to be an overarching strategy, as individual departments have competing priorities and philosophies about the use of technology and data."***

Without this consistent baseline, departments will struggle to share data effectively and make insight-driven decisions about how to better improve the services they're providing.

## Lack of digital skills is a major obstacle to modernisation

A noticeable digital skills gap was also highlighted as a major barrier – for both citizens and public service workers. Our research showed that a lack of IT and computer or digital skills was an issue for 26 per cent of all citizens surveyed. Interestingly, this was less of a concern for the youngest age group (18–24), with just 16 per cent raising it as a problem, compared with nearly a third (31 per cent) of 35–44 year olds.

This issue extends beyond individuals' abilities with technology and includes the digital commercial skills gap. As technology evolves at an increasing rate, it requires different commercial management abilities than those required to procure more traditional items. As one interviewee summed it up, *"buying software as a service is different to buying a box of rubber gloves"*.

One area that experts highlighted was the lack of challenge-based procurement approaches across public services. Rather than completing lengthy tender documents and asserting competencies, vendors would have to demonstrate their abilities through the demonstration of relevant tasks, such as simple coding to briefs. This type of procurement can allow for much more innovation, as not only does it demonstrate skillsets, but also helps to determine feasibility of what is being asked and helps to broaden the supplier base.

### What are the main benefits that digital tech can bring to local communities?

| 25% | 20% | 18% |
| --- | --- | --- |
| Streamline services | Improve the lives of citizens | Connect the community |

More than one public service leader noted that coordination is improving in a number of areas: the ability for a citizen's DVLA image to be used for a new passport, and Tell Us Once, were cited as good examples of joined-up working. These are great examples of simplifying technology to deliver improved services. But, they also highlight other areas which require improvement.

What's worrying is that nearly a quarter of UK citizens said they do not think there is a main benefit that digital technology can bring to their local community. This showcases the need to educate citizens on the benefits of digital technology, and its applications within public services.

In fact, this need for education came up repeatedly. Senior officials noted that as well as improving citizen knowledge, it was also needed with the public sector itself. This was particularly critical where the introduction of technology such as automation could be perceived as threatening livelihoods. But the public sector may struggle to close the skills gap if it continues to invest in platforms and technologies that are hard to learn and maintain.

# Section two

COVID – emphasising an increasingly digital society

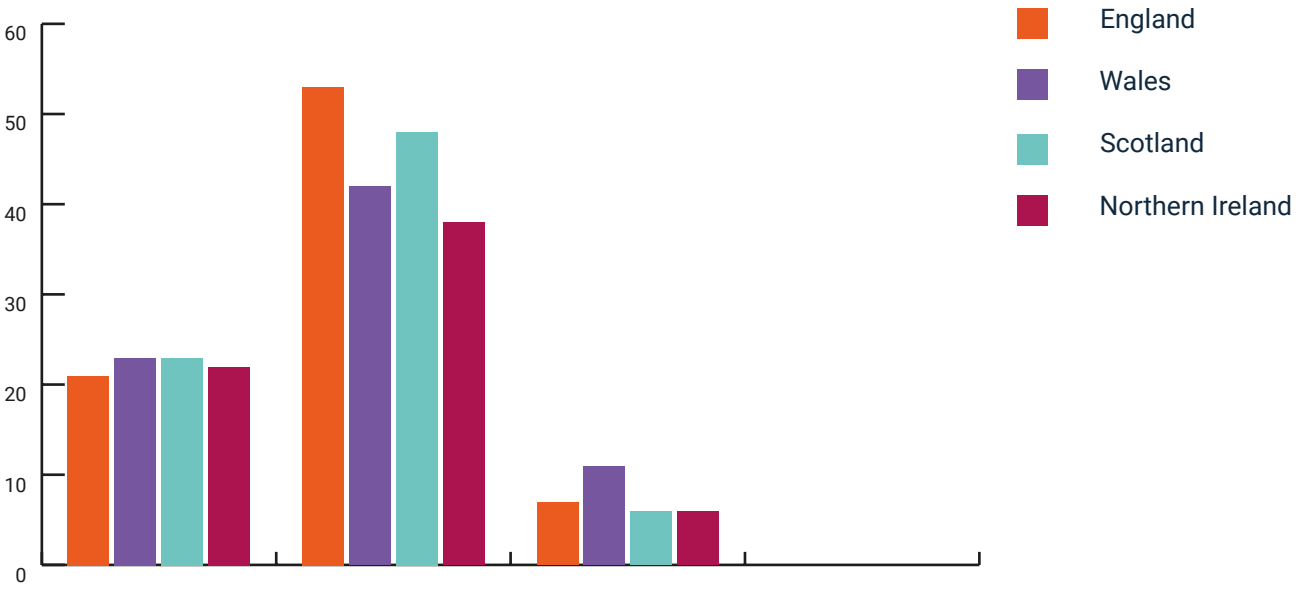
Of course, 2020 has been dominated by one issue above all others – COVID-19. How then has the coronavirus influenced behaviours? Certainly, anecdotal evidence and results from the private sector (particularly in areas such as e-commerce and payments) suggest that the way citizens are using digital services has radically changed.

When looking to public services, however, our research showed that just over a fifth (21 per cent) of people interacted with public services online more, following the onset of COVID-19 and lockdown. The use of digital services has stayed about the same for over half (52 per cent) of the respondents. This highlights that a large proportion of people were already interacting with public services online before the pandemic hit – and that is unlikely to change.

Younger generations are more likely to have increased their interaction with public services online. This is evident by 35 per cent of 18–24 year olds interacting with public services online more, compared to 20 per cent of 34–44 year olds and 15 per cent of 55+ year olds.

However, this shouldn't be taken as older generations not using technology. As Civica's 'A Word from the Wise' research notes, the over 70s are becoming increasingly tech savvy. Nearly three quarters own a smartphone, with two thirds using it at least once a day.

## How COVID-19 has influenced our use of digital services




## Digital perceptions

Use is one thing, but how has the public's perception of government digital services changed? Not by much the results suggest. While 19 per cent said their views had changed positively, 18 per cent said that they had a more negative view of public services as a result of COVID-19. 51 per cent reported no change in perception of public services at all. This tells us that the issues and challenges of modernising public service technology will still be there once we are through this crisis. We can't hold back on addressing these issues once things 'go back to normal' – we need to keep up our momentum.

While citizen behaviours may not have changed as dramatically as expected, COVID-19 has still had a significant impact on the internal workings of public service technology.

In line with the sentiment expressed earlier by Julia Lopez, the overriding theme from senior figures was one of acceleration. Automation technology adoption and greater understanding of why and how emerging technology can help were most prominent. The short-term gains have been in using automation to solve tactical problems. But there's a clear realisation of where it can be deployed in other areas. One respondent summarised the prevailing mood when they said:

> *"We are now six to twelve months ahead of where we otherwise would have been."*

There's an understanding that COVID-19 has proven things can be done differently. That government can be more agile. However, it has also identified two major lessons:

1. **There is the need for improved data sharing.** Getting more value out of data within public services has been a concern for many years. The pandemic highlighted the shortfalls in knowledge around how data can be shared. This will be enabled by a better understanding of rules and regulations around data trust and principles of sharing.

2. **Innovation is about process as much as it is about having the latest technology.** Again, concern around legacy IT is not new, but more figures within public service organisations realise that just as tools are updated, so too are the ways and approaches in which they are used. This is new ground in many respects. One interviewee noted that *"fear-based inertia"*, of not wanting to do something wrong so not doing anything, was prevalent. This hampers the introduction of new approaches which could stimulate innovation. Whether the pandemic will help address the issue in the long term remains to be seen.

# Section three

The future

What does the future hold? Fundamentally, it can be split into two distinct parts. What we need to do in the next six months, and what could be achieved for the future if we continue to build a strong foundation for digital public services.

## Right now

Across the public sector, there has been a change in our attitude toward deploying technologies, with agile approaches being found to overcome perceived barriers to transformation. Digital technologies deployed during the pandemic are great examples of our ability to work more collaboratively and at pace to deliver lasting change that benefits citizens. For example, the Department of Health NI's COVIDcare NI app, was developed by Civica and Big Motive in just two weeks to safeguard citizens. This speed, momentum and these collaborative ways of working should continue.

The next six months will bring a once-in-a-generation opportunity to overhaul how Government acquires technology. This comes at a point when addressing legacy investments and modernising existing IT portfolios and application estates is critical. There's also the need to tackle technical debt – to mitigate security risks and enhance government's capability for better data sharing and delivering service improvements. Now is the time to build the foundations, to set a future-proofed baseline.

Why? Because with so many systems currently outdated, deploying new and emerging technologies will be increasingly challenging – and costly – unless they are addressed as a matter of urgency.

In doing this, we can also look to close the skills gap facing public sector organisations. Providing more modernised platforms and technologies that are easier to adopt, maintain and use allows departments to focus time and investment on the digital service improvements that citizens are calling for.

## 2021 and beyond

Once that infrastructure is in place, thoughts can turn to the deployment of emerging or innovative technology solutions. And there's immense appetite from our experts for this.

As our research showed, the pandemic may have accelerated its adoption, but senior figures were keen to point out that automation was seen as the future of public service technology long before anyone had heard of coronavirus.

Many see automation as having major potential, far beyond the likes of robotic process automation (RPA). Although as one interviewee stressed, RPA is "*brilliant for addressing legacy systems*".

The introduction of the Automation Framework blueprint is a sign of government commitment to the technology. It will also support public services to implement standardisation and avoid the silos and lack of coordination that have historically plagued implementations.

Government focus on emerging technology is not limited to automation, however. Artificial intelligence, and the ethics of its use, are also on the agenda. There is an understanding that for all its benefits, significant education will be required, with AI carrying even more negative connotations than automation.

As one public sector leader put it:

> ***"We need visionary leadership, and we need citizen trust. Do we have it? At the moment, I'd say not. And if we can't get citizens to trust us with their data, then we can't get the data we need to run these technologies and applications effectively."***

## Consumer confidence in government implementation

But how confident are users in the government's ability to deploy these tools effectively? To put it bluntly, not very. Given the points made in this report – this isn't surprising.

> ***"Confidence in public service technology is low. 41 per cent of the UK public are not confident in government's ability to deploy emerging technologies effectively compared to only 30 per cent who are."***

This again points to the need for education. We have to improve understanding from both public service employees and citizens on how emerging technologies will actually deliver greater benefits for all.

As previously highlighted, within public services there remains a concern that automation equals job losses. It should be seen as a route to better job satisfaction, freeing up employees from routine processes (currently hampered by legacy IT) and aiding the better deployment of resources, especially in sectors such as assistive living and care. This in turn has a direct impact on the level of experience the general public receives. And this is a link that many citizens would currently struggle to make.

# Section four

Five steps toward public service technology success

To support public services in incorporating these findings, Civica and techUK have developed a five-point plan. This draws on insights from our research to provide a starting point for public service technology success.

1. **Understand your audience.** One of the most notable points to come out of the research was the alignment between experts and the general public. It's clear that an increasingly tech-literate public is not going to accept poor experiences. Government and public service organisations need to be able to deliver services at scale. This has to be done in a tailored manner which meets the varying of different demographic and geographic groups.

2. **Prioritise based on relevance.** To meet citizens' expectations to further improve digital services, public services need to identify and prioritise what services should receive the greatest share of investments. What systems and technologies can be modernised quickly, securely and effectively, and which will deliver the most benefit to end-users and of course to citizens?

3. **Tackle technical debt.** Of course, we need to consider the long term. But before that, there needs to be a trusted source of data which can inform decision-making for procurement of new technologies. Establishing a "Public Service Technology Technical Debt" register alongside targets for these systems would enable public service organisations to explore quick and low-cost wins to both 'pay back' this debt and get more from existing investments.

4. **Coordination is key.** A lack of coordination across the civil service was a consistent sticking point in our research. Delivering a cross-departmental model for the Civil Service Digital Workplace, that draws on best practice, is critical to ensuring that decentralised working does not become an obstacle to delivering innovation and public service technology success.

5. **Lead with transparency.** Many respondents queried the lack of vision and leadership. One expert highlighted the need for what he called "*a central office for tech*", providing direction and guidance. To that end, Government should look at publishing a UK Public Service Technology Road Map for the next three years. This could help both experts and citizens see how services are evolving to deliver better experiences and provide guidance on what systems and technologies can be modernised (and how).

## Conclusion: Public service technology in 2021

What Civica's research and our conversations with senior leaders consistently demonstrated was the need for education. By being clear on how technology is helping, public service bodies can help improve understanding of what services are available. As well as how they can be accessed and how their implementation positively impacts individual citizens and the wider community.

The coming months will remain turbulent for everyone. The EU Exit, further lockdowns, potential continued disruption and digital leadership within government are all continually in flux. This offers both challenges and opportunities to restart the UK's momentum as a digital leader. To make a difference to the lives of citizens, we must address the current challenges of legacy IT and technical debt now, to lay the foundations and investment for significant service and platform improvements. This is the only way to ensure the proper deployment of digital services and emerging technologies and to deliver immense value to all.

> ***The UK has a once-in-a-lifetime chance to reimagine what a technology-literate public service can deliver for its citizens.***

## About the research

This paper was sponsored by Civica. Censuswide surveyed 1,004 UK citizens aged 18+, weighted to be representative by population of England, Scotland, Wales and Northern Ireland in September 2020. The research was supplemented by insights and expert interviews with senior digital and commercial leaders from across the public sector tech supplier community, Central Government departments, and local public services, and Parliamentarians conducted in the same time frame.

## About techUK

techUK is a membership organisation that brings together people, companies and organisations to realise the positive outcomes of what digital technology can achieve. We collaborate across business, Government and stakeholders to fulfil the potential of technology to deliver a stronger society and more sustainable future. By providing expertise and insight, we support our members, partners and stakeholders as they prepare the UK for what comes next in a constantly changing world.

## About Civica

Civica is one of the UK's largest software companies, with over 30 years of proven expertise in delivering improved outcomes for public services around the world.

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