Navigating the UK landscape:

A Low-Code Approach Can Propel The Public Sector Forward

Foreword

Following the disruption of 2020, the arrival of 2021 was greeted with much optimism across the UK. Unfortunately, COVID-19 and the added complications of Brexit has seen our lives and livelihoods continue to be met with uncertain change.

The public sector has been far from immune to this. But given the dependence on public services, more than any other parts of society and the economy, this double-shot of disruption has brought into sharp focus the role, scope, and effectiveness of local councils and central government in the UK.

To keep up with the urgent needs of the public, the government has entered a chapter of deep, essential transformation. In many ways, technology has emerged as an unlikely hero in this difficult saga, with its role in driving the modernisation of public services to meet the demands of an increasingly digital world.

But if the past two years have taught us anything, it's that change is our only constant – and more unknown challenges linger on the horizon. Once again, technology will have a pivotal role to play, but legacy tools are inefficient and monolithic tech stacks are costly. So, how can it keep on meeting the growing requirements of digital public services, especially in the wake of shrinking budgets and ongoing skills shortages?

To better understand the challenges faced by the UK's central government, police forces, unitary authorities and local councils – and how they endeavoured to overcome them – we gathered insights from more than 250 digital, technology, and corporate decision makers across the public sector.

Our findings have been collated in this research report, to highlight the valuable lessons learned from Brexit and COVID-19. Complete with a look at the ways low-code is enabling the public sector to transform digital public services and better meet the needs of the public.

By understanding how the two forces of Brexit and COVID-19 have reshaped the role of digital and technology for public services, we hope this will enable you to deliver the strategy you need, while ensuring you're prepared for whatever comes next.

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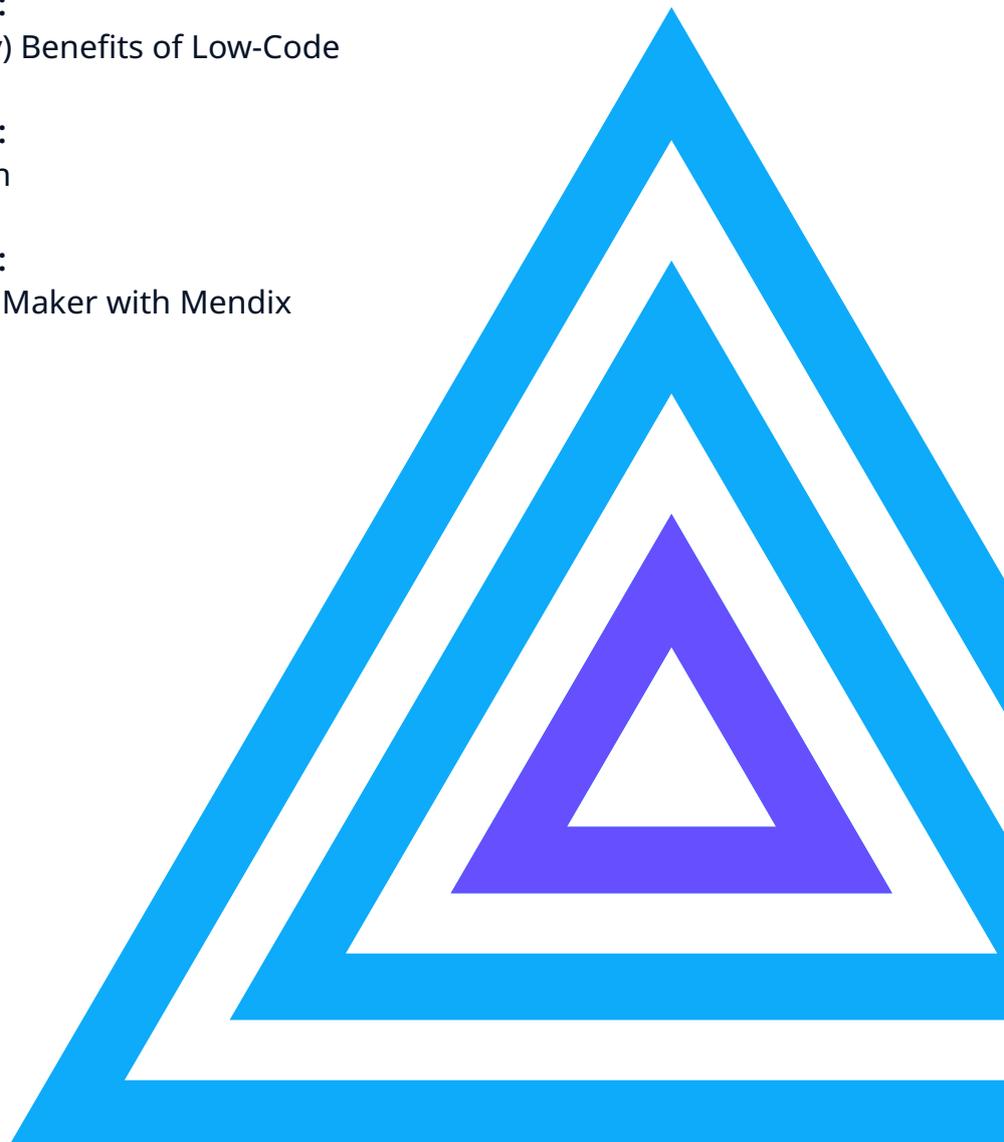
Chapter 1:
Preparing for Brexit

Preparing for Brexit

Organisations have been aware of how Brexit could impact the public sector for many years, so it's no surprise organisations haven't been standing still.

In fact, just over half (53%) had invested more in their organisation as a result of Brexit, with 55% also changing their digital investment priorities. It's likely for this reason that almost two thirds (60%) felt prepared to deal with the increased costs and complexities due to Brexit, and 61% felt ready to meet changing rules and regulations.

Similarly, over half (55%) also believed they were well prepared to guarantee data sovereignty rules were adhered to, which was likely as a direct result of the 54% that changed the way they store and manage data in response to Brexit.

61%

number of organisations that felt ready to meet changing rules and regulations

But that's not to say the sector wasn't aware of the substantial affect Brexit would have on data privacy issues, with just over half (53%) stating how they believed it would make it harder to securely and legally manage consumer data.

In addition, over half (54%) were confident their organisation would be able to change its processes quickly enough to comply with new regulations post-Brexit, leaving a substantial number less sure of their agility.

Either way, it's clear technology played a crucial role in preparedness – with a majority of organisations (55%) investing in new digital tools to navigate the changes brought about by Brexit.

For all its disruption, COVID-19 also inadvertently contributed to this preparedness, with almost two thirds (60%) reporting how the investments and changes made in response to the pandemic actually helped them prepare to be more digitally agile in the future.

Digital's Role in Navigating the Pandemic

Of course, Brexit was just one of the factors at play. On top of this, public sector organisations found themselves having to juggle the seismic, sustained impact of the pandemic on the public – adjusting their ways of working and innovation cycles to support the urgent needs of society.

By the time of our survey, British businesses and organizations in the public sector had spent the best part of a year shifting their operations to respond to the pandemic, while also preparing for the transition from the EU. In many instances, the answer to both challenges was digital and technology.

This was all but confirmed by our survey's findings that a majority (62%) of respondents said the pandemic had caused them to invest more in IT and digital technologies. Only reinforced further by the 62% that deployed new technologies and processes directly as a result of COVID-19.

62%

But beyond simply investing in and implementing new technology and processes, speed was very much of the essence, with almost two thirds (60%) believing the pandemic deemed it more vital to transform digital public services as fast as possible.

number of respondents that invested in IT and technologies due to pandemic, and number of respondents that deployed new technologies and processes directly as a result of COVID 19

The Changing Role of Digital Services

Just as 2020 changed our relationship with technology, the way public sector organisations view and work with corporate departments supporting digital services has shifted significantly too. Given the critical role of digital technology in helping to prepare for and navigate the changes caused by COVID-19 and Brexit, this shouldn't come as a surprise.

And judging by our survey, it hasn't, with a majority (63%) of respondents agreeing how the role of digital public services has fundamentally changed in the past year. With this change perhaps best defined by the almost two thirds (61%) who say that digital technologies have played a more strategic role due to the pandemic and Brexit.

Either way, the impact of corporate services enabling digital public services can't be understated, with the majority (62%) of respondents believing that digital services are more important now than ever before. And it's likely this importance won't waver anytime soon, with the majority (60%) of public sector organisations also providing digital services with extra budget to prepare for the long-term impact of COVID-19 and Brexit.

But with this importance (and power) comes more responsibility. And more than half (59%) of respondents admit that – largely owing to the pandemic and Brexit – digital services are now expected to modernise core services and improve operational efficiency faster. Most likely in a bid to counteract the perceived lag in digital transformation that's felt by more than half (52%) of public sector organisations.

Looking Towards the Wider Public Sector

Despite this added burden on technology and digital services, it looks like they can at least rely on the support of the wider business to meet the evolved expectations around new systems and software. As alluded to by almost two thirds (60%) of public sector organisations that say there's been more collaboration across their organisation to deliver public services in the wake of the pandemic and Brexit.

Recent investments in new digital projects and tools are a clear indication of this. With more than half (57%) of respondents saying their organisation has adopted technologies that empower employees to develop and implement their own business applications accompanied by integration to enterprise systems.

2/3

of public sector organisations say there's been more collaboration across their organisation to deliver public services in the wake of the pandemic and Brexit

But on top of this, today's increasingly digital – and volatile – landscape has also seen organisations invest in internal collaboration (31%), supply chain management tools (32%), risk and compliance management tools (33%) and an online customer portal (39%).

Making the Most of Existing Staff Remains a Priority

Along with the pandemic, Brexit has acted as a catalyst, prompting the public sector to address its digital needs. Investing in more technology at a faster pace has become a priority (as seen above) – but equally as important is the ongoing journey to ensure the whole organisation is collaborating as effectively as possible to deliver efficient public services.

Fortunately, organisations weren't starting from scratch and have been able to rely on a strong foundation. Mainly owing to the fact the majority (59%) of respondents agreed the people within their business are more tech-savvy than they were a year ago.

Even so, there was still work to be done – and back in December 2020, almost two thirds (62%) of public sector organisations had already begun training employees for new digital jobs, processes, and tasks. Once again, however, there's still a heavy dependence on a single corporate department for IT and technology, with a majority (57%) stating how the department needs to work with the rest of the organisation to improve these digital skills.

Chapter 2:
Spotlight on Central Government, Local Government & Police Forces
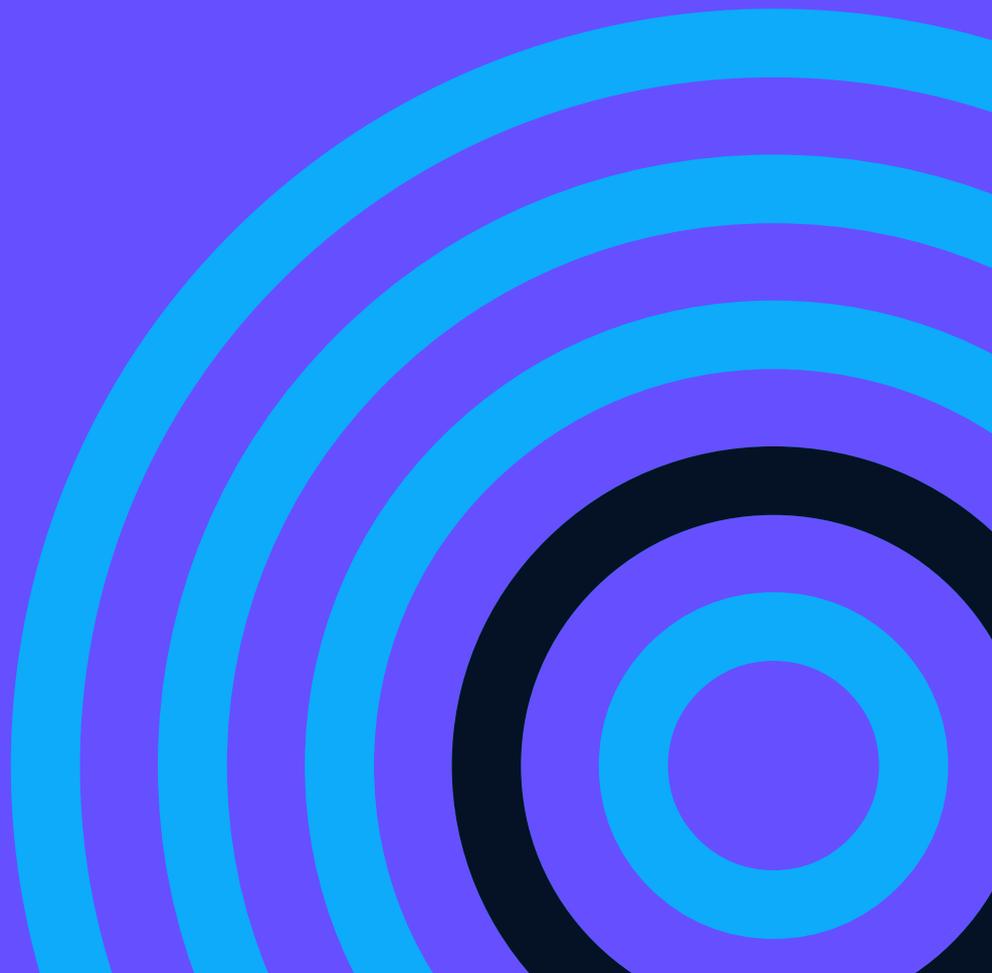
Central Government

Public sector organisations have been critical in enabling the UK to cope with the COVID-19 crisis and Brexit. But, unsurprisingly, the burden – and critical eye(s) – on central government has been far greater than its counterparts across the sector, requiring innovative technology solutions, delivered at pace, to address the evolving needs and expectations of the public.

The UK's Government Digital Service (GDS) is a testament to this, with its ongoing mission to design and develop a simple, joined-up, and personalised government experience for everyone. Not forgetting the Central Digital and Data Office (CDDO) and its commitment to supporting digital, data, and technology transformation at scale.

IT departments have of course been instrumental in driving these digital initiatives. But, as revealed by our research, they're under pressure to deliver more digital projects, even faster than before, to meet the needs of the public in an increasingly digital world. However, this has become near impossible due to shrinking budgets and ongoing software skills shortages.

In response, the Civil Service is forced to consider new ways to transform digital public services to better meet the needs of the public, improve data management, and increase their use of new technologies, such as automation.

Increasingly, the UK Government has recognised that low-code can help take the pressure off and has invited proposals for innovative platforms and software for digital public services that include low-code platforms. Their shared vision is to deliver more user-centred, cost effective, local public services through open, collaborative and reusable work.

Part of UK Government's response to COVID-19, the government needed to track contracts for suppliers to register, submit availability, lead time and pricing for subsequent review, approval and ultimately purchase. This is a great example of low-code in action. Mendix Expert Services Team worked alongside civil servants and their technology professionals to deliver an end-to-end solution to support the specified process and manage supplier communications.

The result was a successful project delivered within an urgent four-day timescale, providing the required capability, improving speed and efficiency of supplier onboarding and equipment distribution. Following the app's success, the UK Government has proceeded to create a number of apps using Mendix low-code, that have replaced complicated spreadsheets recording details, tasks and approvals, to provide a more productive and less cumbersome solution.
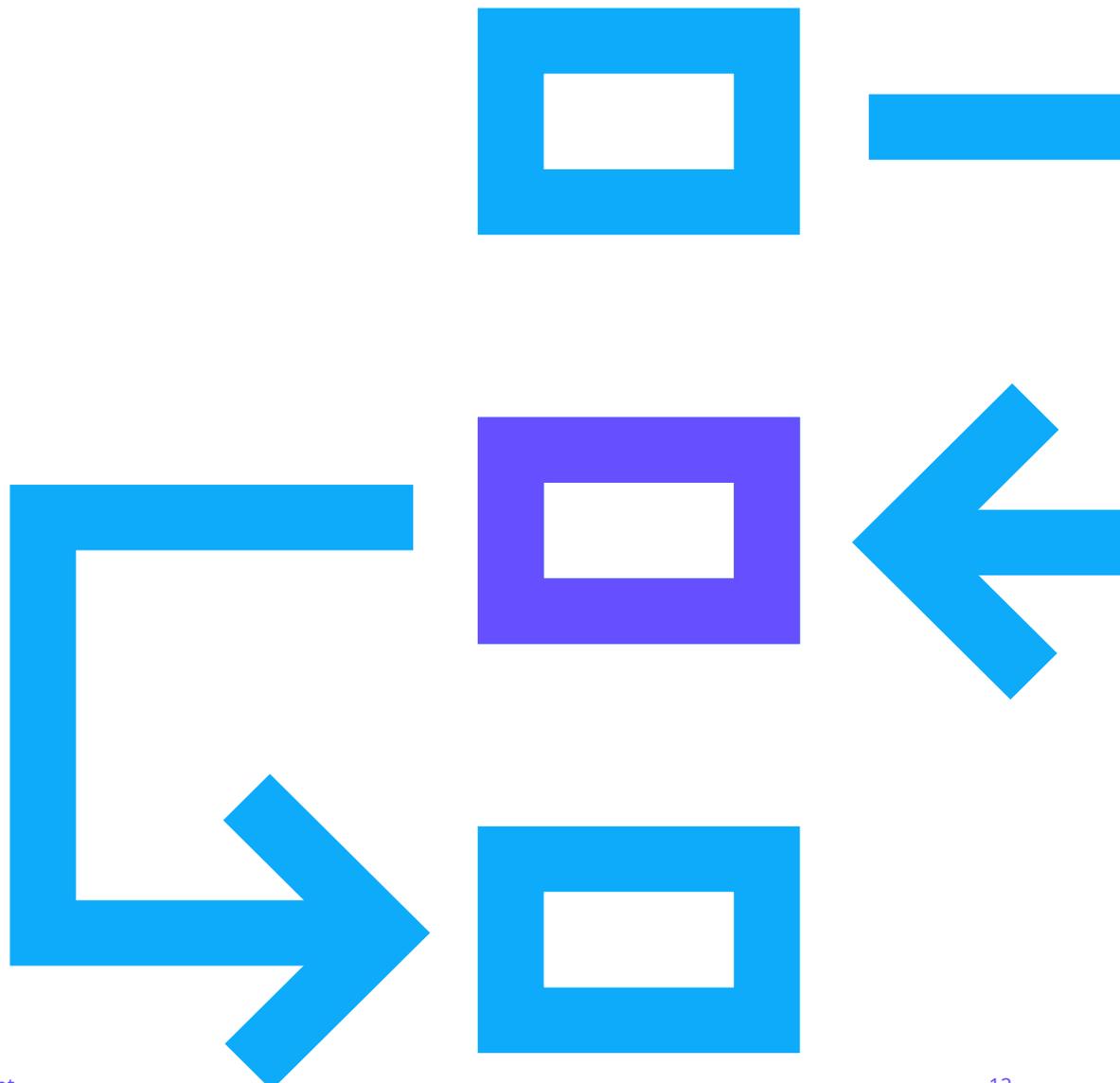
Local Government

Local government has also played a key role in keeping communities safe and informed throughout the pandemic. Overnight, local councils were forced to set up remote working for their employees, while dealing with extraordinary demand for services from local people and businesses – and this was only made more complex in the wake of Brexit.
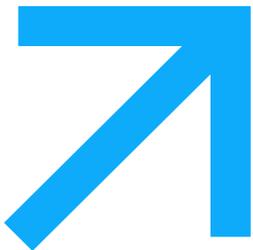
By investing in digital transformation of public services, councils were able to respond and build trust with the communities they serve. But as we enter the new year, there's a need to continue the pace of this modernisation as local authorities strive to address digital inclusion and improve multi-agency coordination between local government, healthcare, and the voluntary sector for effective digital public services.

However, the road ahead is far from straightforward – and digital public services will need to be designed and delivered at pace to navigate change and meet the needs of local residents and businesses. But this comes against a backdrop of sustained cuts in spending, alongside the same coordination and legacy tech challenges that are hampering the wider public sector.

24h

in just 24 hours the Knowsley council built an application to support their local community

IT teams must build on the innovative foundations that were forced by necessity to optimise operating models, service delivery, and ultimately engage citizens through digital public services. But they can't do it alone – and like we've seen in central government, low-code is quickly emerging as the answer to drive local government forward.

Knowsley Council is one great example of a local service provider that used low-code to adapt to the increased demand from its residents and local businesses. In just 24 hours, the council built an application that enables Knowsley residents to request assistance or volunteer their services to support their local community.

This application connected people who need help with the people who can help – providing support for 7,000 vulnerable residents. This includes Knowsley Council residents who fall in the shielded category – those people who need additional support because they live alone or need to self-isolate for health reasons.

Police Forces

The UK's police forces are essential for maintaining public safety. But their role today extends far beyond just fighting crime, with the need to build and nurture strong relationships of mutual trust between the police in a multi-agency setting together with the communities they serve.

It's no secret this relationship was severely tested as socio-political movements and public pressure rose to the fore during the pandemic. But even before the start of the crisis (and Brexit), police forces were facing an uphill struggle to ensure public safety, while dealing with sustained cuts in public spending.

In 2021, as the thin blue line continued to get thinner, police departments have been turning to digital technologies to streamline their services and lower costs. But in the process, this has also helped transform the way policing is delivered – taking police officers away from desks and bringing them closer to communities and crime scenes.

3000

police officers so far are now able to record notes and pictures on their mobile device through a new application

Digital transformation across police forces is already well underway, but the onus is now on maintaining this momentum to protect the public, empower communities, and prevent crime before it happens. However, as we've seen across the public sector, significant digital change is difficult due to the constant roadblocks of low budgets, lack of time, and collaboration challenges.

This is where low-code can have a huge impact with minimal physical and fiscal investment, to propel police forces – and the communities they serve – forward in 2022. Below are some of the ways this is made possible.

Mendix recently worked with a UK police force to roll out an application that replaced police officers' notepads. Instead of having to take incident details down using pen and paper, officers are now able to record notes and pictures on their mobile device. This application has been rolled out to over 3,000 officers so far, with another 2,000 gaining access in the near future.

This application is particularly impressive for a number of reasons. Firstly, it is a native mobile application contained in the private cloud. But also due to the nature of the application, it has to work offline without saving anything to the device itself. These are obviously complex features of an application that were only made possible because of low-code.
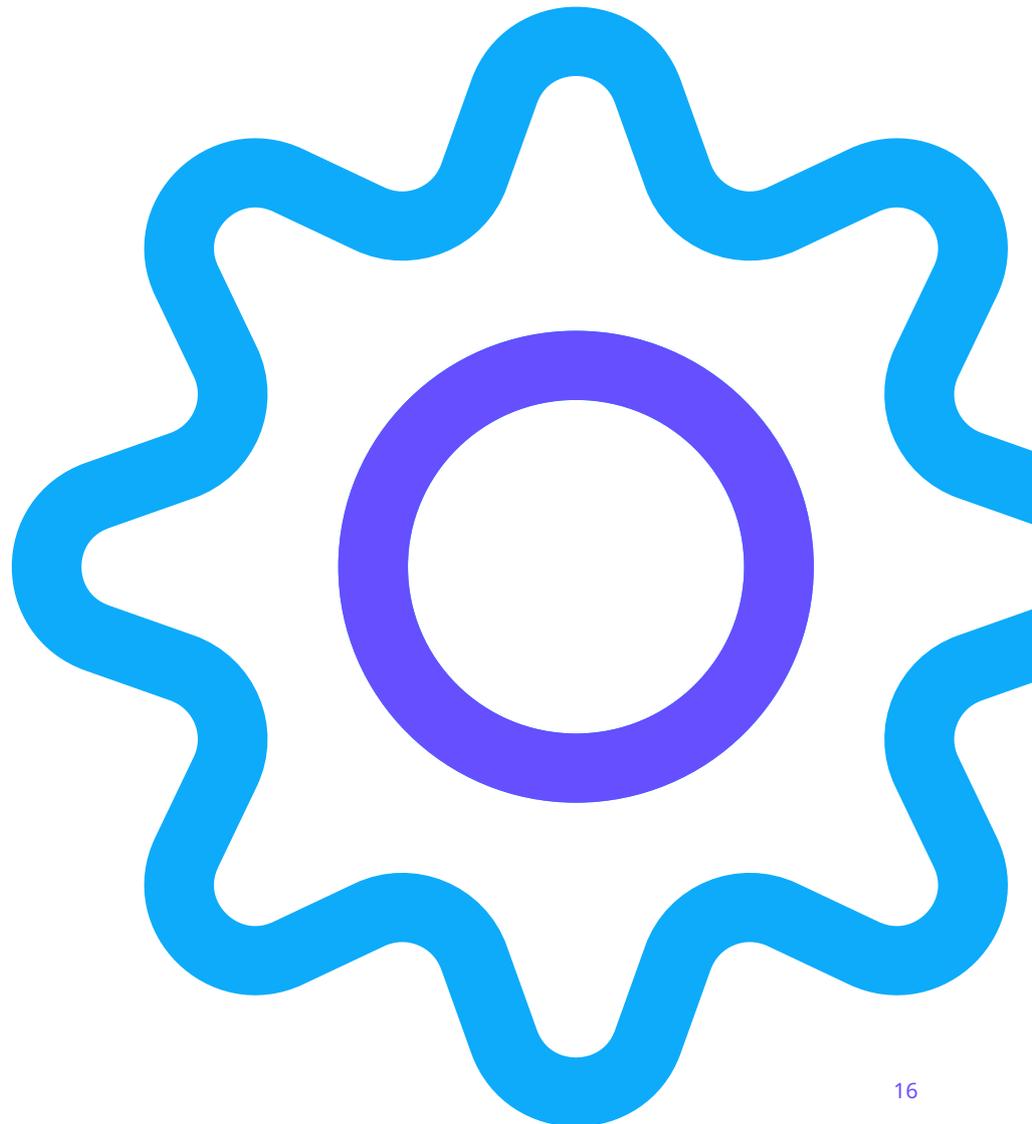
Chapter 3:
The (Many) Benefits of Low-Code

In response to the challenges faced by police, and local and central government, low-code can be the key to cost-effectively modernise core systems, improve operational efficiency, engage citizens, and deliver digital public services that meet the needs of businesses and the public. In this chapter we explore how, with a look at low-code's role in promoting collaboration, innovation, and rapidly delivering outstanding digital public services.
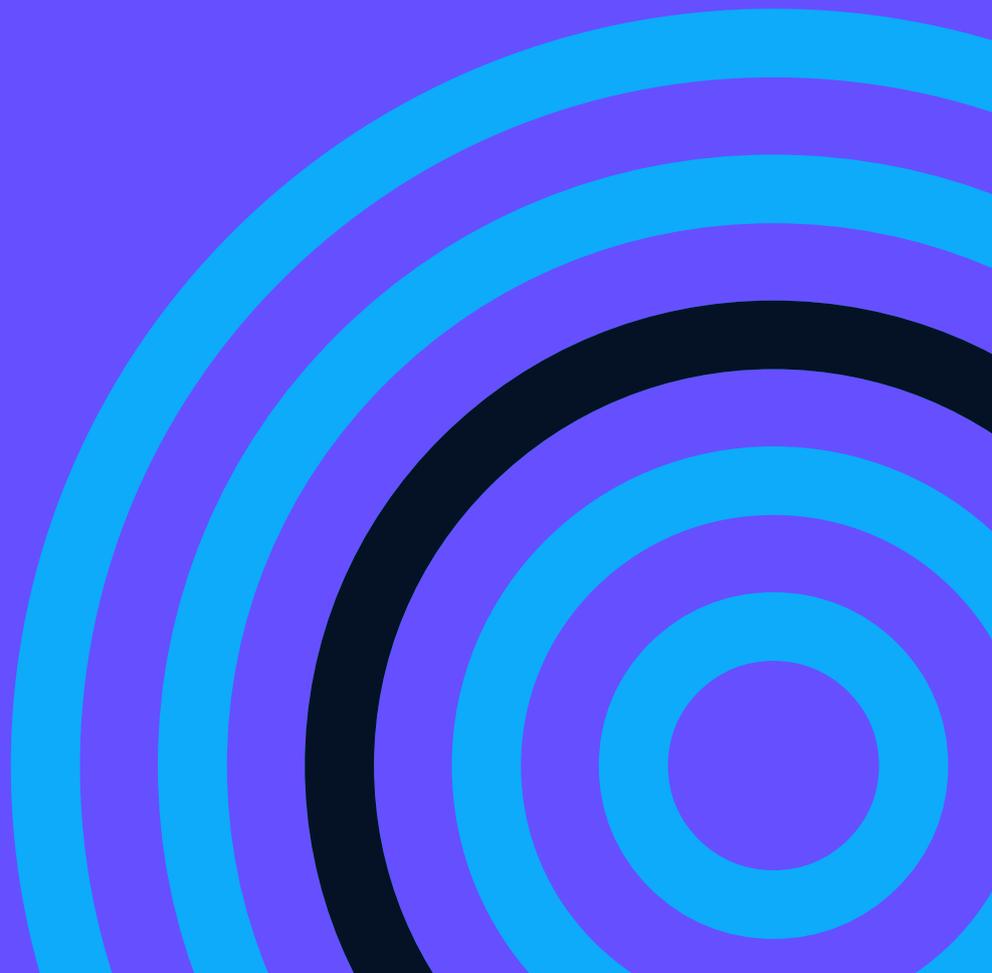
Overcome Legacy Technology Challenges

One major blocker to innovation within the public sector has been its longstanding grapple with legacy technology. Once upon a time, upgrading IT architecture meant carrying out a major overhaul, all at once – often taking years to implement, with the benefits not realised for a prolonged period of time.

But the need for essential digital public services continues to evolve too quickly for this traditional model. So, the sector must consider moving to a composable enterprise – whereby organisations can add apps to the tech stack one by one, like LEGO, creating a model that progresses at the pace of 2022 (and beyond).

Low-code platforms have made this possible, by providing a sandbox to create any application and ensure it works seamlessly with others. Importantly, it works with any operating system and fits anywhere in the tech stack, to link with different systems and avoid integration headaches.
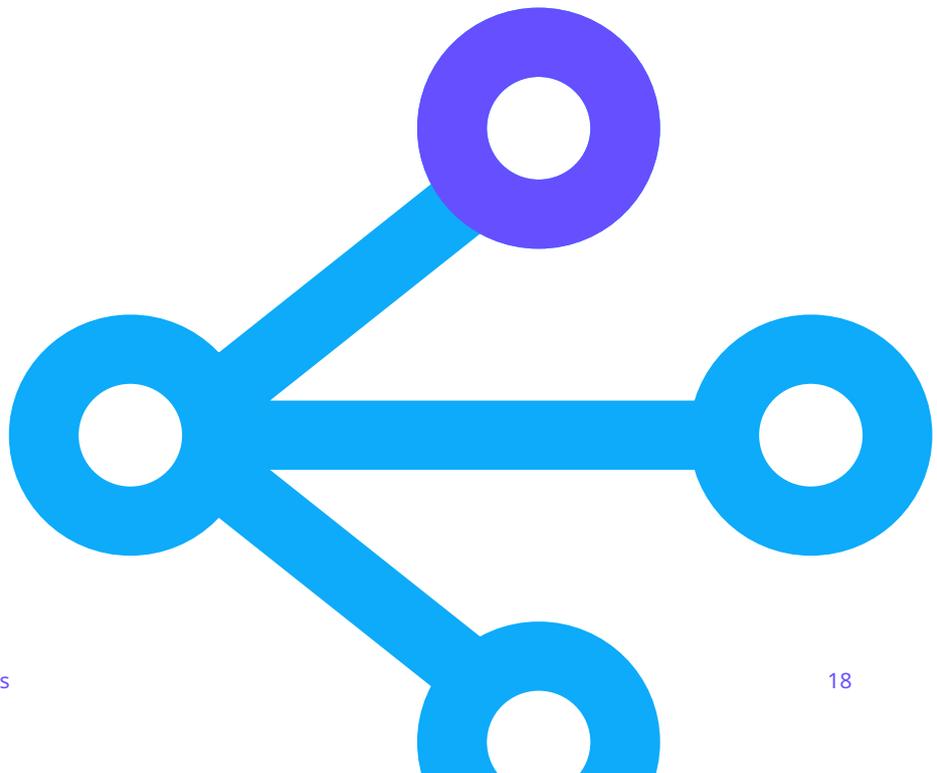
Close the Digital Skills Gap

Even before the disruption of 2020, UK businesses and public sector organisations were contending with a digital skills gap. Unsurprisingly, COVID-19 blew it wide open as digital services and the subsequent skilled persons to deliver them skyrocketed in demand, while Brexit did its best to make sure developers were even harder to come by.
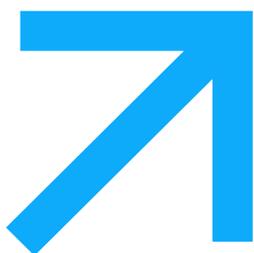
Throughout 2021, the sector has been inundated with the same shortages. The outlook for 2022 on the digital skills gap isn't looking any better. But rather then magicking software specialists out of thin air, one solution for organisations is to stop looking outside and start looking within – with inter-skill sharing serving to upskill other employees to reduce the burden on a solitary IT department.

Low-code platforms, such as Mendix, make this possible by empowering all employees to become makers with its accessible, intuitive features. Of course, technology professionals and digital experts will still have a role to play, but by sharing their skills, they share the load – and in time everyone can develop the necessary skills to confidently collaborate, innovate, and create alongside IT.
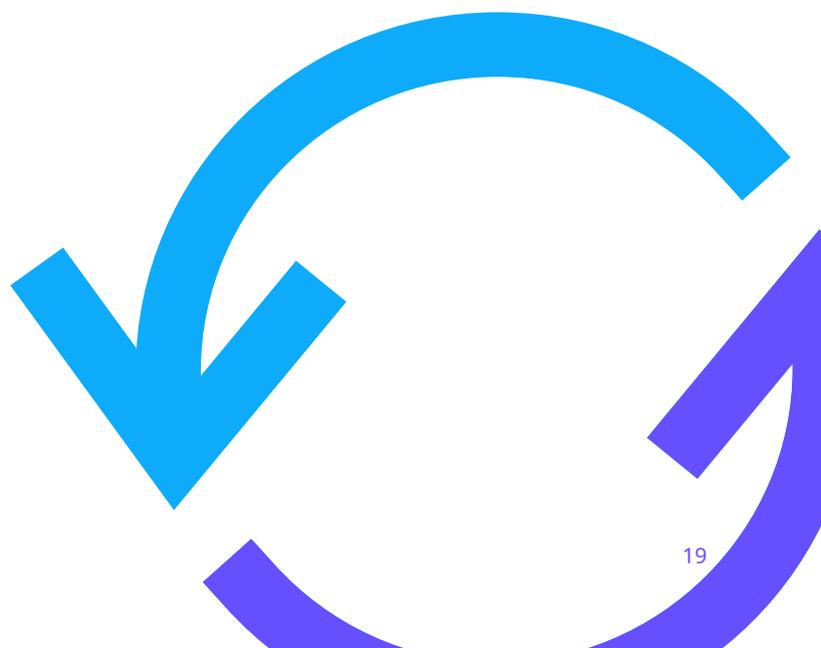
Seamless Data Integration

Close collaboration across an organisation is essential to realise digital ambitions and propel public sector organisations forward. But every digital service, new business model and solution designed to make the lives of the public easier requires data – and not just any old data, the right data, which comes from a range of sources.

So, while low-code is necessary, it's just one piece of the puzzle – and developers and every part of the organisation need to be able to easily discover and understand data. However, finding the right data can require sifting through a jungle of systems and data stores. Even if you find it, you then need to get access to it – and be able to understand how to interpret and use it.

Even to the trained eye, this can be a challenge. Fortunately, Mendix's Data Hub, the world's first low-code data integration platform, brings simplicity and transparency to the complexities of data integration. Through its Data Hub Catalog, developers can get the right data at their fingertips with this standards-based metadata repository that's a one-stop shop for finding and understanding data.

Lower Barriers to Entry, Cost and Deployment Time

In an increasingly digital world, where the public (and employees) expect easy access to information and services, public sector organisations must be able to develop digital solutions at pace. But, as we've established, doing so in a traditional way is no longer sustainable – and is only made more difficult by limited resources and depleting budgets.

Low-code development lowers the barrier to entry, cost and time to deployment because expert coders are no longer needed for full development. For example, police officers and employees – who understand their workflows and processes best – can help code and deploy a workflow instead of relying only on the limited internal or external resources of programmers.

Not only does this reduce hiring costs, but because front line officers and those employees working throughout the police force have far greater understanding of their requirements and the working procedures, this can help develop apps that better solve the problem at hand. Because of low-code's ability to build more apps in less time, it also goes without saying that this can be far more cost-effective than traditional development.

# Unlock Innovation and Elevate Citizen Experiences

Beyond just working faster, there's also a need to work smarter to make the lives of public sector employees and the public they serve easier. But of course, as our research reveals, the public's needs are always evolving – along with their expectations. So, public sector organisations have to proactively find solutions to problems before they become a problem.
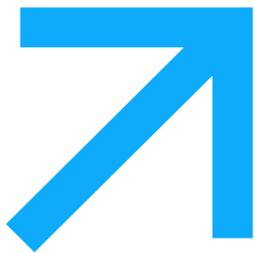
Since low-code development allows more apps to be built in less time, what once took months now takes only days (or even minutes) – meaning time is no longer a real barrier to innovation. By making coding accessible to all, every employee can also apply their expertise to develop smarter, more relevant services and solutions that actually address the public's needs.

Low-code can also help to take advantage of advancements in technology. For example, with low-code, automation and the means of automating business processes can be easily developed and rolled out across an organisation. By doing so, this also frees up employees to focus on more critical tasks, develop new ideas, and devote more time to the public.

Chapter 4:
Conclusion
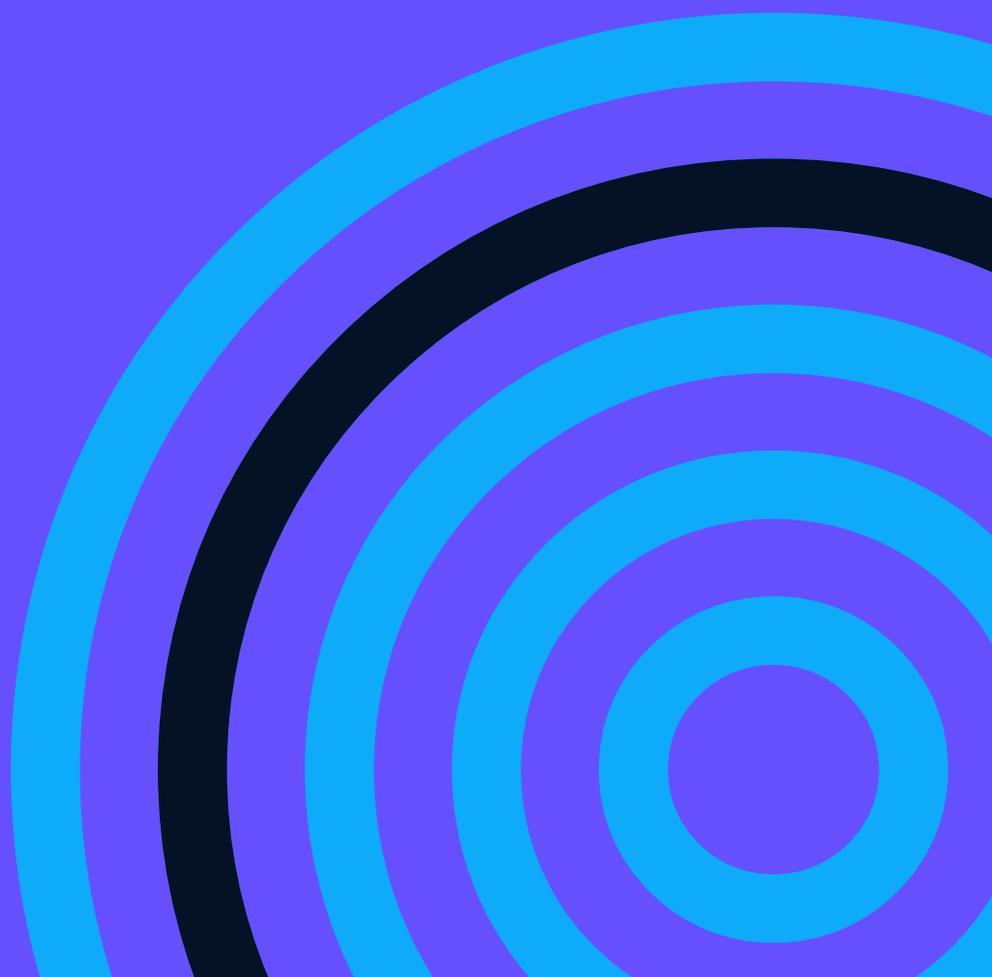
Following the onset of COVID-19 and the added complications of Brexit, the kind of shifts that were expected to take place over a decade hit organisations all at once. But few, if any, were as impacted as those in the public sector, as police forces and central and local governments alike scrambled to keep on serving and protecting the public in a time of crisis.

Even in the face of adversity and extreme pressure, public sector organisations displayed remarkable resilience and resourcefulness to keep the UK and its communities functioning – and safe. IT departments and technology played a pivotal role in enabling this, but with yet more change on the horizon, their work is far from over.

The ongoing need for digital services and solutions comes against a backdrop of dwindling budgets and mounting skills shortages. And organisations are facing an uphill struggle to meet the public sector's growing requirements while juggling costs and safeguarding against future disruption.

Fortunately, there are answers to these challenges. And looking under the hood of digital transformation, at app development itself, there is an opportunity for public sector organisations to innovate faster, collaborate more, and cut costs.

Low-code development enables IT departments to meet public needs at pace, avoiding inflexible architectures and integration headaches. But it also eases the burden on IT teams by empowering all employees to combine their own expertise with that of technology professionals and digital experts, to develop apps that make a real difference to society and the public.

Ultimately, low-code empowers anyone to become a developer – and this collaborative approach to development helps to grow digital skills across the public sector as part of a long-term solution to its talent challenge. With lower barriers to entry also serving to inspire innovation from a diverse group of people that better understand the needs of the public.

The UK has changed, and that journey is far from over. But by adopting a low-code approach alongside all the digital transformation that has been taking place, there's hope that the public sector will be more agile, resilient, and ready for whatever comes next.

Chapter 5:

Become a Maker with Mendix

Discover how Mendix's low-code platform can help your public sector organisation to deliver achievable, scalable innovation with powerful impact.

Become a Maker