The impact of digital transformation on the UK economy:

Local and Central Government and Blue Light services

A Cebr report for Virgin Media Business

February 2021

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Executive Summary

- This is a Cebr report for Virgin Media Business on the impact of Covid-accelerated digital transformation (CADT) in the **local and central government and blue light services** (LCGS) sub-set of the public sector.

- Following the release of Cebr's extended report for Virgin Media Business on the topic of Covid-accelerated digital transformation, and its impact on the UK economy more broadly, this report focuses on the **LCGS sub-sector**.

- It is the first in a **series of sector-specific vertical reports**, providing a review of the role that digital transformation is expected to play in accelerating the UK's rebound from Covid-19.

- Within LCGS, we consider **blue light services** including **police**, **fire** and **ambulance**, together with **prison and court systems** and **general public administration** such as **local authorities**.

- As detailed in the main report, increased adoption of key digital technologies due to the pandemic could lead to a period of Covid-accelerated Digital Transformation (CADT). **Boosted investment and fast adoption of CADT technologies over the coming decades is set to increase UK GDP by £232bn[1] or 6.9% by 2040**.

- We find that approximately **one third of economywide tech-enabled growth** will be supported by public sector investment in the **three** public sub-sets that were analysed in the wider report (LCGS, education and healthcare). This is an increase in **economywide GDP of £75bn, or 2.4% in 2040**.

- Of this, approximately **£32bn originates from the sector in which local government sits**. This GDP boost will be realised across the whole of the UK economy, representing an **uplift of approximately 1% of UK GDP in 2040**.

1 All figures are presented in 2020 prices.

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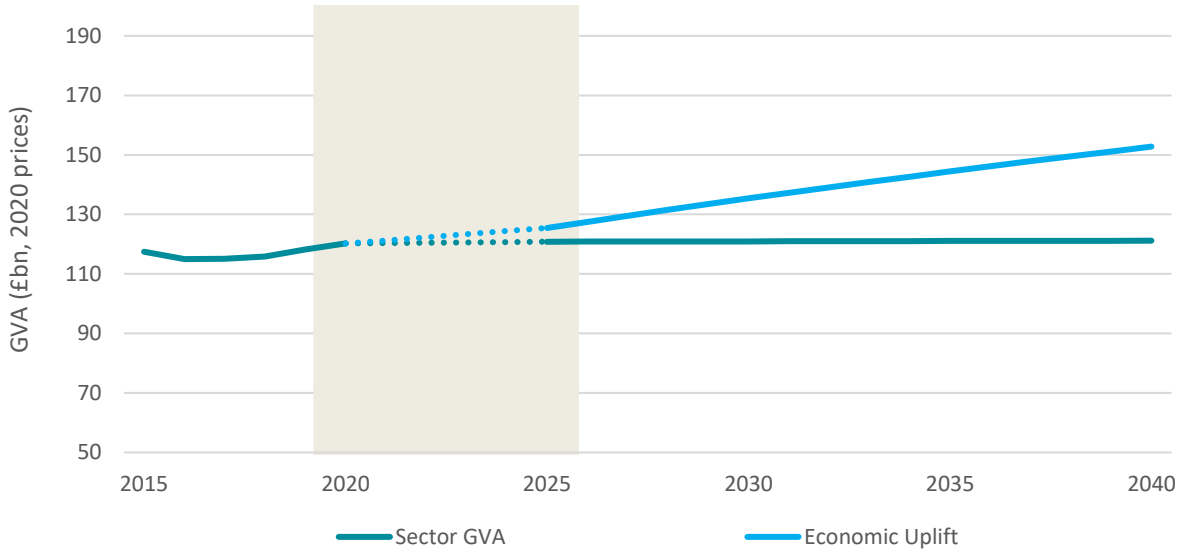
- **Figure A**, below, sets out the **forecasted size of the local and central government and blue light services (LCGS) sector** under the **baseline scenario**, together with the **estimated size of the cumulative gain** which will be **realised across the whole UK economy**, as a result of **accelerated digital transformation in the local government sub-sector**.

Figure A: UK Local and central government and blue light services sector, GVA, 2015-2040.



Source: Cebr analysis

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1. The impact of Covid-accelerated digital adoption

This section sets out the findings of the research, that is, the estimated sector-specific impact of accelerated adoption of digital and technological initiatives, in response to Covid-19, estimated over a 20-year time horizon.

For reference and context, Table 1 sets out a summary of the results for the whole of the UK economy, after which the LCGS sub-sector results are presented.

Table 1: UK-wide impact of post-Covid digital transformation adoption

Year	Baseline GDP (£bn, 2020 prices)	Uplifted GDP (£bn, 2020 prices)	Additional GDP (£bn, 2020 prices)	Percent Boost
2020	2,178	2,178	0	0.0%
2025	2,651	2,725	74	2.8%
2030	2,891	3,018	127	4.4%
2035	3,143	3,314	171	5.4%
2040	3,361	3,593	232	6.9%

Source: Cebr analysis

The 2021 – 2025 short run

It should be noted that this research has been carried out in real-time, against an uncertain economic backdrop with particular respect to the long-awaited Brexit deal announcement, and indeed Covid-19 – the surrounding circumstances of which have been subject to frequent and last minute change. Results are estimated using assumptions that are based on the state of the world at the end of 2020, and the near-term forecast might consequently be subject to change.

As noted in Cebr's extended report, the shape of 'economic recovery', in the period 2021 – 2025, is uncertain.[2] Opinion ranges from a quick 'V-shaped' to a prolonged period of lower output. This uncertainty is largely due to the unpredictable progression of the virus and governmental responses. While a fast and effective rollout of vaccines may allow for a return to normality and a quick economic recovery, prolonged restrictions well into the second half of 2021 would lead to greater scarring in the economy and slower economic growth in the following years.

We have therefore placed greater focus on the medium and longer-term findings by excluding annual estimates for the years between 2020 and 2025. Longer-term findings are more robust and less likely to be impacted by the current – and ongoing – changes to government policy and pandemic trajectory. By the start of the long term steady state period (currently estimated to be 2025), increased Covid-accelerated Digital Transformation is estimated to have added £74bn to GDP.

2 The immediate term between 2021 and 2025 can be thought of as the of the 'economic recovery' period, before the UK transitions into a long term steady state. 2025 has been chosen as a suitable analytical starting point from which to undertake the analysis because that is the nearest steady state marker that is currently identifiable.

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It can be seen in Table 1 that under the baseline scenario, sectors operate under normalised, assumptions, following non-accelerated technological usage trajectories. In this case, GDP across the UK economy as a whole is estimated to be approximately £2,891bn by 2030. However, the results of the model in which we consider accelerated technological adoption, indicate that GDP could increase to approximately £3,018bn – an uplift of £127bn, or 4.4%.

By 2040, the counterfactual GDP – with normalised assumptions regarding technology adoption – is estimated to be approximately £3,361bn. However, with the increased used of digital technologies, it could be uplifted by around 7% to £3,593bn – an increase of £232bn.

As detailed in the extended report, the public sector is treated differently from the private sector. The uplift accruing to increased adoption of digital transformation in these government-dominated sectors is expressed with respect to its impact on wider UK sectors. Any innovation that raises either the quality or the quantity of output from the public sector), will not necessarily directly boost the GVA of that sector, rather, it is assumed that the benefits achieved can be expressed as cost savings in each year for the respective public sub-sectors. The cost savings are then invested and re-invested each year, the economic yields of which will be realised as broad-based benefits across the wider UK economy.

Table 2 summarises the impact of accelerated technological adoption across the three public sector sub-sets of interest: LCGS,[3] education and healthcare.[4]

Table 2: Impact of accelerated digital transformation in the education, health and LCGS sub-sectors of the public sector

(Real, £bn, 2020 prices)			
Public Sector	**Size of sector in 2040**	**Economywide gains attributable to public sector investment**	**Gain as a % of GDP**
Local and Central Government and Blue Light Services (LCGS)	121	32	1.0%
Education	151	10	0.3%
Health & Social Care	270	33	1.0%

Source: Cebr analysis

It is estimated that by 2040, increased adoption of digital and technological initiatives in the education sector could increase GDP across the economy by around £10bn – a gain of approximately 0.3% of GDP. Across healthcare, GDP gains (to be realised across the overall UK economy) are estimated to be approximately £33bn in 2040. In local and central government and blue light services, the GDP uplift is estimated to be £32bn, or around 1% of UK GDP in 2040.

3 'Public administration and defence' (as defined in Cebr's macro model) can be considered an appropriate proxy for 'LCGS' in the context of this analysis.

4 Per the scope of the research, we have considered only three sub-sets of the broader public sector. It should be noted that the activity of these three sub-sets is not the complete extent of public sector activity.

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Local and central government and blue light services

Table 3 sets out the estimated size of the local and central government and blue light sector gains. Gains originating from sub-sets of the public sector, such as this one, will be realised across the wider UK economy.

Table 3: Impact of accelerated digital transformation in LCGS sector – in terms of economywide gains

	(Real, £bn, 2020 prices)	
Year	Economywide gains attributable to public sector investment	Gain as a % of GDP
2020	0	0.0%
2025	5	0.2%
2026	7	0.3%
2027	9	0.3%
2028	11	0.4%
2029	13	0.5%
2030	14	0.5%
2031	16	0.5%
2032	18	0.6%
2033	20	0.7%
2034	22	0.7%
2035	23	0.7%
2036	25	0.8%
2037	27	0.8%
2038	28	0.9%
2039	30	0.9%
2040	32	1.0%

Source: Cebr analysis

The LCGS sector remains broadly consistent in size over the time horizon, at approximately £121bn. Economywide gains from accelerated digital transformation are estimated to be in the region of £5bn by 2025, the equivalent of 0.2% of UK GDP in 2040.

By 2028, economywide gains attributable to the LCGS sector reach double digits at approximately £11bn, and continue to increase to approximately £32bn by 2040 – or 1% of UK GDP.

Figure 1 illustrates the size of the cumulative delta, attributable to digital transformation in the LCGS sub-set of the public sector. This uplift will be realised by the wider UK economy.

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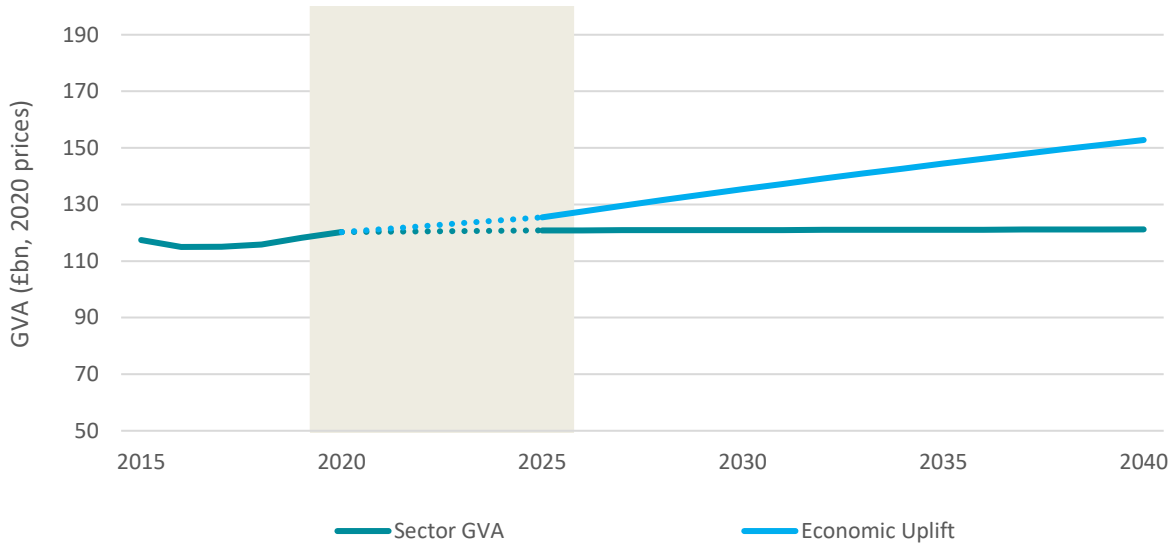
Figure 1: UK local and central government and blue light services (LCGS) sector GVA, 2015-2040



Source: Cebr analysis

2. Case studies

The following case studies and interviews supplied by Virgin Media Business serve to demonstrate the forms of digital transformation organisations working in throughout the public sector have successfully implemented throughout Covid-19. This is content provided by Virgin Media Business.

2.1 Greater Manchester Combined Authority

How people-first digital strategies can help UK regions rebound from the pandemic.

You have to put people at the heart of digital revolution. Greater Manchester Combined Authority (GMCA) commits to working with its communities every step of the way.

The city promises to leave no one behind as it uses connectivity to rebound from the Covid-19 pandemic. And being digital by design is already paying dividends.

During lockdown, digital helped GMCA connect volunteers with neighbours in need. And its practical innovation solutions were critical for the area's tech startups.

Digital, creative and tech were already the fastest growing sectors in the region. They bring £5 billion a year into the local economy. And with them new, high-value jobs.

But GMCA recognises it still has a long way to go.

Inequalities exist within its 2.8 million people. And bridging that digital divide presents huge opportunities to bring more benefits to more people.

To tackle that the city launched its Digital Blueprint in 2020. The initiative, spearheaded by Mayor Andy Burnham, sets out Manchester's ambition to be a world-beating, inclusive, digital-first city.

That Digital Blueprint established a clear framework through which the city could use digital tools to support Greater Manchester's citizens and businesses. During the pandemic, but also beyond.

Innovative partnerships are key to Andy Burnham's three-year plan. Greater Manchester will achieve its goals by working with companies like Virgin Media Business to ensure every citizen benefits.

As Cllr Sean Fielding, GMCA Lead for Employment, Skills and Digital, explains: "Greater Manchester is doing digital differently.

"We are committed to being a digital city region that puts our residents at the heart of our plans, and are working towards ambitions to be recognised as a world-leading digital city region."

But what does doing digital differently mean?

Cllr Fielding explains how Manchester benefited from its Digital Blueprint during the pandemic and how this set the growth agenda for years to come.

Matching volunteers with vulnerable people

In response to Covid-19, GMCA launched the Community Hub Application on its Greater Manchester Digital Platform. It matched volunteers with vulnerable people in need of support.

The Digital Platform also hosted a revolutionary situation-reporting system. It ensured health and social care providers had the latest and best information at their fingertips.

The system monitored PPE stock, staffing, infection rates and outbreaks across the region. It gave real-time information to thousands of people tackling the pandemic, including:

- **540** care homes
- **690** pharmacies
- **448** GP practices
- **818** other health and social care settings

With schools and colleges closed, the Greater Manchester Technology Fund provided hundreds of help kits to students at risk of digital exclusion. It helped them continue learning online.

And across the city, Manchester Cathedral launched the online Covid-19 memorial book #GMRemembers. It helped bereaved families and friends share personal and public tributes.

Accelerating access to vital information

Meanwhile, the region's health and social care organisations accelerated deployment of the GM Care Record, which gave frontline professionals vital information in the fight against Covid-19.

The GM Care Record means workers in health or social care can easily access the patient information critical to decision-making.

But while the Covid-19 pandemic acted as a catalyst for much innovation, the main thrust of GMCA's forward-looking strategy is how the city will look tomorrow.

Partnerships for success

Public and private partnerships working in tandem are delivering a world-class digital infrastructure. Greater Manchester has invested more in full fibre than any other region in the UK.

The programme brings with it 2,700km of new fibre-optic broadband infrastructure. That's enough fibre to cover three times the distance between Land's End and John O'Groats.

This new network will connect more than 1,700 public sites and help unlock further investment across the region.

GMCA's strategy includes a number of bold investments in social value initiatives. These include:

- **Early Years Digitisation** Giving children the best start in life. By switching paper-based checks to digital, health visitors can improve life chances for children up to 30 months old.
- **Fast Track Digital Workforce Fund** Already backing 14 projects to support businesses and address skills gaps. It helps scores of residents enter well-paid creative, digital and tech roles.
- **Cyber Talent Programme** Encouraging a cyber ecosystem by retraining to support smart development. It helped more than 75 SMEs with their cybersecurity.
- **Cyber Foundry** Helping more than 170 of the region's SMEs in partnership with four universities. Providing support to bounce back from problems caused by the pandemic.

Martin McFadyen, Head of Public Sector at Virgin Media Business, says: "We recognise that Greater Manchester and the North more broadly has been hit particularly hard by the pandemic.

"Increasing focus on social value commitments is so important.

"We kept people connected during lockdown, when it was most essential. And we saw a massive uplift in online access, whether that be for education, working or entertainment."

Martin adds: "We have continued to expand our network through Project Lightning so more local people can benefit from ultrafast gigabit broadband.

"GMCA is tackling the inequalities in schools, addressing social isolation and homelessness. All while supporting the local public sector and business communities to stabilise and rebound over the months ahead.

"That's why we support GMCA in channelling the power of digital technology to create opportunity and to transform lives."

Greater Manchester is on course to becoming 100% digitally enabled. And the city is determined to achieve this goal while leaving no one behind.

Sara Todd, Lead Chief Executive Greater Manchester Digital Portfolio & Chief Executive of Trafford MBC, says: "Mayor Andy Burnham's great passion is digital acceleration. A few years ago it was seen as only the territory for techies and enthusiasts.

"But just look at the way our digital economy has accelerated enormously over the last few years. And lots more people are making that significant leap towards digital as a result of the pandemic.

"We aspire to be a world-class, digital-first region.

"Not because we want the badge. But because we don't want to leave anyone in Greater Manchester behind, whatever their background, age or circumstances."

She says: “We want people in Greater Manchester to get on in life and we want our economy to thrive. And we firmly believe digital is central to that aspiration.

“In the last six months, inequalities have come to the fore in people’s minds. We all need to have a focus on digital acceleration for everyone.

“There’s a more significant challenge than we realise. One in four in Greater Manchester only access the internet in a narrow, limited way. And one in six are described as a non-user of digital.

“That could be as many as 1.2 million people in our conurbation not engaging in, or excluded from, the enormous opportunities that come from digital to improve people’s lives.

“And I know it’s not only a Greater Manchester issue.

“Digital is key to enabling our region to recover from this pandemic. To genuinely enable us to level up across the country … as well as how we level up in Greater Manchester.”

Cllr Todd concludes: “Our intention is to be a 100% digitally enabled city region. To help everyone have access to the internet. And to do so with confidence and safety, as well.

“We believe access to the digital world is a basic human right … the internet is the fourth utility. We want to work with all services to level the digital playing field.

“With the Greater Manchester spirit, we can work together, across our sectors and across our boroughs to build back economic resilience and make sure that no one is left behind.

“If we can get connected and stay connected we can move mountains.”

2.2 Digital Innovation in Belfast – a critical pillar for Northern Ireland’s Recovery

Belfast refused to pause its digital ambitions for Covid-19. In fact, the city pressed ahead with bold, new transformation plans throughout the pandemic. And already the strategy is paying dividends.

Now almost one in four of all new jobs across Belfast are in tech. High-skilled, high-paying jobs that benefit the entire region.

The city appointed Digital Information Commissioner Dr Jayne Brady, MBE, to help transform its economy. And she spearheads a campaign attracting millions in overseas investment.

She explains: “I took up the role during Covid. I think it’s recognition of how important digital innovation is to recovery. It’s not an add-on – it’s a critical pillar.

“The pandemic crystallised the need to develop strategies which are inclusive but based in innovation. We are supporting high-resilience, high-productivity sectors and local businesses.”

Dr Brady adds: “Northern Ireland is an area of excellence for cyber. It drives £60 million per annum in US investment based on its research and excellence.

"Key sectors like this are really strong. Many organisations have recruited through Covid and proved highly resilient.

"For example, Belfast ranks in the top three cities globally for financial technology from the perspective of foreign direct investment.

"Every £1 in public-sector funding for R&D and innovation typically returns £7. Short-term interventions around digital transformation provide the city with long-term benefits."

Belfast City Council is building digital skills. Dr Brady says: "We have significant numbers of graduates coming into play. We want to give them the skills we need for our longer strategy.

"Last year, 23% of all new jobs here were tech-related. They deliver the highest ratio of salary to cost of living and a high quality of life.

"We are working towards a digitised, smart city. We support next-generation infrastructure that can add value and connect our citizens.

"Digital is absolutely critical … We work hand-in-glove with local enterprises, councils, universities and commercial partners to deliver the right strategies."

Belfast chose Virgin Media Business to deliver full fibre connection across the city. £100 million investment in Northern Ireland has brought gigabit capability to more than 330,000 premises.

2.3 Edinburgh – accelerating digital innovation as a result of Covid-19

Bold digital transformation means Edinburgh can do more things better and faster. Council services that once took weeks are now completed in hours.

Depute Leader Cammy Day leads the City of Edinburgh's three-year smart-city drive. The new, comprehensive strategy is heralded as the "great enabler".

Cllr Day believes digital innovation will help "tackle the increase in unemployment and poverty we have seen because of Covid".

He explains: "Digital technology is the way forward. Not only to save us money, but because it's the right thing to do. We have plans to be the best in Europe.

"To some, tech is only for geeks. We see it as visionary. It transforms our approach to CCTV, through collecting bins and monitoring air quality to providing a better service to communities.

"We want our citizens to access services in two or three clicks. Edinburgh is already one of the top cities in the country to live and work, and technology will help make that even better."

Stephen Moir, Edinburgh's Executive Director of Resources, is clear: "We're creating a generation of Edinburgh citizens who are digitally literate. Equipping them with digital skills for the future.

"We have accelerated some things directly as a result of Covid. We facilitated the democratic process of Edinburgh remotely. With all our members able to participate.

“Digital is now at the heart of the way we work. Previously, we would’ve taken three weeks to clear 400 applications from landlords.

“When we automated that clearance process, we had 80% cleared in three hours, freeing our staff up to focus on the complex ones that needed a conversation.

“Our approach to automation is not to reduce jobs; we have used it to remove the need for our people to get involved in unnecessary, high-volume work.

“There’s more time for empathy, judgement and face-to-face human interaction. We’re the fourth biggest employer in the city. We don’t want technology to cut things; we want to do things better.”

Virgin Media helps Edinburgh achieve its connectivity ambitions. During lockdown, it became the first city in Scotland to get hyperfast gigabit broadband.

2.4 Wolverhampton – accelerating growth via digital transformation

Wolverhampton’s Head of ICT, Jai Ghai, says his department and others like it across the UK went from “unsung heroes” to starring roles during the Covid pandemic.

The city’s leaders believe it has created a great digital opportunity. Maintaining that forward momentum is critical to strengthening its services and rebuilding the economy in 2021.

Jai explains: “We had to scale things up overnight. Thankfully, we had already been investing in the infrastructure that came into play. And that showed.

“Staff had to work from anywhere and everywhere. They didn’t have to be desk-bound any more. We had to mobilise so they didn’t feel alienated working from home.

“One of our earliest and best decisions was to roll out Microsoft Teams. In just one week, we went from 300 users to more than 4,200. In ordinary times we wouldn’t have rolled it out that way.”

In fact, the pandemic meant Wolverhampton brought forward much of their digital transformation strategy by a whole year. They are doing better, faster.

Jai adds: “I’ve been in IT for 22 years. And for the first time in my life, I have this opportunity where senior executives understand the power of data.

“This is now the new normal. We want to use this opportunity to roll out a lot more online channels. We want to enable better outcomes for citizens and residents.”

Even before Covid, the Wolverhampton economy felt the benefit of digital transformation. More than 64 local businesses went online as part of the Retail Revival programme.

And in less than two months they hit £1 million in combined online sales – an impressive 41% increase in revenue.

Heather Clark, Wolverhampton’s Strategic Projects Manager, says: “We recognise the importance of digital across all the things we do. It plays a critical role in supporting recovery and growth.

“In the past, digital was seen as something separate. Now it should rightly be at the centre. Digital is the fourth utility. It’s no longer a nicety; it’s essential.”

Virgin Media Business is with Wolverhampton on its digital journey, investing £2.5 million in the city and connecting 3,900 premises. One reason it’s among the top 10 fastest growing UK cities.

2.5 Local Government Association – Local authorities nationwide are keen to deliver even more improvements

Councils across the UK are united in their ambition to connect, skill up and better serve their people. And they understand collaboration is key to achieving this.

They recognise the importance of the government’s aim to “level up” the nation by providing next-generation fibre broadband to every home by 2025.

The cross-party Local Government Association (LGA) comprises 335 councils across England and the 22 Welsh unitary councils. It gives local government a strong, credible national voice.

The LGA set up its Digital Shift Programme to support councils as they adopt new online tools and technologies and adapt to the shifting economic landscape.

LGA Digital Spokesperson Cllr Mark Hawthorne says: “Access to fast and reliable digital connectivity is no longer a luxury – it is a necessity.

“The Covid-19 pandemic has underlined the importance of good-quality and affordable internet access for businesses and communities across the country.

“From keeping in touch with friends and family to ordering online shopping or working from home, connectivity is key.”

Cllr Hawthorne adds: “As place-shapers at the centre of their communities, councils have a fundamental role to play in helping enhance the digital connectivity of their local areas.

“With better-connected residents and employees, councils can unlock new ways of engaging with local services.

“And they can keep pace with the expectations of communities increasingly surrounded by a digital world.”

He concludes: “To make sure the government can reach their 2025 target, councils need more funding to help support telecommunication providers to deliver improvements on the ground.

“We have asked the government to use the Spending Review as an opportunity to empower councils to place a local digital champion in every local area to help facilitate delivery and support providers to install gigabit-capable broadband as quickly as possible.”

3. Literature review and panel insight

In order to undertake the analysis, it was necessary to conduct an in-depth literature review of each "in scope" industry. This enabled sector-specific assumptions to be made which were then further verified through panel interviews and workshops with industry experts and insiders. These assumptions were used as modelling inputs in support of estimating the impact of accelerated digital transformation on each of the UK sectors of interest.

This section sets out the findings from the literature review. Of particular importance was data on current levels of technological adoption for each sector, from which it would be possible to estimate trends in tech adoption. It was also important to gather evidence on the tech-enabled productivity increases that *could* be realised across a variety of industries – which would provide an indication of the potential gains that could be achieved with accelerated use, owing to events such as Covid-19.

The literature review and panel insight also provide important background information against which findings from the research can usefully be contextualised.

Local and Central Government and Blue Light Services

Technology and digital tools have been widely adopted by Blue Light Services in the UK. The UK police force has undergone a significant technological advancement in recent decades, improving overall efficiency. Most forces now offer their officers tablets or smartphones to record statements and access police databases remotely. This limits the need for officers to go back and forth between stations and communities on their day-to-day jobs.[5]

Advancements in data analytics and artificial intelligence (AI) are leading to pre-emptive policing with systems able to help target interventions and reduce the heavy cost of crime. For example: A prisoner with a history of burglary and a high chance of reoffending is released from prison. The system highlights this and recommends increased patrols around their area and increased support to be delivered by the local probation centre. The increased patrols and targeted support from the probation service act as a deterrent, reducing the chance of a crime being committed.[6]

A further study estimates that low-level crime costs the UK £130m per year. However, it suggests that if online crime reporting and digitalisation of CCTV footage was established by all forces, time spent dealing with these crimes could fall by as much as 25%.[7]

The West Midlands Police introduced such technology, called Facewatch. It is an AI software that scans CCTV for facial recognition and speeds time to bring offenders to justice. It is estimated to reduce the time per investigation by two to three weeks and has saved a minimum of four hours of police time with CCTV; £809,121 through 12,268 cases using the system.[8]

5 Insight. (2018). 'How are New Technologies Transforming the Police Force?'

6 Deloitte. (2015). 'The Digital Policing Journey: From Concept to Reality'.

7 TechUK. (2016). 'Digital Policing: The Future of Modern Crime Prevention'.

8 Ibid.

Technology has also freed up significant resource within prisons, increasing efficiency and cutting costs. One study found that through the introduction of self-service kiosks for inmates, staff time associated with certain jobs fell dramatically:[9]

- Collating prisoner applications and returning to prisoners was reduced by 82%, equivalent to 5,461 minutes per week;
- Time taken for menu orders was reduced by 64%, equivalent to 271 minutes per week;
- Canteen orders were reduced by 89%, equivalent to 634 minutes per week;
- Prisoner balance requests were fully automated so reduced time taken on these by 100%, equivalent to 8 minutes per request of staff time; and
- Time taken to distribute prison wide notices fell 73%, equivalent to 76 minutes per notice.

It's not only prisons and Blue Light Services where digitalisation and new forms of technology are changing how processes are done. The pandemic has created a necessity to move trials and court cases online and create virtual courtrooms. A pilot study from 2010 found that more virtual court cases could be seen daily than traditional face-to-face cases; 2.33 versus 2.19 – 6.4% increase. This was, however, met with a net cost of £247 per case.[10]

Although a net cost in 2010, technology has advanced significantly in the past decade. Even when video conferencing was still in its infancy, it proved to be more efficient than face-to-face trials, if at a cost. It is likely that this efficiency will only have increase alongside large scale cost reductions as the technology itself has come down in cost.

The first week of May 2020 saw 80% of the UK's court and tribunal cases handled remotely. While Covid-19 saw a significant backlog of cases grow in the courts, especially for jury trials,[11] further development of virtual courtrooms could be implemented as part of solutions to generate further capacity in the system and reduce the significant backlog.

Local governments are also making significant savings by adopting new technologies. In a review conducted by the Local Government Association,[12] 50 local governments were found to have utilised technological innovations to improve outcomes for citizens and save over £41 million in total.

Notwithstanding the time period in which this particular research was reported (2014), some of the key findings of the paper can be summarised as follows:

- The London Borough of Hillingdon saved £750,000 a year through moving to Google Apps;

9 Ministry of Justice. (2020). 'Evaluation of digital technology in prisons.'

10 Ministry of Justice. (2010). Virtual Court pilot Outcome Evaluation'.

11 BBC. (2020). 'Covid and the courts: 'Grave concerns' for justice, warn watchdogs'.

12 Local Government Association. (2014). 'Transforming local public services using technology and digital tools and approaches'.

- Hammersmith and Fulham introduced an online self-service portal for their residents. This portal has over 70% of households registered and saved £1.15m annually through employee hours saved and efficiency gains;
- The London Borough of Dagenham achieved a 100% digital shift for benefit claims, reducing processing time by 30 days, saving £617,00 annually;
- Lewisham has enabled its residents to report environmental issues online. This portal has led to a 73% reduction in graffiti and a 33% reduction in call centre activity, saving £500,00 over 5 years;
- Leeds City Council introduced a live web chat facility on their website providing support to users. This is cheaper than phone calls and identifies problems with the site in real time, leading to 400 improvements to the site; and
- Bristol City Council has given their staff mobile tablets allowing them to report problems while out in the community, reducing the need to travel between community and office and increases the reporting of local issues.

Similarly, other local governments have shown significant digitalisation since the start of lockdown. The Swindon Borough Council noted a 2,000% increase in Free School Meal applications at the beginning of the lockdown period. The council undertook a trial of Robotic Process Automation (RPA) and managed to reduce a 583-hour monthly process to 9.6 hours – a 98.3% efficiency gain.[13]

The lockdown period, home working and furloughed staff have catalysed the public sector to become more efficient; to produce the same results with fewer resources.

13 IT Pro. (2020). 'How Coronavirus has accelerated the digital transformation of Britain's public sector.'

Cebr