

# The future of smart cities

The challenges and opportunities of digitisation



**BUSINESS**

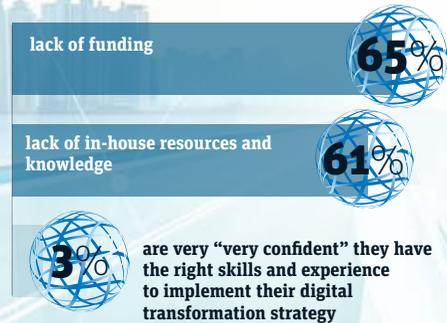
# Smart cities in numbers\*

This year, Virgin Media Business teamed up with iGov Survey, contacting local authorities and councils to investigate the progress of the smart cities and digital transformation agenda in the public sector. Below are some of its findings.

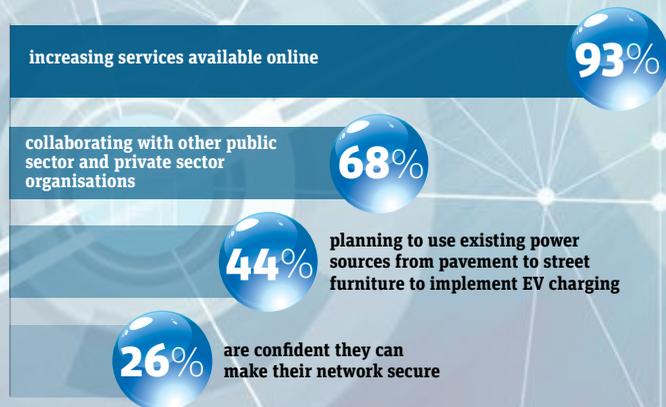
## What are the biggest factors driving the need for a digital transformation strategy in your city?



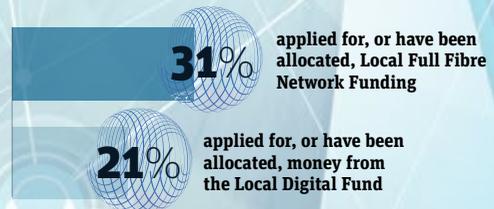
## What do you believe are the most challenging aspects of your strategy?



## How is your organisation currently approaching digital transformation?



## Funding



\*All figures from the 2019 Smart Cities and the Digital Transformation of Local Government survey, conducted by Virgin Media Business and iGov Survey

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# Breaking down barriers to digital transformation

**Martin McFadyen, head of public sector at Virgin Media Business, talks about the company's experience of working with the public sector to drive digital transformation forward**



Virgin Media Business has been partnering with public sector organisations for over 20 years, leveraging technology to enable wider collaboration, improved services for citizens and increased employee productivity, all while driving cost efficiencies. At the heart of our public sector strategy is regional engagement, with over 40 local offices, networks and local investment programmes.

This year, we partnered with iGov Survey to create a report, highlighting the outcomes, drivers and barriers behind smart cities and digital transformation in local government. The report is based on responses from local authorities of all sizes across the UK, and we were delighted with the number of senior-level directors that took the time to respond.

Whether we look at the wider digital transformation of public services or specific smart city strategies, it is clear that citizen experience is at the heart of the digital agenda. Cost efficiency is still a priority, with 83 per cent of respondents citing it as a motivating factor for driving digital transformation forward. However, improving citizen experience ranked higher, at 86 per cent.

Within their smart city strategy, many local authorities have a desire to use innovation to support environmental goals, whether this is implementing wi-fi in public buildings (which 67 per cent of respondents have done), providing charging points for electric vehicles (44 per cent) or leveraging IoT (internet of things) to monitor pollution levels (39 per cent). All of these demand specialist

knowledge and skills and a need to constantly collaborate with other public and private sector organisations.

However, there are still a number of barriers to achieving the required outcomes. For example, 65 per cent cited the perceived cost of digital transformation and a lack of funding as key barriers. Many local authorities are still working with legacy infrastructure, which was not designed to support the level of digital transformation they are implementing today. This is supported by the fact that only 15 per cent of respondents had confidence in the ability of their current infrastructure to respond quickly to changing organisational needs. In order to deliver new technologies they need to overcome the challenge of legacy infrastructure and address the lack of resources and in-house skills. Only 3 per cent told us they were confident that they had the right in-house skills to deliver their plan.

In conclusion, our report shows that there is a real desire in local government organisations to leverage funding and adopt new technology as an enabler, delivering a better experience for citizens. There are similarities between the goals of different communities, but there are also subtle differences in the priorities and challenges in different regions.

Working with the right technology partner and addressing the outcomes, rather than looking at technology in silos, is the key to successful digital transformation. Virgin Media Business acts as a co-pilot with local authorities across the UK, helping them develop their digital roadmap and providing a range of solutions and services to support the themes identified in this report. With our regional focus, we are large enough to rely upon, but we also act as a local partner, with regional experts and local insight. We understand the subtle differences, and we can partner with local authorities to achieve the right outcomes. Digital transformation isn't just a tantalising prospect that remains beyond reach. It's achievable. In fact, we are helping government organisations do it every day.

**At a recent *New Statesman* and Virgin Media Business round table, experts, local government leaders and private sector representatives met to discuss the potential of smart cities and digital transformation**

# The road to smart cities



**I**n an age of rapid technological revolution, with new emerging technologies opening up brand new fields of industry and innovation, it is essential that the public sector isn't left behind when it comes to digital transformation. Smart city initiatives offer huge opportunities for local authorities to maximise their resources and deliver better services in a streamlined, efficient and cost-effective way. The adoption of new technologies is vital to the provision of modern services for the 21st century, and digital transformation strategies are already enabling the delivery of improved services to communities up and down the country. But progress is often hindered by a lack of resources, knowledge and expertise, and the use of citizens' data can have multiple ethical implications.

To discuss these issues and look at the benefits and potential of smart cities, as well as exploring how the barriers to the digital agenda can be overcome, the *New Statesman* gathered experts, thought leaders and industry spokespeople for a recent round table in Westminster.

Theo Blackwell, London's first chief digital officer, working alongside Sadiq Khan at the Greater London Assembly, opened the discussion by describing his work in the capital, attempting to maintain its position as a leading tech hub as well as promoting the use of tech to design responsive and accessible services for Londoners. "I've seen transformational changes in our digital and in our data capability," said Blackwell, "but not so much in our policy making. There's a real need for digital leadership in our cities to ensure the

benefits of technology are felt fully by the citizens as citizens, and not just as customers of technology companies. And why should data be solely the preserve of big technology companies? Why can't we mobilise the data that we collect as cities for civic benefits?"

Through the effective and intelligent use of data, the aim, for Blackwell, is to make London "the smartest city on earth." Summing up his outlook, Blackwell questioned the standard definition of smart cities. "What do we mean by a smart city? It can be a noun, or a thing to be achieved – a district, a city-wide platform... But us becoming smarter is more of a process, us adopting technology to do our jobs better, serve citizens better... A lot revolves around transport and changing London's transport mix. Over 80 per



## “Why should data only be for big tech corporations?”

PHOTO: THE PHOTO TEAM

cent of journeys will be made by foot, by cycle or by public transport by 2041, and that won't be achieved without the mobilisation of data and tech. Same with improving the environment and air quality, or combatting crime. The role of sensors, data, and citizens engaging with the technology around them is crucial.”

In response, Martin McFadyen, head of public sector at Virgin Media Business, emphasised the company's commitment to regions across the UK. “At the heart of our organisational structure is regional presence,” said McFadyen, before building on Theo's introduction and definition of smart cities. “What we see with the smart cities agenda is the desire to deliver more sustainable and efficient public services. Smart cities are too often seen as a thing rather than a purpose, but sometimes

people see the purpose as just saving money. More efficient and sustainable public services are what we're striving for, but it's important to embark on these initiatives with a view to improving citizens' lived experiences, not just making financial savings.”

“Connecting public services is incredibly important,” McFadyen continued. “Should we have disparate data streams across all the public services that we use? Separate health records, education records or any other publicly provided information or data, or should there be commonly held data on every single person? People are far more willing to give up whatever personal data is asked for to get a 5 per cent discount from Amazon than they are to get an improved public service.” It was a

## “Tech is seen as an evil behemoth”

point echoed later by Richard Barnes, Virgin Media Business's head of public sector development. “Data security, and changing trust models is something we need to work on,” said Barnes, “as there's a dichotomy between the public sector's ability and obligation to keep data safe and secure, versus some people being more than happy to share with commercial service providers.”

Jon Corner, chief digital officer at City of Salford gave an account of his experience pushing for digital transformation in the North-West. “We have to look at different ways of working with the private sector. There are a lot of disruptive technologies that are about to arrive,” Corner said, highlighting the speed of changes that are currently taking place. “We've got Media City in Salford. There are 10,000 people who live and work there. It's not smart even though there are 22,000 miles of

→ fibre cable running through it and there's one room that the whole city is controlled from, managing the air, water, fire regulations, traffic. But there's no data collection, it's not connected. But now that's starting to change and it's becoming a real playground for what can be done."

Elizabeth Harrison, strategic programme manager at Kent County Council, stressed the importance of digital inclusion and universal connectivity. "Digital transformation and smart cities are underwritten by connectivity. You need universal connectivity. Otherwise you find that when you're promoting new online services, you automatically get complaints from those that can't access them." Steve Hughes, chief executive of Citizens Advice Stockport, also focused on the issue of digital exclusion, but was clear that digital transformation can be a useful tool for tackling poverty. "There are huge benefits," said Hughes. "I think digital could help solve a lot of the issues that surround poverty. We have to think about skills and the jobs of tomorrow, helping people who are perhaps out of work to get into the industry, and tech is the perfect industry for, say, people with mobility issues. It can really help with social isolation, which in turn improves mental health. But there is, of course, the access issue. People can't afford the device, can't afford the monthly subscription. And one of the key issues for deprivation now is online access... Access to broadband is becoming like a utility, an essential part of life just like water, gas, electricity. So we need to make sure access is universal."

Responding with an optimistic assessment of the UK's capabilities, Simon Clifford, director of digital and data at The Police ICT Company, gave an evaluation of the IT infrastructure already in place but under-utilised. "There are 30 million smart phones in the UK, 4G-connected and with sensors. That's it – we have the IT network. We need to leverage it... We have the infrastructure and it is connected. We just need to learn how to make proper use of it."



## “Tech can help with social isolation”

Managing director of Manchester Digital, Katie Gallagher, further developed the discussion around the common barriers to digital transformation, returning to the issue of access but moving the conversation onto the public perceptions of technology and the digital industries. “51 per cent of the population feels that innovation has happened too fast for them,” said Gallagher. “The issue isn’t just access, it’s an issue of trust. Tech nowadays is seen as an evil behemoth that misuses people’s data and misleads them. There’s a huge image problem.”

Commenting on the drive towards smart cities, Richard Barnes, head of public sector development at Virgin Media Business, identified potential blockages at the political level. “Politicians don’t stand on platforms of smart cities or data. They stand on platforms such as the environment, parking, highways,” said Barnes, underlining the fact that digital transformation is a means to an end rather than an end in itself, and that the adoption of technologies can often feel piecemeal as opposed to cohesive. Oliver Wheeler, a researcher at Labour Digital, also pointed out political obstructions, questioning how local authorities can

invest properly in digital transformation in the midst of austerity and a funding crisis. “It’s really important to make sure they are funded properly rather than blaming digital officers for lack of ambition,” he said.

Continuing the discussion around funding, and commenting on some of the results of Virgin’s report, Alison Brown, marketing strategy manager at Virgin Media Business, said “the majority of organisations we surveyed had applied for multiple types of funding – Local Full Fibre Network funding, One Public Estate funding, the Digital Innovation Fund – a lot of different funding models. But they also said that their number one challenge was lack of money.” There seemed to be a disconnect between “perceived costs of technology” against “the actual reality”, and Brown noted a need for support in developing a plan to spend money strategically.

Matt Agar, head of commercial design and strategy on Building Digital UK, described some of the work undertaken at the Department for Digital, Culture, Media and Sport, and underlined the importance of sharing good practice if the smart cities agenda is to move forward. “It’s important to help create good examples, good demonstrators, and then to start normalising those, and say ‘this is what one local authority is doing, this is the recipe book for everyone else,’” Agar commented. “Part of that is through public funding, competitions, business cases at the beginning, but with a view to not actually needing that later on, because one of the barriers to transformation is lack of information.”

Concluding the discussion, Cormac Connolly, Virgin Media director of strategy and innovation for project lightning, said “great stuff is happening, as evidenced around this table. The infrastructure, which we’re highly committed to providing, is such an important foundation. You can only do digital transformation and work towards smart cities with that infrastructure. We can drive that across residential and business, really driving connectivity across the UK.

# The work of Whitehall

## What kind of support is available for local authorities, combined authorities and city regions for realising the potential of smart cities technologies?

**Matt Agar (MA):** We launched the Local Full Fibre Network (LFFN) programme a couple of years ago with a Challenge Fund calling on local bodies to bid for support for local digital transformation projects. The whole purpose is to try and stimulate commercial investment – the programme is an enabler, or a means to an end rather than an end in itself. But we work collaboratively with local authorities and local bodies to help them get the best out of new technology and maximise connectivity, extending gigabit-capable broadband for all residents as well as the local public and private sectors.

A lot of work is focused on upgrading local authority sites – that could be council homes, libraries, sports centres, or, when we're working with healthcare bodies, GPs and hospitals. There are real added benefits to full fibre. You can increase demand in these areas and bring investment in.

**Sam Holloway (SH):** We have a huge amount of ongoing projects, working with councils on all kinds of improvements across a lot of sectors, such as health and social care, which can benefit massively from digitisation. For doctors, it can facilitate remote consultations and telehealth, easing pressure on services. It can mean access to patient records is quicker, taking less time out of short consultations. In social care, sensors can be placed in the homes of the elderly, so the right people can be alerted when they have fallen or they are

**Matt Agar, Building Digital UK head of commercial design and strategy, and Sam Holloway, 5G innovation network and communications lead at the Department of Digital, Culture, Media and Sport, talk about the government's digital transformation and smart cities strategy**

in trouble.

These types of technologies are reaping rewards in the private sector too, playing a part in advanced manufacturing, product development and research, and helping support a new wave of innovation across all sectors – the fourth industrial revolution.

## What are the main barriers to digitisation of the public sector and how can these be overcome?

**MA:** Resources can be an issue and equity may be a problem in some areas, but we're here to try and explain more and more about what local authorities can do with full fibre and digitalisation, and how its benefits can be spread across every department in every organisation. One of the ways that we can reduce the cost of implementing these strategies and technologies is by making the tendering, contract and procurement processes a lot easier. And that's what we're doing – streamlining the process so that local authorities and the public sector can speed up their smart cities journeys.

**SH:** A lot of it is about educating people about what exactly the smart cities agenda is, and it's not just cities, because rural connectivity and bringing improved digitised services to these areas is also incredibly important and you can see really fast results. We're working in several rural areas, and often these are the places that need digital infrastructure the most. But we need to communicate an effective business case for what 5G and full fibre can do, and try to integrate a proper digital strategy for improving services, boosting local economies and improving the lives of residents.



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