Digital Transformation for Government

The Science of Where Data Makes Government Smarter

esri UK

THE SCIENCE OF WHERE™

Transforming Government

Modern Government aspires to make the most of its data, to enable agile, effective and cost effective decision making.

Government needs simple and engaging ways to exchange information with staff, citizens and the supply chain.

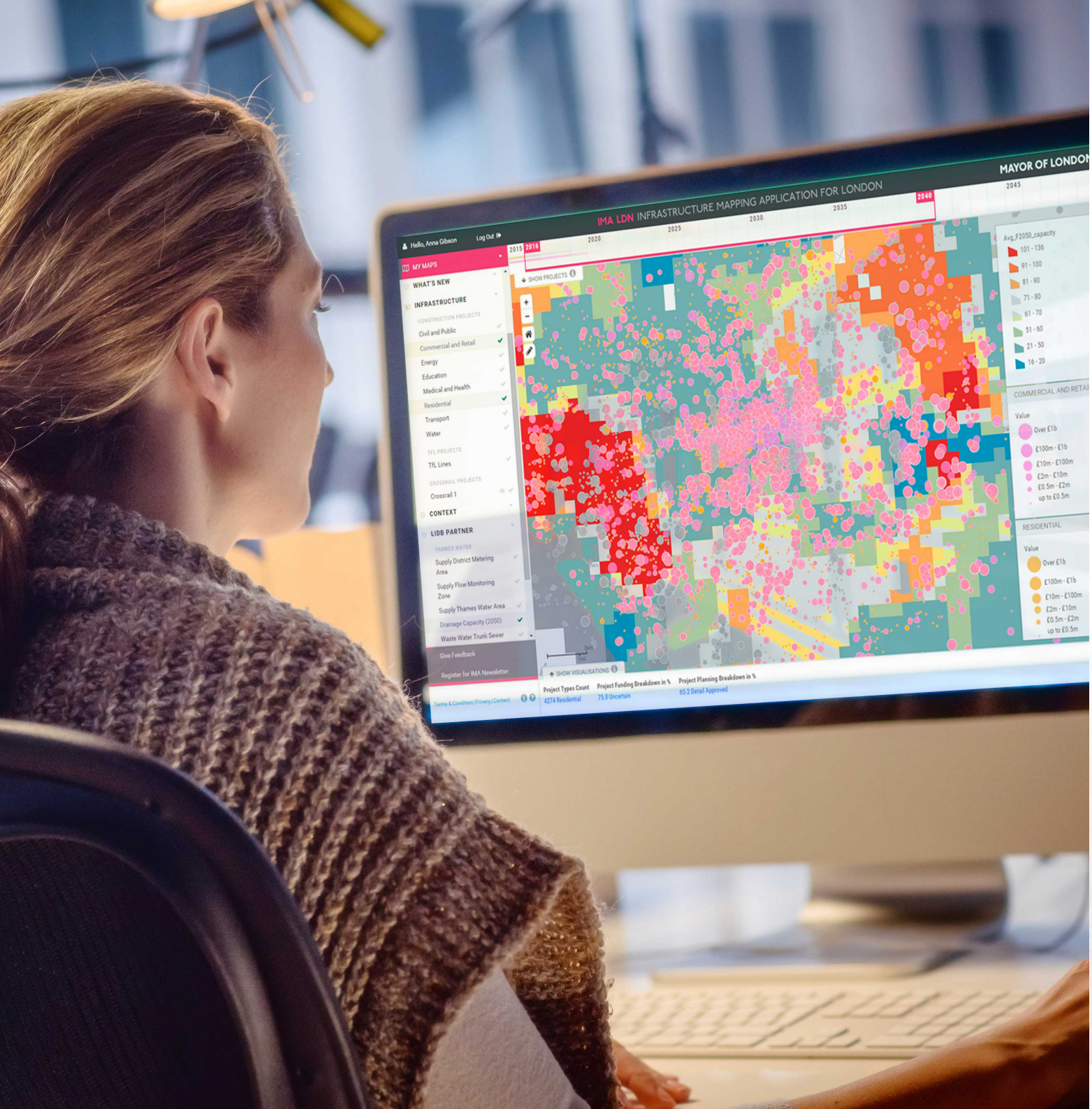
At Esri we build the worlds most powerful mapping and spatial analytics software, enabling government to:

- Visualise the physical world and business data together, using the essential context of location.
- Share and collaborate with colleagues and partners.
- Equip your mobile workforce with the information they need whilst monitoring their safety.
- Design and plan the places of the future.

All of this, using out-of-the-box, rapidly deployable secure solutions that are low cost and provide a significant return on investment.

This eBook explores how Esri GIS is used by our government customers to reduce costs, inform policy, attract investment and optimise citizen services.

Many Central Government departments and more than half of all Local Authorities in the UK work with Esri UK to improve Operational Intelligence and deliver Smarter Communities.



Making Data Work

Smart Communities through strategy informed by data-driven decisions

GIS provides advanced analytics that uncover the real stories within your data. While most analytical tools ignore the location element found in almost all government data, GIS makes it central to decision making. If government is going to create places that people are proud of and want to live in then data-driven decisions based on the realities of each locality are essential.

On the following pages, discover how this is working in practice for Westminster City Council and Norfolk County Council.

Making Data Work

Maximising value for money with a new approach to waste services procurement

Westminster City Council has made innovative use of GIS to help ensure that new tenders for its £225 million waste disposal contracts offer the best possible value for money. It anticipates that its new approach to waste services procurement could contribute to avoiding costs of up to £2 million a year.

- ArcGIS allows the council to make more informed decisions about supplier appointments
- The GIS-enabled project has given the council rapid insight into complex public service requirements
- By using ArcGIS, the council avoided the need to pay external consultancy fees of £20,000

City of Westminster

> *"ArcGIS Online is helping Westminster City Council to make evidence-based decisions and ensure the effective use of public funds in the management of waste services"*

It is anticipated that the new approach to waste services procurement could contribute to avoiding costs of up to £2 million a year.

Making Data Work

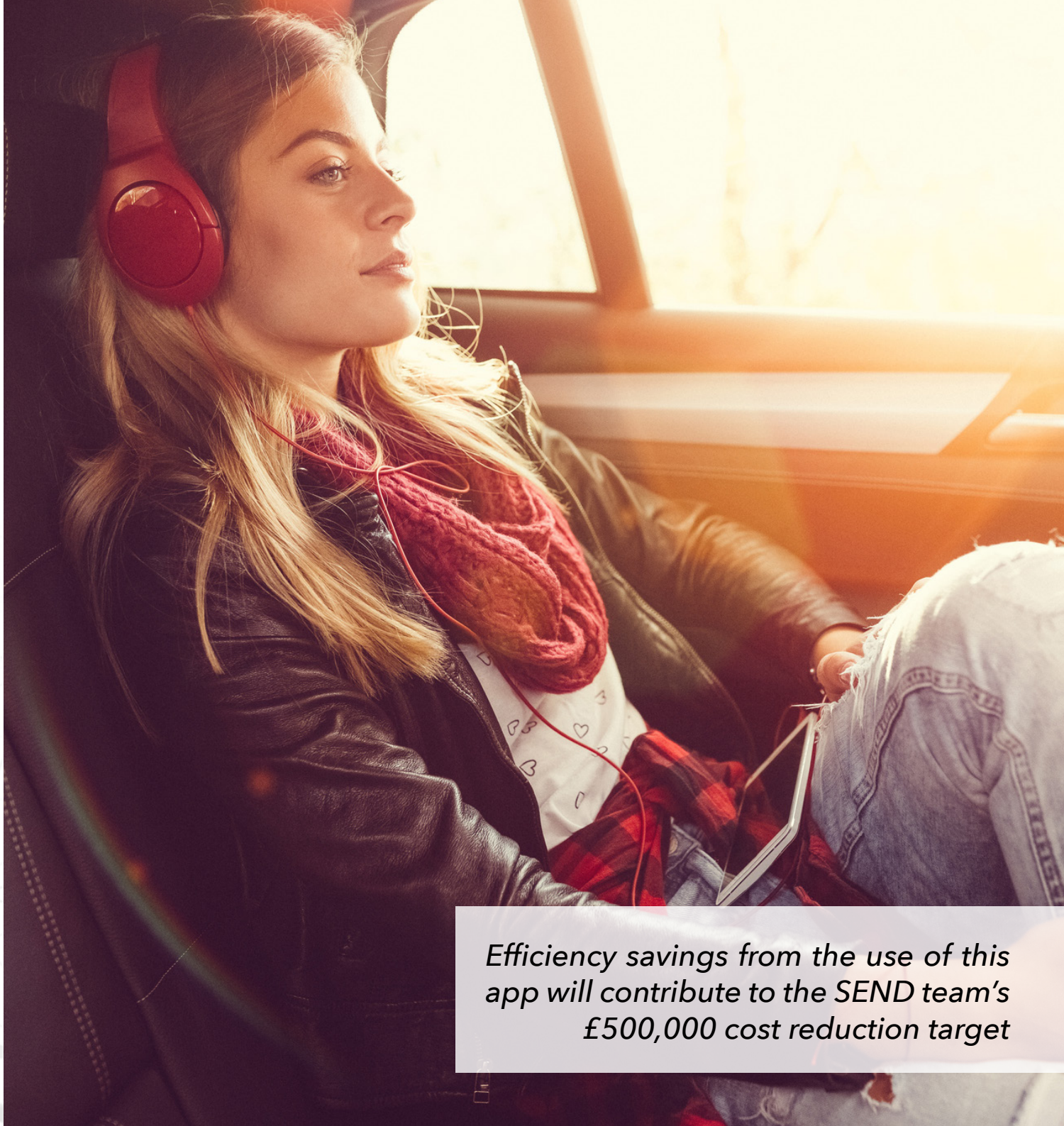
Improving the commissioning of school transport for vulnerable children

Norfolk County Council is using Esri's ArcGIS platform to help it arrange the most suitable school transportation for pupils with special educational needs. This insightful application of GIS is improving services and safety for children, while also helping the local authority to achieve its cost savings target.

- With greater understanding of pupils' travel needs, employees can commission safe, appropriate journeys
- The council can easily see opportunities for pupils to share journeys or make shorter journeys to reduce travel costs
- Efficiency savings from the use of this app will contribute to the SEND team's £500,000 cost reduction target

Norfolk County Council

> *"Our new ArcGIS app allows us to provide a high quality transportation service for children with special educational needs, while operating cost efficiently"*



Efficiency savings from the use of this app will contribute to the SEND team's £500,000 cost reduction target

Making Data Work

Improving access to sporting facilities in Wales

Sport Wales has gained a far deeper insight into the distribution and accessibility of sports facilities in Wales thanks to a geospatial analysis plug-in developed by the University of South Wales. Based on Esri's ArcGIS platform, the tool enables Sport Wales to provide the Welsh Government, local authorities and national sports governing bodies with clear evidence of where to invest to deliver health benefits for the widest number of people.

- Non-technical users can perform sophisticated analyses of sports facilities in just five or six simple steps
- Analysis results are displayed quickly, clearly and attractively in easy-to-interpret interactive maps
- The use of floating catchment area models enables users to allow for different drive time scenarios

sportwales
chwaraeoncymru

> *"We can perform highly nuanced analyses with ArcGIS, quickly and easily, to gain real evidence of the best places to allocate funding to benefit the largest number of people and specific sections of communities."*

ArcGIS will help Sport Wales to ensure that sports facilities are accessible, fit-for-purpose, sustainable and in the best locations

Open Data and Transparency

Smart Communities through open data and transparency

Sharing Open Data gives citizens confidence in government and enables the private sector to develop innovative services, providing employment and prosperity. GIS provides an intuitive, engaging and easily consumed means to share open data – encouraging its use and increasing the range of possibilities.

On the following pages, discover how this is working in practice for Lambeth Council and explore how the Cabinet Office is improving transparency in Central Government.

Open Data and Transparency

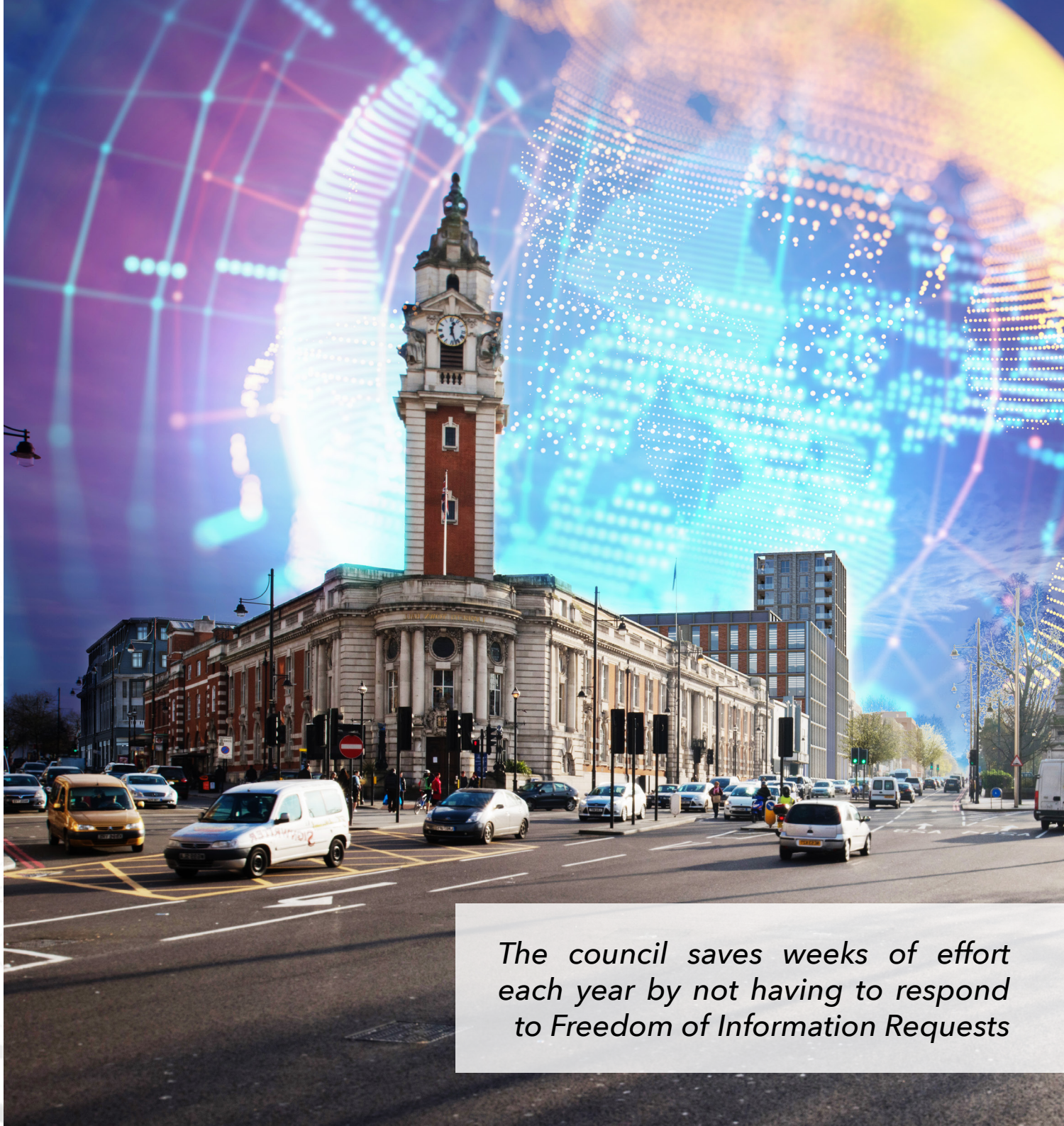
Making Open Data available and relevant

The London Borough of Lambeth Council has become a pioneer of best practice in the publication of local government Open Data in the UK. Using ArcGIS Online and preconfigured Open Data templates, the council doesn't just make Open Data available; it makes it relevant and useable for the widest possible range of people and organisations.

- Council employees save weeks of effort each year by not having to respond to Freedom of Information and data requests
- Citizens gain online access to council data in a map-based format that they can more easily understand
- Third party organisations harvest Open Data in a wide choice of formats to suit their business needs

Lambeth

> *"ArcGIS Online has definitely helped to push us to the forefront of the Open Data movement."*



The council saves weeks of effort each year by not having to respond to Freedom of Information Requests

Open Data and Transparency

Improving transparency in Central Government

Firmly committed to improving transparency in Central Government, the Cabinet Office has developed a GIS-based web app that makes vacant property and land information more accessible to the public. Over time, it hopes that this online solution will lead to a decrease in under-utilised government-owned assets and increase revenue for government departments.

- This GIS app supports the government's transparency agenda, making information far more accessible to citizens
- The use of Esri's ArcGIS platform ensures that the web app is easy to use, allowing people to quickly find vacant properties and land in their chosen locations
- The Cabinet Office streams background mapping data directly into its web solution, saving time on data preparation and management

Cabinet Office

> *"It was extremely tricky for people to find information about property in their area… Rather than just providing this raw data, we decided to provide an online application that would be quick and easy to use"*

The GIS app supports the government's transparency agenda, making information far more accessible to citizens

Open Data and Transparency

Inspiring citizens to engage with policies

Using configurable apps from Esri, South Ayrshire Council has developed over 25 informative Story Maps to communicate information to citizens, businesses and its own employees. These highly versatile, interactive maps don't just tell a story; they engage people in local issues, support the local economy and improve the efficiency of council operations

South Ayrshire Council was acutely aware of the challenges of sharing information and getting local people to engage with its policies. In particular, it wanted to increase public awareness of its Local Development Plan, a strategic policy document that sets out the council's land use priorities

- The council has increased citizen engagement in key policies such as the Local Development Plan
- Key events are publicised more inventively, increasing visitor numbers and boosting tourism
- Employees work efficiently and save money, with improved understanding of corporate policies

south AYRSHIRE COUNCIL

> *"We now have a rapidly growing portfolio of over 25 Story Maps that play a valuable role in improving communications with citizens, businesses and colleagues "*

The council has increased citizen engagement in key policies such as the Local Development Plan

Efficiency Savings

Smart Communities through optimised services and minimised cost of service provision

GIS enables government to evaluate and optimise services, understanding where there is greatest need and providing a cost effective means to deliver services.

On the following pages, discover how this is working in practice for Cornwall Council to improve services and drive cost savings and explore how the Environment Agency is driving efficiencies in tackling river pollution.

Efficiency Savings

Making strategic use of GIS to drive cost savings

Confronted with the need to make multi-million pound savings, Cornwall Council is making strategic use of Esri's ArcGIS platform to help identify and implement a wide range of cost reduction initiatives. At the same time, its use of GIS helps it to protect vital public services and deliver new programmes for families in need.

- ArcGIS provides evidence to support decisions about where to make economies in public services
- The council has a greater understanding of how assets can be shared and optimised between partners
- Better quality data helps the council to participate in government schemes and deliver multi-agency support for local people

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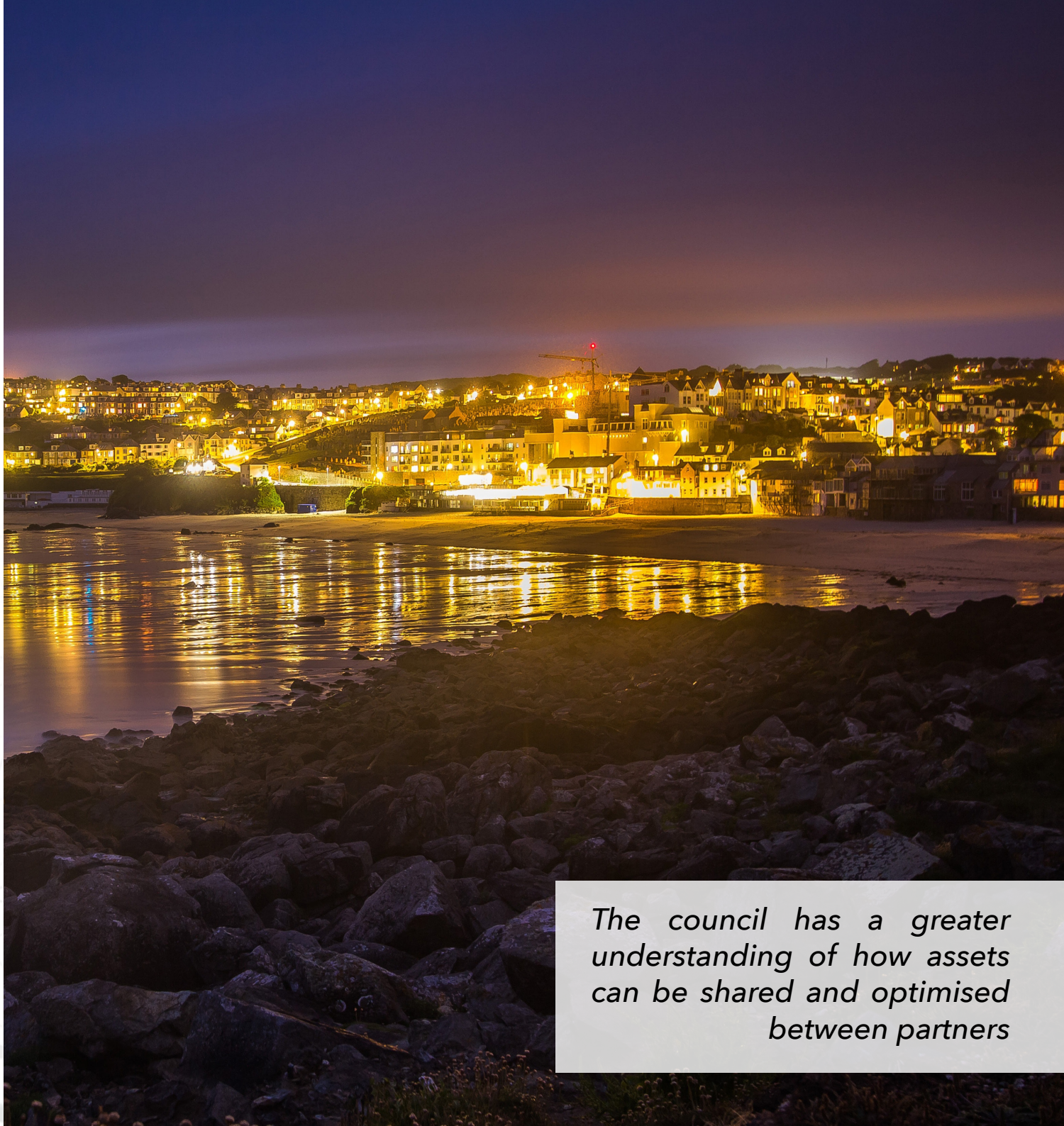
CORNWALL COUNCIL

> *"ArcGIS is playing an active role in helping Cornwall Council to achieve its cost reduction target "*



The council has a greater understanding of how assets can be shared and optimised between partners

Efficiency Savings

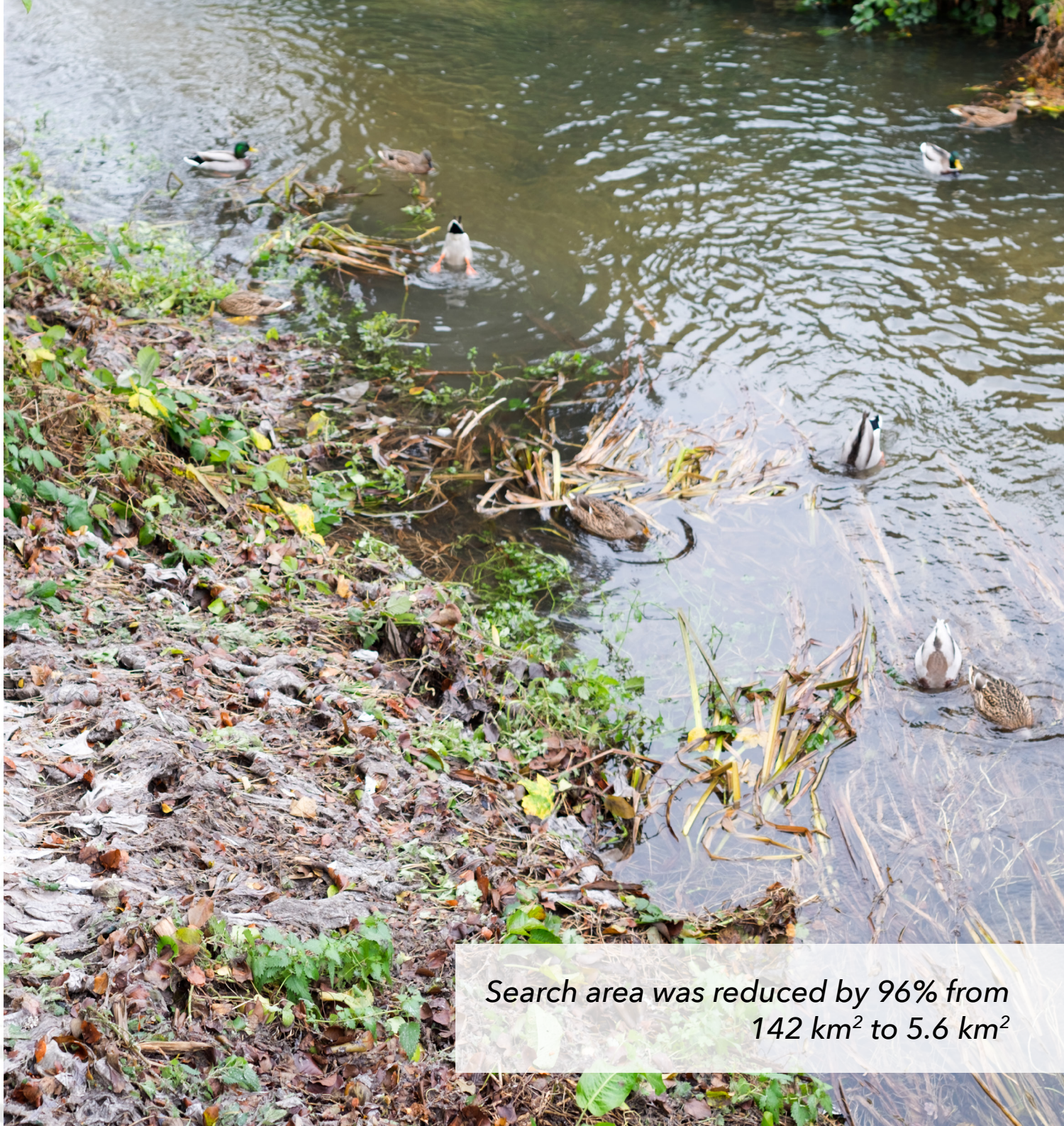
Tackling river pollution in Herefordshire

Tasked with reducing river pollution, the Environment Agency needs to identify the individual fields that are responsible for dispelling soil, fertiliser and nutrients into rivers, within catchment areas covering hundreds of square kilometres. Using ArcGIS, it can now pinpoint high risk locations more quickly, collect evidence via smartphones and operate more efficiently to help improve river water quality.

- Search area for potential soil run-off reduced by 96% from 140 km2 to 5.6 km2
- Number of inspections possible per day, per officer, increased from one or two to as many as ten
- Faster interventions and projects with farmers, improving river quality

Environment Agency

> *"Rather than having to hunt for potential sources of pollutants across the entire trial area of 140 km2, we could see that just 4% of the catchment posed a possible threat"*



Search area was reduced by 96% from 142 km^2 to 5.6 km^2

Regeneration

Smart Communities through strategic planning to create and maintain places that meet the needs of citizens

Green spaces, well-planned roads, recreation and affordable housing - these features attract people to a community. Planners, economic developers and urban designers depend on the smart maps and spatial analytics in Esri's ArcGIS software to find the best ways to deliver what people want - a high quality of life and sustainable growth.

On the following pages, discover how this is working in practice for the Greater London Authority in meeting the needs of Londoners.

Regeneration

Meeting the needs of 10.5 million Londoners

The Greater London Authority (GLA) is pioneering a new, more collaborative approach to infrastructure planning to guide the long-term growth of the capital. Using Esri's ArcGIS platform, it has developed an inventive web app that will help public and private sector organisations make better investment decisions and deliver the right infrastructure to meet the needs of over 10.5 million Londoners by 2041.

- Time and cost savings for private and public organisations, as they can collaborate more effectively on joint works
- Reduced road disruption leading to happier Londoners and an estimated cost saving of £4 million
- Accelerated home building with utility infrastructure delivered ahead of demand

GREATER
LONDON
AUTHORITY

> *"We believe that use of our ArcGIS app can encourage utilities to invest ahead of demand and therefore support the delivery of the Mayor's housing targets."*

Reduced road disruption leading to an estimated cost saving of £4 million

Transport Infrastructure & Operations

Smart Communities through a strategic approach to infrastructure planning and operational intelligence

Esri's ArcGIS software lets you understand assets in real time, whether they are moving or stationary. Gain full visibility of your operations to improve service, safety and reliability.

Transportation organisations need cost-effective tools to manage assets, human resources and field operations. Use GIS to plan, monitor and manage infrastructure more effectively. Determine capacity enhancements, improve operations and identify the most strategic investments.

On the following pages, discover how this is working in practice for Transport for London and Crossrail.

Transport Infrastructure & Operations

Delivering a £4 billion investment plan for London's roads

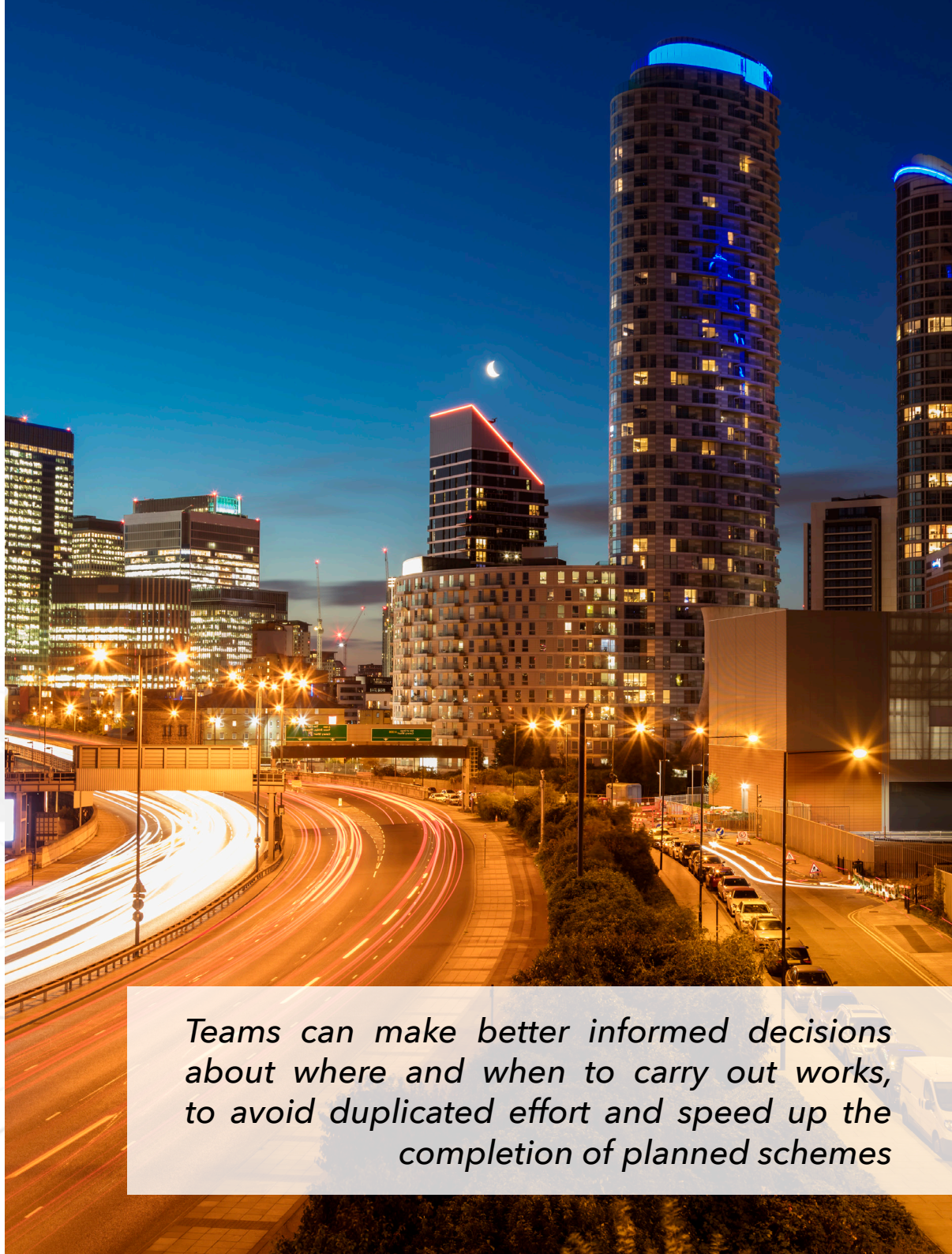
An enterprise deployment of Esri's ArcGIS platform is helping Transport for London to transform the quality of London's roads for residents, commuters and visitors alike. Using GIS, the organisation's employees can make better operational and planning decisions.

Internally the Surface Playbook solution is being used by over 1500 employees, from multiple different teams in the Surface Transport, as well as other sections of TfL. The external version of the Surface Playbook is now available to all TfL stakeholders including London Boroughs, GLA, Utilities and Highways England.

- Better informed operational and planning decisions
- More efficient and collaborative working
- Less disruption for all users of London's roads

Transport for London

> *"Our ArcGIS platform is already transforming our business and will continue to support the aspirations for the future"*



Teams can make better informed decisions about where and when to carry out works, to avoid duplicated effort and speed up the completion of planned schemes

Transport Infrastructure & Operations

Improving efficiency in a complex £15 billion construction project

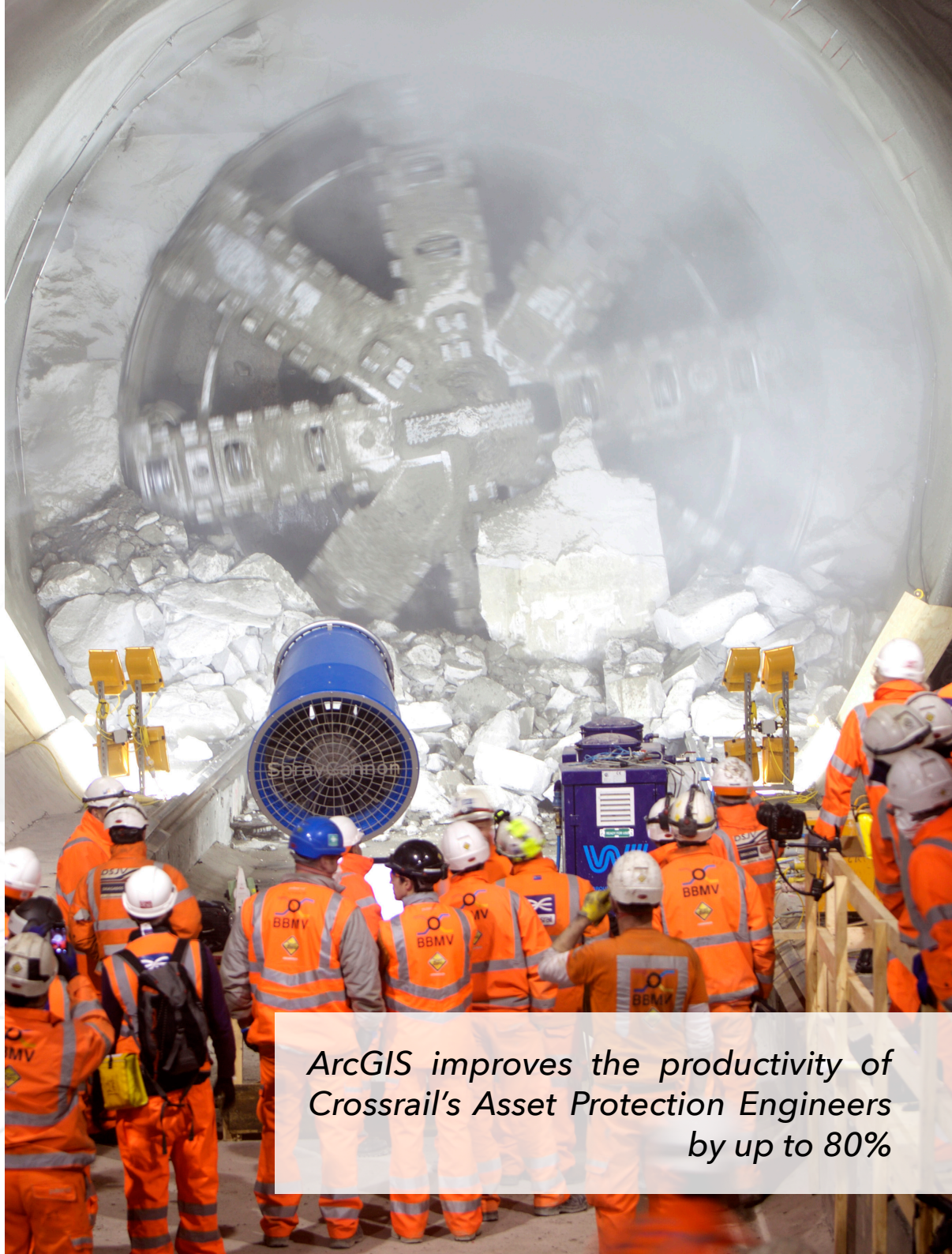
The Crossrail project uses Esri's ArcGIS platform to manage hundreds of simultaneous programmes of work and account for millions of new assets. The organisation has created a range of web, mobile and 3D GIS apps that help manage cost efficiency, ensure site safety and share information securely.

- Crossrail's Asset Protection Engineers now use an ArcGIS-based app to help them produce ground movement reports in response to claims where settlement issues have potentially arisen. The engineer can use the app to select, collate and present all of the information required, resulting in up to 80% less time spent on the report.

- In another initiative, Crossrail is using ArcGIS to model facilities in 3D for the first time and prepare an invaluable 3D asset record for the new station operators. The 3D capabilities of ArcGIS have enhanced the understanding of the relationships between assets and facility spaces, enabling them to be maintained more cost efficiently. Infrastructure Managers can also identify and analyse issues on the ground with greater understanding than before.

- Using the ArcGIS platform, Crossrail can easily share data about its routes, assets, tunnels and stations with third parties, the general public and the media. In the future, the organisation plans to make it possible for partners, such as Transport for London, to consume its data as web services or gain secure access to Crossrail's central GIS portal

Crossrail



ArcGIS improves the productivity of Crossrail's Asset Protection Engineers by up to 80%

Transport Infrastructure & Operations

Defining efficiency improvements in national road surveys

Transport Infrastructure Ireland (TII) has deployed a mobile ArcGIS solution to help it automate, standardise and accelerate its annual survey to assess the skid resistance of national roads throughout Ireland. It can now plan and undertake road surface inspections with 20% fewer people, while collecting better data to inform highway improvement programmes.

The national road network in Ireland is around 5,300 km long, incorporating multilane motorways and rural single carriageways. Every year, Transport Infrastructure Ireland (TII) is required to undertake detailed inspections of around 1,000 locations nationwide that have been identified as potentially posing an increased risk of skidding in the future. While none of the inspection sites present an immediate threat to safety for the general public, TII has to complete its survey within four months, so that recommendations can be acted upon as part of proactive road maintenance activities.

Benefits of the ArcGIS solution include:

- Mobile inspectors find inspection sites more quickly and collect data more efficiently in the field
- Office-based teams don't waste time printing maps, creating forms, uploading data and filing information
- Senior managers monitor and manage progress with real-time insight into the status of surveys

Bonneagar Iompair Éireann
Transport Infrastructure Ireland

> *"We have around 20% fewer personnel and yet can still complete the HD28 survey programme within the required timeframe "*

Senior managers monitor and manage progress with real-time insight into the status of surveys

GIS is a transformative technology already at work across government in the UK and around the world, whether it's local, regional or central government. Find out how you could be leveraging this technology to its full potential:

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