

The logo for 'axians' is displayed in a blue, lowercase, sans-serif font. The 'x' is stylized with a red-to-blue gradient. The background of the entire page is a long-exposure photograph of a city street at night, showing light trails from cars and buildings illuminated with warm lights. A large, semi-transparent purple shape overlaps the left side of the image, containing the main text.

# axians

## The public sector: the new innovators\*

\*Powering the process with automation

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# Setting the scene for a brighter future

*The quiet pavements are immaculate and not a single street light flickers as the morning sun rises. The recycling has been collected in record time, again. An hour from now, after uniforms have been found and homework frantically finished, children will walk safely to school in streets free from pollution. Traffic will flow steadily in both directions. An ambulance somewhere in the distance avoids the busy roads. The buses are on time and there is plenty of space for everyone to read the paper: Crime is down. Exam results are up. Unemployment is at a record low.*

## **It's not too much to ask, is it?**

But how do we deliver exceptional public services when there is more to do, less resource available to do it and ever increasing expectations from every direction?

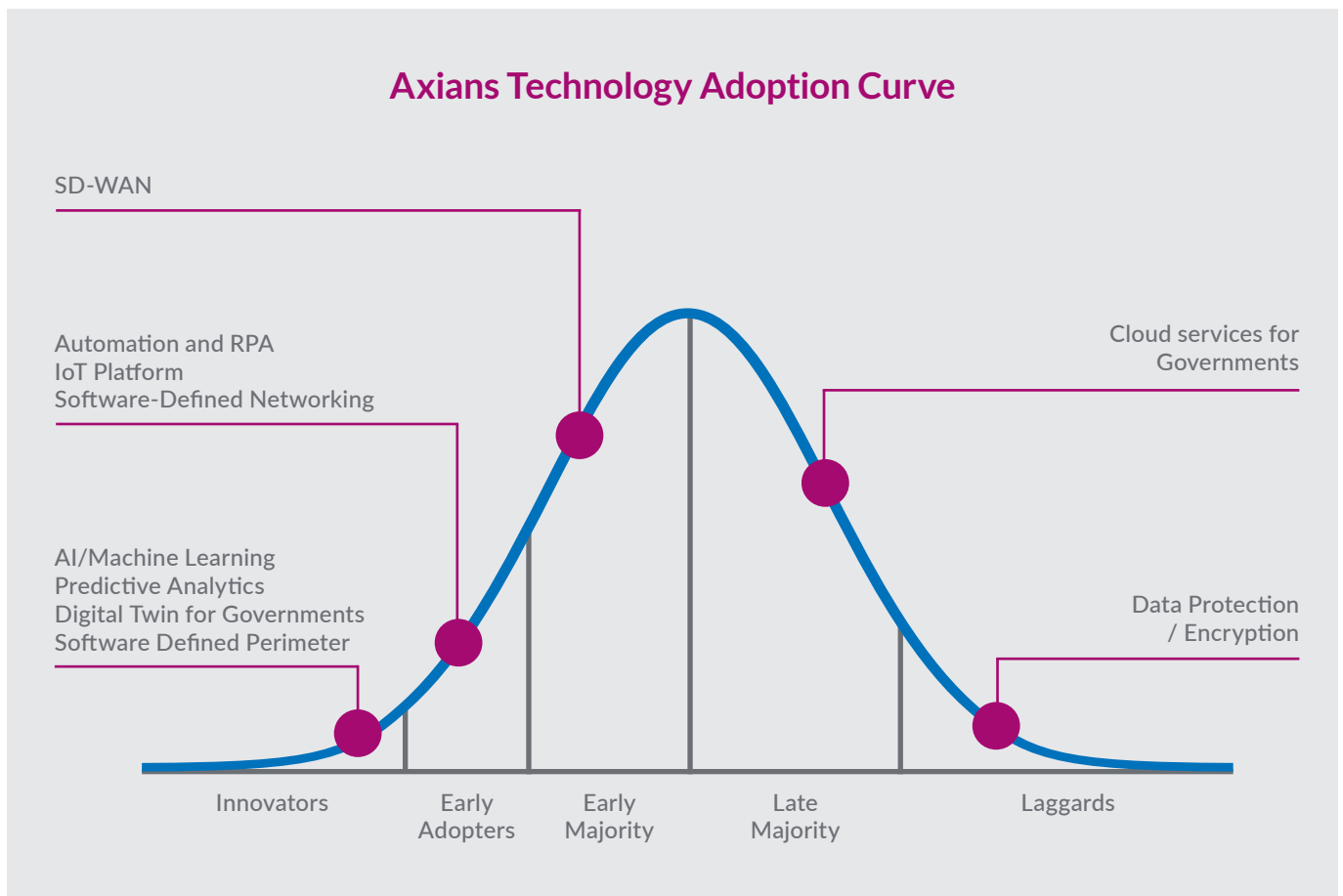
## Expertise in digital transformation

### Axians deliver ICT services in 23 Countries and supports its customers from IT infrastructure and services to digital transformation in the UK.

We are supported closely by a superb group of vendors which work with state-of-the-art technology to deliver excellence every time. We are helping the UK Public Sector transform the way technology relating to Network Infrastructure is utilised and operated. We know how to help you make the most out of what's available and we have the skills available to get the job done. We enable you to make the technology transformation today.

## The public sector: the new innovators

Historically, the public sector has been seen to be part of the late majority or even laggards when placed on Everett Rogers' Adoption Curve, but Axians has witnessed something different. Faced with having to continually do more work with less available resource and struggling to recruit what Dominic Cummings famously referred to as "weirdos and misfits with odd skills", many Public Sector Organisations are willing to transition to new technologies sooner rather than later. Able to make use of their partnerships, Public Sector Organisations have been able to manage the skills gap to oversee a cultural shift towards cutting-edge systems which offer greater power for progress. Many of the technologies that are being investigated and used by the public sector today are ahead of the mainstream. The public sector is placed at the innovator, early adopters, and early majority stages of the curve.





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## Cyber-security: protecting the future

Research from GlobalData in 2018 found that security and data protection are the highest priority investments in the sector. Each year breakthroughs are being made which bring security upgrades to automated systems. As data collection technologies and cyber-security technologies continue to be developed, the ability to incorporate those upgrades across all parts of a network relies partly on a cohesive, disaggregated system (such as SD-WAN) which can be updated efficiently, and partly on having the skills available to maximise the system's inherent potential.

Ethical data collection is a vital tool to inform and improve how our networks and infrastructure work; but it is even more vital to keep that information safe. This is a world where cyber-security and its relevant laws are ever-changing and the protection of critical data is key. Encryption, for instance, is a must have. In the vast majority of cases, Axians finds that security is taken very seriously and if you're not yet getting it right then you are lagging behind and putting people at risk.

## Automation: powering progress

Automation tools such as Robotic Process Automation (RPA) are enabling operations teams to manage large scale dynamic infrastructures by reducing many of the small repetitive tasks into scripts that can allow the engineers to focus on higher value activities.

Automation tools provide a flexible and responsive system that can be scaled up to meet increased demand. Automation has been the driving force behind the progress of society for centuries and will continue to lead us into the future. You already know this and that's why many of the technologies that are being used by the public sector today are ahead of the mainstream. Automation technology enables you to do a lot more with a lot less.

Axians has a lot of experience in this field. We are pleased to see some early adoption, not just of using scripts to simplify change but of full automation frameworks that provide the entire operational process from provision to delivery.

## SD-WAN: network optimisation

SD-WAN is a networking technology based around the disaggregation of the network service and the underlying network infrastructure. This means that secured, application-optimised network services can be delivered over technologies such as MPLS, DSL, 4G and more. The centralised visibility and control of the network that SD-WAN enables adds the capability to both scale significantly, and also to take advantage of available infrastructure to deliver the connectivity.

This builds the business case for this technology in many public sector organisations.

Whilst SD-WAN use across the public sector is broadly in the early-mainstream stage of adoption, sadly, we see that many organisations wait for their major WAN refresh before investing in and gaining the benefits of SD-WAN. SD-WAN offers you the chance to disaggregate and leverage an enhanced capability for flexibility. Failure to leverage this advantage may result in the wastage of valuable resources such as time, money and missed opportunities to develop in-house skills.

## Internet of things: harnessing the power of data

Transformation can only truly be realised when you take advantage of all the data you gather and amalgamate what they mean. Public Sector Organisations are early adopters of IoT, and have already made vast improvements in areas such as public transportation and smart infrastructure.

Data can be gathered from an Internet of Things platform (IoT), stored in the cloud network, and utilised to provide benefits to the automation systems. An IoT platform is a software that enables development, deployment and management of solutions that connect to and capture data from IoT endpoints. It drives improved business decisions and may be delivered as a hybrid combination of edge software platform and/or cloud IoT platform as a service. An IoT platform can oversee changes such as improved bus timetables, real-time traffic analysis, well informed ambulance routes.

## AI and machine learning: high powered processing

GlobalData found that the technologies with the highest anticipated investment growth are advanced networking (software-defined) and AI/machine learning (ML). AI and ML enable organisations to process huge amounts of data and gain insight from the results that can help them to be more accurate or efficient. The applicable use cases can be as varied as the sources of the data. For example, there have been examples recently in medicine where AI has consistently outperformed trained consultants in the medical screening of patients.

Many Public Sector organisations have already adopted AI and ML, making them innovators. We can use these technologies to increase our capacity to plan ahead for the future, predict component failure and to optimise the use of our valued resources.

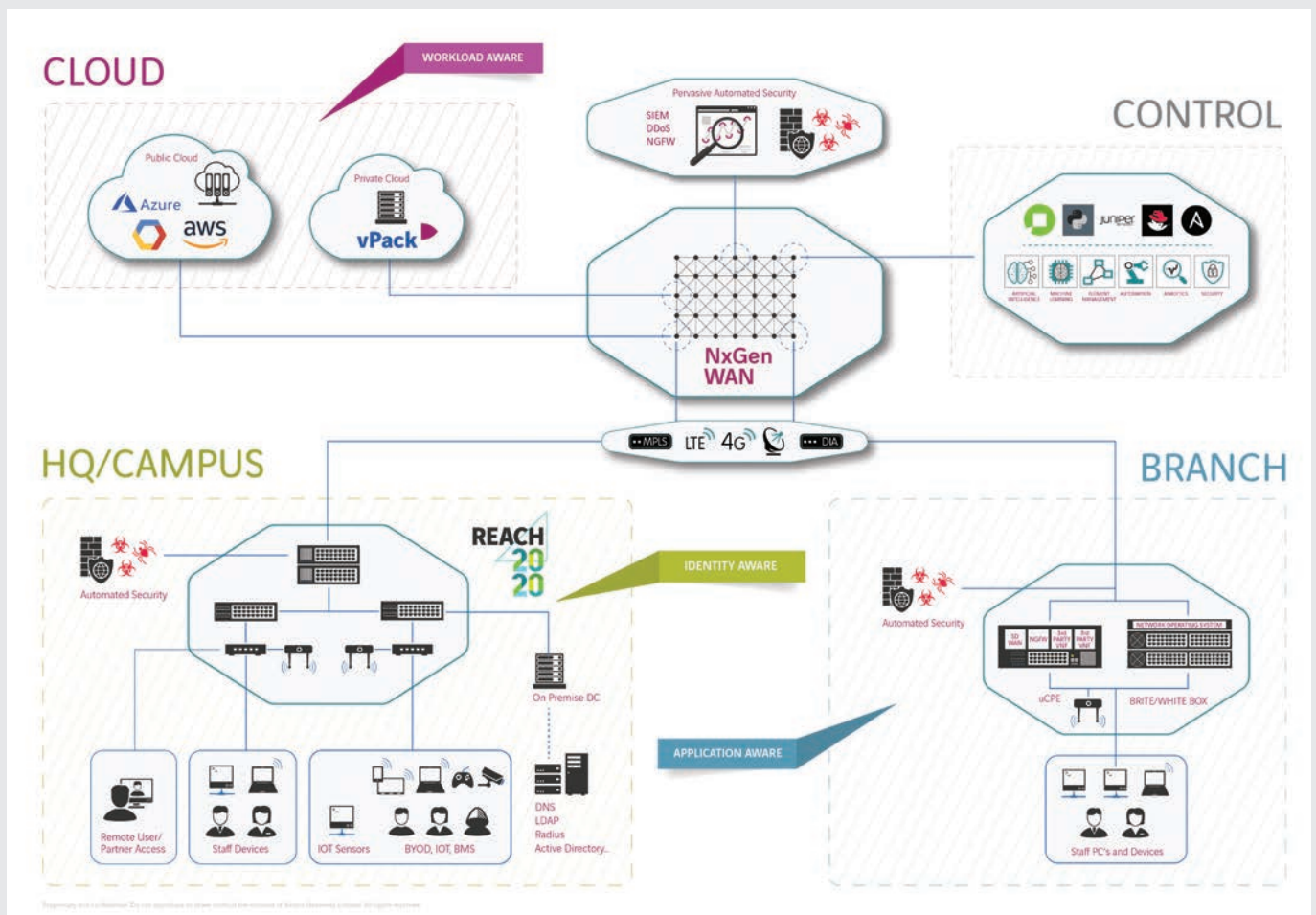
## Digital Twin and predictive analytics

A Digital Twin is a virtual representation (or model) of a real-world environment.

This allows you to play out “what if” scenarios and assess the various interdependencies that exist between systems and infrastructure. The use of Digital Twin can enable predictive asset maintenance, provide data to support planning decisions and enable performance optimisation. The National Infrastructure Commission has released a report calling for the creation of a National Digital Twin for the UK public sector to help make better, more informed decisions. In the

networking industry we have been used to modelling change through virtual labs for some time and many of Axians customers take advantage of our Lab as a Service.

If the Digital Twin can offer a landscape of connected interdependence, then predictive analytics can help to examine the what-if scenarios. They can help to improve traffic flows, predict floodplain effectiveness and even the outcome of a student’s learning journey. Adoption of these technologies is still small on a project-by-project basis rather than us transforming to the norm and the users of these technologies are very much innovators.



## Next Generation Architecture

The diagram above illustrates how the infrastructure architecture of public sector organisations has evolved to support the users needs. Adapting to next generation solutions around the wide area network and the increasing move to the cloud.

A photograph of three business professionals in a meeting. A woman with curly hair is pointing at a laptop screen, while a man in a blue shirt looks at a document. Another woman is visible in the background working on a laptop. The scene is set in a modern office with a white desk, a laptop, a smartphone, and a coffee cup.

# Time to transform

Technology is developing at an exceptional rate and often moves forward faster than your five year plan. It's difficult to keep up.

Take stock of your strategy. Consider how the delivery of your foundation services is changing and take the plunge. Get yourselves an Automation Jumpstart Assessment to see where you could benefit from process automation in your IT stack and free-up your valuable resources to focus on other activities. Don't be deterred by a lack of in-house skills; there are partners out here who can help you get started, develop in-house skills and improve cultural adoption. Leverage the infrastructure you have so that IT can become an enabler of change. AI and automation help you build towards that dynamic, responsive mechanism for delivering today's services and the efficient, stress-free present we all want to see.

Book your assessment at  
[Ukpublicsectorsales@axians.co.uk](mailto:Ukpublicsectorsales@axians.co.uk)

For more information visit  
[www.axians.co.uk/public-sector-market](http://www.axians.co.uk/public-sector-market)

# About the author

Andy Butcher has been helping many UK Public Sector businesses succeed over the past 20-years. As General Manager for Axians Public Sector Business Unit, Andy brings IT solutions to meet the changing expectations of government institutions as they navigate the ever-evolving dynamic of technology solutions required to keep pace with increasing user expectations.

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