

Accelerate a Digital Transformation in the UK Public Sector

Integrate data to make informed decisions, perform real-time analytics, and enable automation for intelligent growth, faster outcomes, and digital services.



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Meeting the Need for a Modern Infrastructure

Public sector organisations across the UK, like their private sector counterparts, are realising the growing need for modern technology that allows them to realise the full value inherently held within their data—at the speed stakeholders and citizens expect. Legacy systems that don't easily scale or integrate with modern platforms and are not cost-effective create barriers to meeting organisation's current and future requirements.

Too often, infrastructure across the public sector is unable to support initiatives to modernise, digitally transform, and manage growing volumes of data from an ever-increasing number of sources. What's needed is a modern platform that reduces complexity, lowers costs, and delivers superior performance—and provides easily accessible, trusted data to make confident decisions that accelerate growth.

A Balanced Approach is Key

Given the multi-faceted challenges that organisations face, it's evident that a balanced approach is crucial for the UK public sector's push for digitalisation and modernisation. There's a need for continuous training and upskilling of the workforce to harness the potential of digital tools effectively. There's also a pressing requirement for robust platforms that can seamlessly manage, protect, and optimise data.

As local authorities and central government navigate these challenges, they have to strike a balance between:

- Various innovations at play
- Agencies expected to do more with less due to increasing budgetary constraints
- The technologies and policies in place
- The need to modernise
- The road ahead

Digital transformation in the UK public sector is undeniably a topic of significant relevance, not just for professionals within the sector, but for every UK citizen. It's a journey that impacts everyone, and understanding its intricacies is key to securing the future of public service in the UK.

This eBook highlights challenges the public sector faces and offers solutions enabled by data, analytics, and a modern data platform.

Navigating the Evolving Data Landscape in the UK Public Sector

The turn of the century marked the dawn of digital transformations, casting a light on the varying pace of adaptation across different sectors. The most crucial and intricate of these transformations is within the UK's public sector.

The Renaissance of Local Councils

Historically, local councils used archaic, paper-driven processes, had long wait times for information, and relied on manual interventions to serve the public. A few years back, a resident's attempt to access council tax records or request planning permissions involved cumbersome paperwork and required several days, if not weeks, of waiting.

Fast-forward to today and these councils are at the forefront of the digitalisation drive, embracing digital interfaces to enhance service delivery. However, this transformation also exposed the complexities of data management within the public sector.

Challenges Looming Over the Drive to Digital

Among the most significant challenges in transformation is managing the sheer volume of data. The digital age has amplified data generation, creating vast reservoirs of information that need sorting, analysing, and storing. As local councils become more digital, they face the mammoth task of not only storing data, but making it accessible, understandable, and actionable.

Moreover, with greater digital dependency, cybersecurity has emerged as a key concern. Public sector entities have witnessed an array of cyber threats and are often prime targets, given the sensitivity of their data. This necessitates robust data protection measures and, more crucially, a constant evolution to stay ahead of potential threats.

The digitalisation drive also casts light on another significant challenge—using legacy systems. As councils modernise, they encounter the incompatibilities of older systems to meet the requirements for today's digital age. Many legacy systems, entrenched deeply within operations, pose significant hurdles to integration, scalability, and security. In addition, a lack of data literacy coupled with poor data entry using these legacy systems, with no controls in place, leads to increased instances of poor data quality.

Easy-to-Use Data Accelerates Transformations



"Digital transformation has unrivalled potential to improve the lives of citizens throughout the UK and modernise the way government works," says Parliamentary Secretary for the Cabinet Office, Alex Burghart MP.

Trusted, integrated data is at the heart of any transformation. Actian can accelerate the UK's digital transformation by making data easy to access, share, and analyse. This supports modernisation, automation, and other transformation initiatives.

Legacy Systems Meet Hybrid Cloud: The Modern Solution

In the sphere of technological evolution stands a juxtaposition that stalls progress—mounting pressure to innovate versus the inertia of legacy systems. For the UK's local councils and central government entities, this paradox of progression has been a prominent feature in their digital transformation narrative.

Consider a local council, which over decades built and maintained an IT infrastructure to support operations. From handling housing applications to processing council tax payments, these systems, once considered state-of-the-art, have served as the digital backbone of the public service infrastructure.

However, as technology leapfrogged into the era of cloud computing, big data, and IoT, these systems began to show their age. For instance, during significant public events or announcements, it's not uncommon for central government agencies and local authorities to face challenges managing data due to system overloads or slow processing speeds.

The Legacy System Conundrum

While it's easy to suggest a complete overhaul, the reality is far from straightforward. Legacy systems hold vast amounts of crucial data and are often deeply integrated into operational mechanics. This makes any change or upgrade a potential logistical nightmare.

At the same time, the need to modernise is more pressing than ever. As data volumes grow, thanks to digital initiatives, so does the demand for faster, more efficient processing and analysis. Citizens expect real-time responses and swift service deliveries. With outdated systems, local councils often find themselves unable to meet these expectations, leading to delays and at times, public dissatisfaction.

Additionally, integrating newer, advanced tools or platforms with these systems presents another tier of challenges. Software incompatibilities, potential data loss or corruption, and investing the necessary time and resources to modernise can be daunting.

Hybrid Cloud: A Light at the End of the Tunnel

Amidst these challenges, hybrid cloud solutions have emerged as a solution. A combination of on-premises, private cloud, and third-party public cloud services offers much needed flexibility and agility. For example, during peak demand periods, rather than relying on the limited capacity of legacy systems, departments can leverage the cloud's scalability to handle the increased load, ensuring uninterrupted service.

Furthermore, hybrid solutions provide a seamless transition pathway. Instead of a drastic shift, organisations can gradually move their operations to the cloud, ensuring data integrity and minimising operational disruptions.

Bolstering Data Privacy and Integration in an Interconnected Era

In a world that's rapidly digitising, the sanctity of individual data is paramount. Local councils and central government entities are custodians of vast repositories of citizen data. From tax records to health details, the public sector manages information that forms the very essence of an individual's identity.

Looking Forward: Balancing the Past and the Future



The journey from legacy systems to modern, efficient infrastructures requires careful planning, strategic investments, and a clear vision. It's not just about technology, but also understanding how technology impacts operations, service delivery, and public engagement.

Once government business units see tactical challenges being solved, there will be greater buy in to the bigger picture and clarity on how to achieve the overall modernisation strategy together.

The Privacy Imperative

The digital realm is fraught with challenges. The potential for cyber threats, data breaches, and unsanctioned access loom large. A poignant reminder is the recent breach incident at the Police Service of Northern Ireland where vast quantities of personal information about police officers were mistakenly released to the public.

This was not the result of a sophisticated hack, but purely human error. This situation is avoidable, yet without the correct processes and access controls in place, it is unfortunately likely to happen again.

Integration in an Age of Overflowing Data

Beyond protection is the equally critical realm of data integration. Central government's efforts to craft timely policies often hinge on insights derived from consolidated, integrated data. For instance, education reforms are more effective when the Department for Education has access to integrated data spanning all educational institutions.

This process is anything but simple. Different departments, each with their own data collection, storage, and management mechanisms, tend to create silos that are hard to penetrate. The result? Fragmented insights that might not represent a timely, accurate picture pose barriers to trusted, data-driven decision making.

A Unified Path Forward

So, how do local councils and central government manoeuvre this landscape? By embracing technological solutions that bolster data protection and enhance integration. Advanced encryption, multi-factor authentication, and real-time monitoring can safeguard data. Concurrently, cloud-based integration tools and platforms break down silos, paving the way for unified, cohesive insights.

Action can help. It simplifies data integration, putting an end to data silos and data chaos. Action makes it easy to unify, transform, and orchestrate data pipelines by offering flexible and reliable integration solutions. Organisations can bring together data for a unified approach that instils confidence in the analytics.

Enabling Scalability and Governance While Tackling Data Silos

The ability to immediately scale to handle changing workloads while governing data is important in the contemporary public service landscape. Likewise, local councils and centralised government entities must bring together data in a unified platform to prevent the common problem of data silos.

The Ever-Changing Landscape of Public Service Data Needs

Shifting needs and priorities in the public sector influence requirements for data. Organisations need the agility and scalability to stay ahead of these demands in a cost-effective manner. They may also need to tap into new data sources, so the ability to easily build data pipelines is essential.

The Action Data Platform does this and more. Its data warehouse capability and new integration features enable real-time access at scale. The platform can integrate into an existing infrastructure and scale to meet changing needs.

Delivering Real-Time Insights into Tax Revenues



Action provides the Office of the Revenue Commissioners in the Republic of Ireland (Revenue) with the operational support and real-time insights needed to capture and manage tax revenues efficiently. How? By supporting back-office and public-facing systems.

The organisation's business model calls for greater application integration and increased use of business intelligence and analytics. The Action Data Platform helps create new services and delivers insights to meet stakeholder needs effectively and efficiently.

Governance: Ensuring Data Integrity and Trust

Data governance is critical across all public sector organisations. It ensures established policies and processes are followed to maintain high data security, integrity, quality, and availability to meet each organisation's needs. Robust governance helps safeguard against data leaks that can open the door to ransomware threats and loss of public trust.

Strong data governance also helps root out data silos. Eliminating duplicate data helps ensure high quality while saving money by avoiding storing the same data in multiple locations. Having timely, accurate, and trustworthy data enables informed decision-making and policy formation.

Promote Data Governance and Eliminate Silos

The Action Data Platform prevents silos and supports data governance. It offers integration as a service directly in the data platform to manage data in the cloud and on-premises. Data profiling capabilities improve data quality. Organisations can connect data using pre-built connectors or create their own API connectors to both ingest and deploy data to applications.

The Actian platform makes governed data easily accessible to all users, which discourages departments from creating data silos and turning to shadow IT approaches. The platform also supports real-time analytics with sub-second response times, making data available to users or processes as soon as it becomes available.

Economic Implications: Cost-Efficiency in Data Management

Legacy systems, while reliable and familiar, have intricate challenges. On the surface, they might seem like a financially viable choice, considering the immediate capital expenses associated with modernisation. However, when organisations look beyond initial costs, hidden expenditures emerge.

The Underestimated Impact of Legacy Systems

For local councils, every penny saved can be channelled toward community projects, infrastructure improvements, or public welfare programs. But with legacy systems, organisations often find themselves allocating large chunks of their budgets to maintenance and patchwork fixes. There are also costs associated with downtime, training personnel on outdated interfaces, and resolving compatibility issues with newer digital tools.

Moreover, potential data breaches or losses from outdated systems don't just come with the immediate financial toll. They also cause a loss of public trust—an invaluable and irreplaceable currency. That's why the real costs of legacy systems are multifaceted, encompassing both tangible and intangible impacts.

From Expense to Investment: The Digital Shift

Shifting the perspective from viewing system upgrades as expenses to seeing them as investments dramatically changes the approach of public sector entities. By embracing digital transformation and modern data management solutions, councils aren't just reducing their operational costs but also significantly enhancing service delivery, building public trust, and ensuring more streamlined, efficient operations.

The Power of Real-Time Analytics



In the UK, insurance comparison websites give top billing to insurers that respond the fastest to online requests for quotes. The AA needed a platform that delivered a risk-balanced competitive insurance quote with sub-second speed. The Actian Data Platform lets the AA analyse data to deliver a quote in a fraction of a second.

"Actian and our BI tools integrate seamlessly and deliver real-time insights with great speed and performance," the company's pricing analyst explains. "We're able to make informed, risk-balanced decisions very quickly."

Likewise, public sector organisations can utilise the raw power of the Actian Data Platform to process information in real time. This can save money per query because jobs will be completed faster, which enables additional benefits such as reducing energy consumption and reaching environmental, social, and governance (ESG) targets.

For instance, adopting hybrid cloud solutions enables immediate scalability, ensuring that during peak demand periods, systems can handle the increased load without incurring additional costs. Moreover, cloud solutions often offer pay-as-you-go models, ensuring councils and central government entities only pay for what they use.

A Future-Focused Approach to Financing

Digital transformation is no longer just about keeping pace with technological advancements. It's about being financially savvy and future-focused. Investments made today in modern data management solutions promise not only immediate returns in operational efficiency, but long-term gains from increased public satisfaction due to more agile, responsive public services.

In addition, by partnering with technology providers that understand the unique challenges and needs of the public sector, these entities can benefit from tailored solutions, ensuring maximum return on investment. It's not about spending more, but spending intelligently.

Connect All Systems for a Single Source of Truth

Integrating all systems and technologies, especially legacy systems, is often extremely difficult. That's because bringing old technologies into modern ecosystems and integrating them with state-of-the-art offerings involves complex processes and specialised IT skills.

Many legacy systems were built as single-purpose solutions to serve a specific need. They were not designed to seamlessly integrate with other technologies. Likewise, legacy systems lack the ability to analyse data holistically, which means getting answers to critical business questions can take days.

Yet, because many organisations rely on legacy systems, integration is needed to enable automation, data sharing, and other benefits. Connecting systems also addresses the problem of silos caused by disparate technologies.

Staying Relevant and Responsive in Our Digital Age



The economic lens offers clear insights into the pressing need for digital transformation in the UK public sector. Every decision, every investment, and every policy made today will reflect in the services of tomorrow. It's crucial that these choices are informed, strategic, and future-ready, ensuring that the public sector remains robust, resilient, and relevant in the ever-evolving digital age.

Solve Modern Integration Challenges

Action's DataConnect, which can be delivered as an on-premises solution or as part of the Actian Data Platform, solves integration challenges. The intelligent, low-code integration platform addresses complex use cases with automated, intuitive, and reusable integrations.

DataConnect also makes it easy to unify and orchestrate data pipelines, enabling organisations to tap into new and emerging data sources. This integrated approach brings together all data from all sources for a single source of truth that gives organisations confidence in their results. Using DataConnect:

- Maps the data source to the target in a few clicks to deliver data to any destination.
- Ingests, transforms, and automates data pipelines, with or without code.
- Ensures data is complete and compliant, using data quality rules.
- Builds and promotes a data culture by giving all users governed, self-service integration.

Future-Proofing Public Services with Actian's Innovations

The future of public service delivery is constantly evolving. With artificial intelligence (AI) techniques such as machine learning and big data analytics continuing to be integrated and delivering new value, the very essence of public service is transforming. For example, local councils are harnessing AI-driven chatbots for public queries, while central government leverages data analytics to drive and inform national policies.

A Glimpse into Tomorrow

Data and analytics requirements often change quickly as new data sources, applications, and use cases emerge. Local councils and central government need the agility to respond swiftly to shifting priorities and citizens' needs, and not be locked into specific vendors.

Academy Bank Connects Data in a Hybrid Environment



Academy Bank needed to connect and manage data in the cloud and on-premises for a hybrid environment. By leveraging DataConnect and the Actian Data Platform, Academy Bank brought existing integrations and APIs to cloud-based systems without needing to rewrite integrations.

With Actian, Academy Bank developed and migrated integrations to support a hybrid cloud infrastructure. The bank delivered automated, real-time updates to its core banking system and saved more than four hours per day by eliminating manual data entry.

Actian understands the unique challenges and opportunities for the UK public sector as well as the data and analytics capabilities needed to solve challenges and deliver outcomes:

- **Frictionless integration.** Actian makes it easy to integrate data on a single platform for a single source of truth.
- **Data quality.** Actian unifies, transforms, and orchestrates data pipelines to bring together all data, while data profiling ensures quality data.
- **Develop new integrations.** Actian enables low-code, no-code, and pro-code design environments to transform data and leverage data quality rules, dramatically reducing time spent on data preparation without training staff to use complex enterprise tools.
- **Modern design architecture.** The Actian Data Platform enables the use of simple relational models to provide a modern design architecture that doesn't require sophisticated data engineering skills.

Fast Results that Support Modern Use Cases

Organisations at all levels of government need a modern infrastructure to automate processes, support digital initiatives, predict citizen needs, and offer self-service options. The Actian Data Platform can serve as the backbone for infrastructure modernisation. It enables:

- Secure data sharing across functions using data masking and role-based access controls.
- Simplified infrastructure management, operations, and monitoring, eliminating the need for staff with deep database and infrastructure skills.
- Ultra-fast analytics performance while saving money on compute and storage resources.
- Deep, meaningful data insights without requiring IT assistance.
- The ability to meet ESG targets, sustainability, and governance (ESG) targets because less time is needed to run analytics in the cloud, which reduces energy consumption.

With skill shortages, an ongoing problem across many government organisations, making data and integration processes easier is a significant benefit. The Actian Data Platform allows analysts and business users at all skill levels to get answers from their data, enabling more use cases and fostering a data-driven culture.

High Performance with Low Cost in a Single Platform

A modern data platform can solve many challenges faced by public sector organisations. These include reducing complexity and the total cost of ownership (TCO) while delivering superior price performance for data analytics without the overhead of managing complex data stacks.

Many organisations struggle to get data when and where they need it. That's because IT and data departments are too slow to aggregate data silos and deliver the data relevant for decision-making. Another problem is that analysts spend too much time preparing data, and even then, not everyone trusts the results.

The Actian Data Platform overcomes these challenges. The fully-managed platform provides data services, including data integration, data management, and data analytics. Actian's comprehensive offerings simplify the process of connecting, managing, and analysing data. With trusted integration capabilities and features for transformation, data quality, and database services, it's well-equipped to address the demands of the most complex transactional and analytical workloads, including those related to machine learning and generative AI.

Make Data-Driven Decisions with Confidence

For organisations that want clean, unified, reliable data and analytics in real time, the Actian Data Platform provides data integration, quality, and unmatched performance. Native integration and codeless transformations allow more users to access data to drive business goals.

The Actian platform reduces time to value for insights without requiring a large upfront investment in implementation. It also offers a short learning curve to use the platform effectively. This lowers the barrier to entry and enables easy data access across any organisation.

With new capabilities such as integration as a service (IaaS) and database as a service (DBaaS), the Actian Data Platform meets the needs of the UK public sector. Organisations can quickly connect to nearly any data source and integrate and transform data directly in the Actian platform. The result is quality, trusted data that provides reliable insights when they're needed to meet the needs of all data users and stakeholders, and accelerate modernisation and digital transformation.

About Actian

Actian makes data easy. We deliver cloud, hybrid cloud, and on-premises data solutions that simplify how people connect, manage, and analyse data. We transform business by enabling customers to make confident, data-driven decisions that accelerate their organisation's growth. Our data platform integrates seamlessly, performs reliably, and delivers at industry-leading speeds. Learn more about Actian, a division of HCLSoftware: www.actian.com.

9 Times Faster Performance, 16 Times Cost Savings



A benchmark test from GigaOm found that the Actian Data Platform offers superior price performance. The platform's operational data warehouse outperformed competitive solutions across a broad spectrum of real-world query use cases.

Actian query results were up to nine times faster than competitors and up to 16 times less expensive. Faster performance at a lower price point can benefit all public sector organisations and the citizens they serve.

