AtkinsRéalis

Data Science, Data Engineering & AI services

G-Cloud 15 Framework
Lot 3 Cloud Support: Service Definition

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Contents

Service overview

At AtkinsRéalis, we help public-sector organisations unlock the full power of their data – transforming complexity into clarity, and insight into confident action. Our teams combine data science, data engineering, interpretable analytics and responsible AI to deliver solutions that embed into live operations, withstand scrutiny, and generate measurable value.

Our work spans government, defence, transport, health, emergency response and critical national infrastructure, where data-driven decisions reduce cost, strengthen resilience, and improve outcomes for citizens.

We deliver measurable, independently validated results across high-assurance, regulated and mission-critical environments, for example:

- Providing a 10-times productivity uplift in wastewater network optimisation through network modelling for UK water companies.
- Reducing safety-case development time by 20% via knowledge graphing and a Large Language Model (LLM).
- Reducing unforeseen risks by 25% with 10–20% faster reporting cycles through predictive analytics for multiple clients.
- Providing ~30% operational cost reduction through automated spend intelligence for Defence.

Getting started – fast, measurable progress

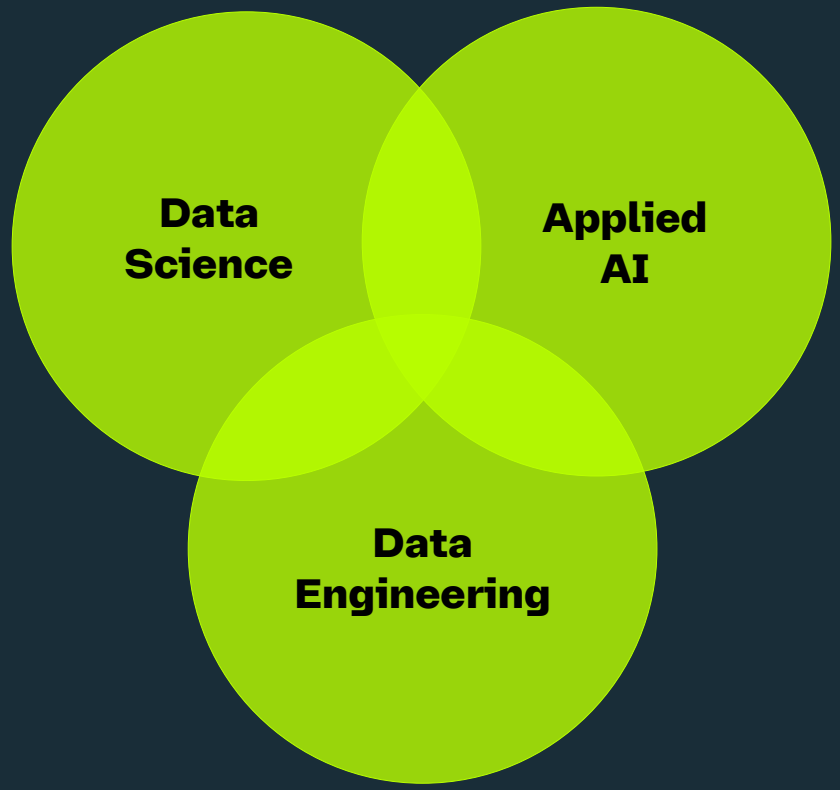
We typically begin with a focused 2-to-4-week discovery phase to map desired outcomes, users and data flows. We will deliver a working prototype, a benefits roadmap and a deployment pathway that you can progress with or without our support:

- Rapid mobilisation from over 1,000 digital practitioners
- Security-cleared teams that can work in sensitive environments
- Flexible commercial models aligned to G-Cloud and public procurement.

Data engineering – foundations that scale

We replace fragmented, error-prone data flows with reliable, governed, cloud-ready data architectures that accelerate insight and reduce operational risk, providing:

- Observability, data provenance, and automation of data pipelines
- Built in data quality controls leading to improved trust and demonstrable compliance for data audits
- Azure, AWS and GCP architectures engineered for minimal downtime and operational visibility
- Open standards and modular patterns to avoid vendor lock-in where required
- DataOps principles – CI/CD (Continuous Integration/Continuous Delivery or Deployment), Infrastructure-as-Code, automated testing and monitoring for reliable and secure data pipelines.



Data science – predictive, interpretable intelligence

We build analytics and interpretable models to help organisations understand what is happening now, what will happen next, and what to do about it now and in the future:

- Exploratory data analysis revealing patterns, anomalies and root causes
- Predictive modelling for spend, demand, asset risk and operational forecasting
- Scenario simulation and optimisation to balance cost, outcomes and risk
- Auditable, explainable models designed to be robust and resilient
- CRISP-DM methodology, with Agile delivery principles such as the Scrum framework to focus on the incremental delivery of value, so data-driven projects progress from vision to deployment with clarity and control

Applied & responsible AI – high-assurance intelligence

We deploy AI that enhances – not replaces – expert judgement. Aligned with GDS, NCSC and emerging ISO 42001 practices, our solutions are well-governed, explainable and transparent:

- Multi-model LLMs with a Retrieval Augmented Generation (RAG)-based architecture for surfacing insight from complex documents
- Computer vision for remote inspection and environmental monitoring
- Agentic AI workflows accelerating analysis with auditable structured output
- Embedded bias detection, explainability and audit trails
- Human-in-the-loop governance by design through use of DataOps principles
- MLOps for automated model retraining on performance drift

Why choose us? – trusted results, proven impact

AtkinsRéalis brings together deep engineering heritage, advanced analytics capability and a proven record of delivery in the UK's most demanding public-sector environments. Our teams operate at the intersection of data, technology and mission-critical operations, ensuring every solution is resilient, explainable and ready for scrutiny.

We avoid lock-in, favour open architectures, and design AI that enhances human expertise rather than obscuring it. We deliver outcomes that last: systems your people can run, decisions they can defend, and value that compounds long after our engagement ends.

Case studies

Find out how our impact is demonstrated through real-world delivery

CASE STUDY

Water Industry – ARROW

To address the challenges faced by harmful sewage discharges and flooding, we developed an AI optimisation tool, AtkinsRéalis Robust Optimisation Workplace (ARROW), which linked to hydraulic models and automatically trialled thousands of upgrade combinations, converging on designs that minimise cost while maximising drainage performance.

ARROW increased hydraulic modeller productivity tenfold and design cycles were reduced from months to days, providing a crucial accelerator for UK water companies to deliver infrastructure upgrades needed for the UK government to achieve performance targets for their £88bn AMP8 investment.

CASE STUDY

Construction Planning Support – AACC

To tackle the difficulties that project planners encounter in identifying the most time-critical activities for large complex construction projects with hundreds of vendors, we built the AtkinsRéalis Analytics Control Centre (AACC), a predictive analytics suite that replaces manual reporting with decision support. Automatically ingesting Primavera P6 data, it allows planners to use natural language to query project data, providing insightful visualisations.

We have reduced unforeseen project risks by 25% and achieved faster early-warning notices across hundreds of complex construction programmes worldwide.

CASE STUDY

Geospatial Commission

National Underground Asset Register (NUAR)

AtkinsRéalis designed, built and operated NUAR – a cloud-native national asset platform serving 700+ organisations. CDMS enabled end-to-end delivery: scaling Agile teams, embedding automation and driving rapid improvement. We cut asset data access times from 6.1 days to 60 seconds, unlocking £490m annual economic benefit, while reducing lead time from 3 months to 3 weeks and delivering ~100 enhancements per year.

The service passed GDS Public Beta and met stringent data security and accessibility requirements, demonstrating our ability to deliver complex, high assurance cloud platforms at pace.

£490M

Predicted in cost savings

- Reduced data access time **from 6.1 days to 60 seconds**
- Predicted to **save the UK economy £490 million annually**, a 36x return on investment
- Streamlined processes predicted to **cut costs by £91 million per year**

About AtkinsRéalis

AtkinsRéalis is a global leader in engineering, design, and digital services, renowned for delivering end-to-end solutions across government, infrastructure, energy, transportation, and technology sectors.

Founded in 1911, our company operates in over 160 countries with a workforce of more than 36,000 professionals, combining deep technical expertise with cutting-edge digital innovation. Notable for internationally recognised engineering projects such as the Burj Al Arab, the Ho Chi Minh City Skyscraper and the Elizabeth Line, alongside digital projects for MoD, HMRC, National Highways and Heathrow, we have earned a reputation for consistently delivering high-quality work.

Our digital capabilities span business strategy, architecture, design, implementation, project management, and lifecycle support, leveraging advanced technologies such as AI, digital twins, and data-driven systems to transform government, infrastructure and energy systems worldwide. With our strong focus on human-centric design, resilience, and sustainability, AtkinsRéalis is a trusted partner for complex, mission-critical projects for clients across government, defence, infrastructure and beyond.

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