



Data Engineering

G-Cloud 15: Service Definition Document



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In the bottom right corner of the slide, there are two overlapping green triangles. The triangle in the foreground is a vibrant green, while the one behind it is a slightly lighter shade of green.

01 About Made Tech

Who we are and what we do



About Made Tech

Established in 2008, Made Tech helps public sector organisations deliver technology at pace. Our services include digital service delivery, technology skills enablement, legacy applications transformation and data infrastructure and insights.

We work exclusively with public sector organisations, and our work follows Government Service Standards and is aligned with the Service Manual and Technology Code of Practice.

We're experts in delivering public sector services based upon easily scalable platforms and are leaders in delivering digital, cloud-based technology platforms using modern software engineering and architecture, and lean and agile software delivery practices.

Working collaboratively with our central and local government clients, we create user-centred, evidence-based, end-to-end services that reduce costs and vastly improve the user experience.

We understand how to deliver successfully using a business outcome-based approach. This ensures we deliver against the highest priorities, maximising value and minimising waste.

Continuous improvement, learning and mentoring are key values for us, and we are committed to sharing new and improved ways of working with client teams when we see opportunities to improve capabilities.



Our mission

To help the public sector build world-class technology teams, that practice the sort of techniques and ways of working you would see in an internet-era business.



Modernise

legacy technology
and working practices



Accelerate

digital and technology
delivery



Drive

smarter decisions with
data and automation



Enable

sustainable
technology and
delivery skills

Our **services**

**Cloud and
Engineering**

Data

**Strategy and
Transformatio
n**

**User Centred
Design**

**Industry
Verticals**

Cyber Security

**Managed
Services**

**Problem /
Solution
Specific**

Technology

Decorative graphic in the bottom right corner consisting of several overlapping green triangles of varying shades.

02 Data Engineering

Delivering user-centred digital, data and
technology services to the UK public sector

Data Engineering

Service description:

We unlock the power of data within the public sector.

When data is locked away in current/legacy systems, using it to create intelligence is difficult.

We support with designing and building pipelines, transporting data, linking/connecting data, ELT/ETL, Stream-processing and creating data lakes, data mesh, data warehousing, along with necessary data-modelling.



Data Engineering

Service features:

- Design/ build data pipelines
 - Support data engineering through discovery, alpha, beta and Live
 - Transport Data through systems
 - Develop Mlops, DataOps, ETL/ELT process
 - Link/ connect data and create anonymisation/pseudonymisation
 - Mature principled data platforms CI/CD, unit testing
 - Batch and Stream Processing
 - Develop Data Mesh, data lakes, data warehousing,
 - Carry out cataloguing and modelling to support data analysis/data science
 - Utilise open source tools such as Apache Spark ecosystem, DataBricks
- 
- Three overlapping green triangles of varying shades (light green, medium green, and dark green) are positioned in the bottom right corner of the slide.

Data Engineering

Service benefits:

- Allow for access to data that was previously inaccessible
 - Link data to generate deeper insight
 - Get data assets ready to support Data science/Machine Learning/ AI
 - Realise the true value of your data estate
 - Training and development of internal teams
 - Support data migration and data migration strategy
 - Enabling reverse ETL/ETL for operational API's
 - Increase data literacy
 - Automation of repetitive data workloads
 - Reduction in time to insight
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- Three overlapping green triangles of varying shades (light green, medium green, and dark green) are positioned in the bottom right corner of the slide, pointing upwards and to the right.

03 Previous experience

Examples of our work



Ministry of Housing, Communities and Local Government: **Homes for Ukraine**

Problem:

A digital service for the Homes for Ukraine scheme to support refugees. The service was to be **launched to coincide with the policy announcement**, meaning **MHCLG had to respond incredibly quickly**.

Solution:

We **rapidly deployed (<7 days) an SC-cleared multidisciplinary team** (engineering, UCD, data) to work with other suppliers and MHCLG senior leadership. **Policy teams were invited to service mapping and user research sessions** to unlock benefits of quickly testing ideas and making frequent iterations. **Existing architecture was re-used to accelerate delivery**.

Outcomes:

- Working service launched within 10 days.
- High levels of engagement across MHCLG, including method advocacy of Deputy Director.
- The service enabled 180,000 expressions of interest in its first week and the settlement of ~120,000 guests to date.

NHS England: GP Interoperability (GP-IT) Patient Record Migration Programme

Problem:

Patient record transfers relied on physical transportation of paper files, taking up to 8 weeks and creating **dangerous care gaps**. 70 million paper records scattered across practices led to frequent **data loss**, immense **administrative burden**, and required 24/7 manual operations for 62.5 million patients.

Solution:

We replaced the road-transport model with an **instant digital warehouse**. We developed 27 data archetypes and interoperability standards, ensuring that when a patient moves, their data moves with them instantly. This included:

- **Cloud-native architecture** providing a secure digital repository.
- CI/CD and test-driven development for **24/7 availability with zero downtime**.
- **Comprehensive monitoring** to resolve issues before they impact patient care.

Outcomes:

- Enhanced continuity of care - patients no longer waiting weeks for GPs to access critical medical histories.
- Record migration times reduced from 8 weeks to 1 day.
- Significantly reduced data loss during transfers.
- Zero unplanned downtime maintained throughout.
- Monthly cost savings of £75,000 through reduced manual processes.
- Scalable technical foundation established for future healthcare digital initiatives.

Ministry of Justice: **Modernising the court results system**

Problem:

The Bichard 7 application manages **transfer and processing of 10-15K daily case results** from court systems to the Police National Computer. MoJ wanted to modernise it with **reliable, cost-effective modern technology**.

Solution:

Given its criticality, we took a considered approach to rolling out replacement functionality. We focused on **moving to cloud and removing expensive proprietary licences**, before full legacy replacement and building new user centred products. **Test-driven development, automation and AI driven code analysis** accelerated delivery.

Outcomes:

- Our iterative delivery released value early and de-risked delivery.
- Police users have a new service with intuitive navigation, aligned to GDS standards, fully accessible and designed inclusively.
- Easy to maintain solution with reduced total cost of ownership.

“

With the great support and guidance from the managed services team at Made Tech, I'm delighted to say this project has been a huge success. A great level of dedicated work has gone into helping us modernise the application, migrate it to AWS and rollout ongoing improvements to meet the needs of our users.

”

Dom Tomkins, Ministry of Justice Service Owner

Contact us

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