

DATA PRODUCT DELIVERY

Service Definition
G-Cloud 15

REPLY

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SERVICE DESCRIPTION

Most organisations treat data as a technical by-product of systems rather than a valuable product designed for consumption, resulting in analysts spending most of their time preparing data rather than generating insights. Reply Data Product Delivery service, designed for G-Cloud 15, fundamentally reimagines this model by treating datasets as products with defined owners, consumers, quality guarantees, and service level agreements. We implement modern architectural patterns including medallion architecture (bronze-silver-gold layers) and domain-driven design that enable departmental teams to own their data products while maintaining enterprise-wide interoperability through standardised interfaces and contracts. Using frameworks like dbt, SQL transformations, and Python, we deliver analytics-ready datasets that power self-service insights, accelerate AI/ML initiatives, and support operational intelligence without repetitive preparation work. Whether you're struggling with centralised bottlenecks, inconsistent definitions across departments, or the inability to scale data capabilities with organisational growth, our data product approach establishes sustainable patterns that align technical delivery with business value and federated ownership models that match how modern public sector organisations operate.

FEATURES

Our product delivery approach combines architectural patterns with stakeholder engagement and technical implementation, ensuring data products meet real consumption needs while maintaining quality and governance.

- **Medallion architecture (bronze-silver-gold) separating raw ingestion, cleansing, conformed data, analytical aggregation layers:** We implement clear architectural layers that separate concerns: bronze for raw data preservation maintaining full audit trail, silver for cleaned and conformed data with business rules applied, and gold for aggregated, analytics-ready products optimised for specific consumption patterns. This separation enables different consumption needs, from data scientists wanting raw access to executives needing pre-aggregated KPIs, to be served efficiently from appropriate layers.
- **Data product design workshops identifying consumer needs, use cases, success metrics:** We facilitate structured discovery sessions with data consumers to understand what questions they need answered, what decisions they are making, and what success looks like for their use cases. These workshops ensure products are designed for actual consumption patterns rather than technical convenience, maximising adoption and value realisation from day one.
- **Domain-driven modelling establishing ownership boundaries aligned to your organisational structure and accountability:** We apply domain-driven design principles to establish clear ownership boundaries that match your organisational structure, creating natural accountability and subject matter expertise alignment. This federated ownership model scales with organisational complexity without creating monolithic central bottlenecks.
- **Interface contracts specifying schemas, data types, SLAs, quality commitments between producers/consumers:** We establish formal contracts between data product producers and consumers that specify exact schemas, data types, refresh frequencies, quality thresholds, and service level agreements. These contracts enable loose coupling where producers can evolve implementations without breaking consumers, and consumers can rely on documented commitments rather than tribal knowledge.
- **Analytical modelling with Visual Paradigm, ER/Studio, and more creating dimensional marts, wide tables, metrics optimised for consumption:** We design and implement data models optimised for consumption, using proven dimensional modelling techniques (facts, dimensions, slowly changing dimensions) and modern wide table patterns that minimise joins and maximise



query performance. Our modelling combines visual design tools for stakeholder communication with dbt implementations that make models testable, documented, and version controlled.

- **Platform-agnostic implementation across Snowflake, BigQuery, Databricks, Synapse, Redshift, Fabric supporting your organisational stack:** We deliver data products using SQL and dbt patterns that work consistently across any modern data platform, avoiding vendor lock-in and enabling portability. This agnosticism means your product designs outlive specific technology choices and can evolve with changing platform strategies.
- **Quality contracts enforcing completeness, accuracy, freshness, referential integrity thresholds per product automatically:** We implement automated quality checks that validate every product delivery against its contractual commitments, failing builds if completeness drops below thresholds, freshness SLAs are missed, or referential integrity breaks. These automated contracts ensure consumers can trust the data without manual validation, while producers get immediate feedback when quality degrades.
- **Self-service access patterns enabling SQL, API, semantic layer consumption without engineering dependencies:** We expose data products through multiple consumption interfaces: direct SQL access for analysts, REST APIs for application integration, and semantic layers for business-friendly metric definitions, enabling different user personas to consume data in their preferred way. This multi-modal access eliminates engineering bottlenecks where every data request requires technical intervention.
- **Product versioning and change management preventing breaking, disruptive changes:** We implement versioning strategies that allow product evolution without disrupting existing consumers, using semantic versioning to signal breaking versus non-breaking changes and maintaining backward compatibility during deprecation periods. This disciplined change management prevents the chaos of unexpected schema changes breaking downstream reports and analyses.
- **Product catalogue integration documenting purpose, schemas, usage examples, ownership, SLAs in searchable repository:** We integrate data products into your data catalogue with rich documentation including product purpose and value proposition, detailed schema definitions, example queries showing common usage patterns, ownership and support contacts, and published SLAs. This cataloguing makes products discoverable and self-explanatory, reducing onboarding friction for new consumers.

These features work together to create a comprehensive product delivery capability that treats datasets with the same engineering discipline applied to software products, ensuring reliability, usability, and value.

BENEFITS

Data product thinking transforms data from a cost centre into a capability that generates value and scales with organisational needs and directly supports strategic objectives.

- **Accelerate analytics and AI projects with analysis-ready, feature-engineered datasets eliminating repetitive preparation:** Data scientists and analysts can start generating insights immediately rather than spending weeks preparing data, because products are delivered pre-cleaned, conformed, and optimised for analytical consumption. This acceleration compounds across multiple projects using the same products, creating exponential time savings.



- **Enable departmental autonomy through federated ownership while maintaining enterprise-wide interoperability and standards:** Domain teams gain autonomy to evolve their data products at their own pace without central approval bottlenecks, while standardised interfaces and contracts ensure products remain interoperable for cross-functional analytics. This federation scales data capability with organisational size without proportionally growing central teams.
- **Reduce data duplication and inconsistency with reusable products serving multiple consumers reliably:** Instead of each team creating their own version of truth or metrics with slightly different definitions, canonical products are built once and consumed many times. This reuse eliminates conflicting reports showing different numbers for the same question, which erodes trust and wastes time reconciling discrepancies.
- **Support self-service analytics empowering business users to access trusted data without IT bottlenecks:** Business analysts can directly query gold layer products through semantic layers or BI tools without requesting data extracts or custom reports from engineering teams. This self-service capability reduces engineering workload while accelerating business users' time to insight from weeks to minutes.
- **Guarantee data freshness and quality with enforced SLAs building user confidence and trust:** Published and enforced SLAs create predictable data availability (e.g. users know finance data refreshes daily by 9am, operational data updates hourly) building confidence to rely on data for time-sensitive decisions. Quality contracts similarly guarantee completeness and accuracy levels, eliminating the need for manual validation before use.
- **Scale data capability matching organisational growth without monolithic central team bottlenecks slowing delivery:** As organisations grow, federated product ownership distributes delivery capacity across domain teams rather than concentrating it in central data teams that become bottlenecks. This distribution enables linear scaling where adding teams adds capacity, unlike centralised models where growth creates queuing and delays.
- **Facilitate cross-department collaboration with standardised interfaces and shared understanding of available products:** Standardised product interfaces and catalogue documentation enable departments to discover and consume each other's products without extensive coordination, facilitating cross-functional initiatives like integrated performance dashboards. This interoperability would be impossible with bespoke, undocumented datasets.
- **Enable AI/ML initiatives with governed, quality-assured feature stores and training datasets ready immediately:** Data products designed with ML consumption in mind (properly versioned, with point-in-time correctness, rich features) accelerate model development from months to weeks by eliminating feature engineering bottlenecks. Quality contracts ensure models train on reliable data, preventing garbage-in-garbage-out failures that undermine AI initiatives.
- **Demonstrate data ROI clearly by tracking product usage, consumers, business value delivered:** Product catalogues capture which products are consumed by which teams for which use cases, enabling clear value attribution. This visibility justifies continued data investment and guides prioritisation toward high-value products.
- **Future-proof architecture aligning to modern data mesh principles adopted across government and industry:** Product patterns align with emerging data mesh principles being adopted across progressive government departments and commercial organisations, positioning you at the forefront of modern practice. This alignment ensures your architecture remains relevant as industry patterns evolve and provides a recognisable model when recruiting talent.



These benefits transform data from a technical dependency into a strategic capability that directly enables organisational objectives, creating measurable ROI and sustainable competitive advantage in service delivery.



ONBOARDING

We will hit the ground running from day one. Our structured onboarding process eliminates the confusion and slow starts that plague consulting engagements, ensuring we're delivering value within weeks, not months.

What We Do:

- **Intensive Kick-off Workshop:** Bring together your executive sponsor, technical leads, and key stakeholders to establish crystal-clear objectives, success metrics, and non-negotiable delivery milestones with complete alignment across all parties.
- **Immediate Communication Infrastructure:** Establish dedicated channels (Slack/Teams), weekly governance meetings with executive visibility, and escalation paths ensuring blockers get resolved in hours, not weeks.
- **Rapid Discovery:** Interview stakeholders, review existing systems, identify data sources, document constraints, and surface risks that could derail delivery before they become problems.
- **Concrete Delivery Plan:** Deliver a sequenced plan showing exactly what gets built when, what resources are required, what decisions need making, and what risks could impact timelines. No theoretical documents, just actionable roadmaps.
- **Quick Wins Identification:** Identify and deliver tangible outputs early that demonstrate immediate value and build organisational confidence in our approach and your investment.
- **Access Secured:** Obtain all necessary system access, credentials, environments, and documentation during the first week, because access delays are the single biggest cause of timeline delays.

Our onboarding doesn't end until we've delivered our first tangible output, proving our team is productive and your investment is already generating returns. You'll know within the first month whether we're the right partner. We move fast, communicate clearly, and deliver evidence of progress.



OFFBOARDING

We do not always believe in traditional "handover" periods where knowledge gets dumped on your team at the end. Instead, we work with you throughout the engagement, training your staff while the work is ongoing and creating experts along the way. Our approach ensures your team is not inheriting unfamiliar solutions but has been building and operating them alongside us from the start. However, if your plan is to have us "do it for you", we will generate documentation on the way, as part of any decision we make.

What We Do:

- **Continuous Knowledge Building (Throughout Engagement):** Your team works directly with our engineers from week one: pair programming, collaborative design, joint troubleshooting. So they understand not just what was built but why, developing expertise incrementally rather than through rushed final handover sessions.
- **Structured Transition Plan:** Formalise the knowledge transfer that's been happening continuously, identifying any remaining gaps in credentials, documentation, or procedures requiring explicit handover with clear ownership assignments.
- **Validated Competency Demonstrations:** Ensure your team independently executes key operational tasks (e.g. deploying changes, responding to incidents, onboarding new data sources, etc.) under our observation and coaching, proving they are genuinely ready for independent operations.
- **Production-Ready Documentation:** Deliver architectural decision records explaining design choices, operational runbooks covering daily operations, incident response procedures with real examples, and video walkthroughs of complex tasks for ongoing reference and future team onboarding.
- **Active Hypercare Period:** Proactively monitor for issues, conduct weekly check-ins reviewing operational metrics, and provide rapid response to problems during the critical transition to fully independent operations.
- **90-Day Post-Delivery Review:** Schedule a structured review assessing what is working, what needs adjustment, and what additional support might prevent future issues, ensuring long-term sustainability and addressing any emerging challenges.

Your success operating our deliverables determines whether we get repeat business and referrals. We have zero interest in building solutions that collapse after we leave. By training your staff throughout delivery rather than at the end, we ensure you're genuinely independent and confident, with deep expertise to maintain and evolve what we've built for years to come.

Access to Data

Following formal offboarding, all data, code, documentation, and intellectual property developed during the engagement transfers entirely to your ownership with appropriate licensing. We retain no copies of your production data, credentials, or proprietary information beyond what's legally required for contract compliance and professional indemnity purposes. Any sample data or anonymised examples used in training materials are sanitised to remove sensitive information. If you require our support post-engagement through separate maintenance contracts or ad-hoc consulting, we will request fresh access grants rather than assuming continued access rights. Your data sovereignty and security remain paramount. Our engagement ends cleanly with your full control over all assets and access.



SECURITY

Personnel Security

As a Specialist Cloud Service, the capability being offered is not limited to specific Impact levels (as it is not infrastructure, software or a platform) and can be used, subject to personal Security Clearance levels. Reply consultants are mostly Security Cleared (SC), some have higher-level Developed Vetting (DV) clearances. We also have a pool of NPPV3 Consultants for Policing work. The majority of our work for both public and private sector clients is at IL2 but we work in the Official, Secret and Top-Secret domains. Our hard and soft information security processes have been designed and approved by independent CESG CLAS accredited consultants.

Information Security

We are ISO27001, Cyber Essentials certified and our Quality Assurance processes are based upon and compliant with our ISO 9001 accreditation. Our Information Security processes are directly guided by our ISO27001 accreditation. We shall adhere to local information and other security policies and will apply local Security Operating Procedures (SyOPs) as may exist. If such do not exist we shall apply our own SyOPs.

Physical Security

The Main Reply Office (London, UK) is a Police Accredited Secure Facility (PASF) with access controls for each point of entry. All Laptops/Phones must be stored securely overnight. When working on a client-site our consultants adhere to client security policies.



TRAINING & KNOWLEDGE TRANSFER

We transfer knowledge continuously throughout delivery because cramming everything into final handover sessions doesn't work and we refuse to set you up for failure. From week one, your team members work directly alongside our engineers (e.g. pair programming on pipeline code, collaborating on dashboard designs, participating in architecture decisions) so they understand not just what was built but why specific approaches were chosen and how to extend them. We run weekly "lunch and learn" sessions covering specific technical topics, tools, and patterns we're using, building your team's capability incrementally rather than overwhelming them at the end. Every two weeks, we conduct show-and-tell sessions where we demonstrate progress and your team asks questions, tries features, and provides feedback. We create role-specific training:

- Technical deep dives for your data engineers covering orchestration platforms, transformation logic, and infrastructure-as-code
- Operational training for support teams covering monitoring dashboards, alert response, and troubleshooting procedures
- User training for business analysts covering BI tools, report building, and data interpretation
- Executive briefings for leadership covering governance frameworks, strategic capabilities, and ROI realisation

All training includes hands-on exercises using your actual data and real use cases, not generic examples that do not translate to your context. We provide comprehensive documentation: architecture diagrams showing system components and interactions, code repositories with detailed README files and inline comments, video recordings of training sessions and complex procedures, searchable knowledge base answering common questions. Most critically, we validate knowledge transfer has worked. Your team must successfully complete practical assessments demonstrating they can maintain, troubleshoot, and extend solutions before we consider training complete. We measure success by your team's independence, not hours of training delivered.



ORDERING AND INVOICING PROCESS

To begin the process, please contact glue.frameworks@reply.com with details of your organisation, role and high-level requirements.

Our Framework Manager will connect you to our experts and from here we will organise an introductory discussion to go into more detail and shape a proposed engagement that suits your needs.

We invoice for both fixed price and time and materials engagements one month in arrears. For fixed price engagements, this takes place upon completion of the deliverable(s), or in stages, if the size of the engagement is greater than £40,000 excluding VAT.

Payment terms are 30 days net of receipt of invoice.



CUSTOMER RESPONSIBILITIES

We deliver exceptional results, but we cannot succeed alone. While we bring expertise, tools, and delivery capability, certain contributions from your organisation are essential to ensure we are building solutions that meet your needs and can be sustained after our engagement. However, we recognise that organisations often engage us precisely because some of these capabilities are missing and we will be there filling those gaps.

What we need from you:

- **Access and Environment Provisioning:** We need access to relevant systems, data sources, and environments to understand your landscape and build appropriate solutions. We understand access can take time due to security procedures and approvals. We will work with you to navigate these processes and can begin with limited access while fuller permissions are secured. If production-like environments don't exist, we can help you establish them as part of our engagement.
- **Stakeholder Identification and Availability:** Help us identify the right people to speak with: subject matter experts who understand your data, processes, and business needs. We know everyone is busy, so we will be flexible with scheduling and efficient with their time. If key knowledge exists only in people's heads rather than documentation, that's fine. We will capture and document it as part of our work.
- **Decision-Making and Governance:** We need someone with authority to make decisions on direction, scope, and trade-offs when choices arise. This doesn't require daily involvement. Typically, weekly or fortnightly governance meetings are sufficient. If decision-making processes are unclear or complex, we can help you establish appropriate governance structures as part of the engagement. Also, if authority figures are missing (C-levels, heads of department, technical leads) we can provide experienced leadership to fill those gaps in order to drive decision-making and maintain momentum until permanent appointments are made or internal capability is established.
- **Representative Data and Use Cases:** Access to realistic data and actual business scenarios helps us build solutions that work for your real-world needs, not theoretical examples. We understand data may be messy, incomplete, or sensitive. We will work within those constraints, help you improve quality where needed, and ensure appropriate security controls. If you are unsure what data to provide, we'll guide you through that discovery.
- **Engagement in Knowledge Transfer:** Your team's participation in training and knowledge building activities is crucial for sustainability after we leave. We understand competing priorities and will design training that's practical, relevant, and respectful of time constraints. If you lack technical staff to receive handover, we can discuss options including extended support arrangements, recruiting assistance, or phased capability building.
- **Honest Conversation About Constraints:** Tell us early about limitations, challenges, or concerns: technical constraints, budget pressures, political sensitivities, data quality issues everyone knows about. Early honesty allows us to plan appropriately and propose realistic solutions. Late surprises create problems, but we would rather know about difficulties upfront than discover them mid-delivery.

We're Here to Help: We recognise that many organisations engage consultants precisely because they lack some of these capabilities internally. Limited technical expertise, no spare capacity for project work,



unclear governance, poor documentation. That is completely normal and exactly why we exist. Where you have gaps, we will work with you to fill them, whether that's establishing governance frameworks, creating documentation that does not exist, building technical capability in your team, or providing extended support while you recruit permanent staff. Our goal is your success, and we will adapt our approach to your reality rather than expecting you to meet some idealised client profile. The key is open communication about what you can provide, what you need help with, and what constraints we are working within. Together, we will figure out how to make it work.



ABOUT REPLY

Reply is a company that specialises in Consulting, Systems Integration and Digital Services with a focus on the conception, design and implementation of solutions based on the new communication channels and digital media.

Reply partners with key industrial groups in defining and developing business models made possible by the new technological and communication paradigms such as Artificial Intelligence, Big Data, Cloud Computing, Digital Communication, the Internet of Things and Mobile and Social Networking. In so doing, it aims to optimise and integrate processes, applications and devices.

Reply's offer is aimed at fostering the success of its customers through the introduction of innovation along the whole economic digital chain. Given its knowledge of specific solutions and due to a consolidated experience, Reply addresses the main core issues of the various industrial sectors.

Through its network of specialist companies, Reply supports some of Europe's leading industrial groups in Telco & Media, Industry & Services, Banks & Insurance, and Public Administration to define and develop business models, suited to the new paradigms of Artificial Intelligence, Big Data, Cloud Computing, Digital Media and the Internet of Things.

We make innovation happen.

We started with a small team and a purpose: to help the digital revolution happen. Today, we are a team of more than 14,600 people in 16 different countries but we still have the same DNA, made up of agile, vertical task forces and an inner passion for innovation.

We are a decentralised network of specialised companies.

Among Replyers, you will find passionate geeks, visionary strategists, and creative minds, each with sharp skills in a specific business, who cooperate together and never stop learning from each other.

Make forward, act sustainably.

We know a sustainable future is possible and technology can be a strong asset to reach it. As leaders in digital transformation, we push for change and operate in full accordance with the highest ethical standards and with respect for the rights of future generations