



Data Engineering & Software Development

Service Overview

Description

DataDrill helps life science teams turn fragmented, hard-to-access data into structured, usable assets. We build systems that automate ingestion from global and often messy sources, normalize and structure it for use, and deliver insights through dashboards or APIs that make sense for how teams actually work. Whether for internal decision-making, regulatory reporting, or client-facing deliverables, our solutions make sure your data is complete, consistent, and traceable.

Business Challenge

Life science organizations often rely on siloed tools, Excel-based tracking, and processes that are too manual and error-prone. Off-the-shelf software rarely fits how teams work in regulated environments. We solve this by building systems that match your workflows, reduce manual work, and give you confidence in your data.

Value Proposition

- Custom systems designed around your actual workflows and team structure
- Real-time visibility into trial activity, regulatory timelines, or operational metrics
- Audit trails and role-based access built into every system

Benefits

- Integrated data flows across tools, teams, and formats
- Less time spent on repetitive data prep or fixing broken exports
- Dashboards and reporting tools that reflect live operational data
- Scalable architecture that grows as your data and business evolve

Methodology & Delivery Approach

We work in fast, structured delivery cycles that combine technical precision with direct, hands-on collaboration. Every build is grounded in real data flows, realistic use cases, and measurable business outcomes—ensuring solutions move seamlessly from design to production.

Delivery Phases

- **Discovery & System Mapping** – Joint working session to map tools, data sources, user roles, and workflow friction points.
- **Architecture & Planning** – Define data schemas, API logic, automation layers, and system integration architecture.
- **Implementation & Build** – Execute across integrations, backend services, frontend interfaces, and automation pipelines.
- **Validation & Testing** – Apply real-world and edge condition tests to confirm performance, stability, and system integrity.
- **Deployment & Enablement** – Deliver the full system with internal documentation, user onboarding, and optional live training support.

Communication & Collaboration

- **Onboarding Workshop** – Alignment on goals, constraints, data logic, and success outputs.
- **Sprint Communication** – Weekly updates shared via Jira or Notion; working product visible in every cycle.
- **Project Lead Coordination** – A dedicated technical lead ensures continuity, cross-team communication, and risk management.
- **Tool Flexibility** – Collaboration via Slack, Microsoft Teams, or client-preferred platforms. Shared dashboards for visibility and transparency.

Project Execution

Milestone Roadmap –

- System design approved
- MVP delivered and reviewed
- Full feature integration
- Final validation and production launch

SLAs & Support Options –

- Post-launch options include:
- Feature expansion
- Bug resolution
- Real-time monitoring setup
- Audit preparation support. All structured to match internal review cycles and operational uptime needs.

Team Competences & Qualifications

Expertise:

- Our engineers have deep experience building systems for clinical, regulatory, and operational teams
- We understand how data needs to move, who needs to see it, and what it needs to be able to prove

Project Experience:

- Data platforms connecting lab systems, trial data, and regulatory trackers
- ETL processes that extract structured data from PDFs, CSVs, and external databases
- Dashboards and alerting systems for clinical operations, QA, and executive teams

Technology Stack & Tools

Custom Software Development:

- React, TypeScript, Python
- PostgreSQL, MongoDB, Firebase, Supabase

Data Tracking & Ingestion:

- REST APIs
- Webhook automations and custom ingestion pipelines
- XML, JSON, and flat file ingestion logic

Data Visualization:

- React dashboards built for internal and external use
- Power BI and Chart.js for embedded reporting

Integration:

- API-based system links
- File-based sync logic and database integrations
- Secure access and encrypted storage

Analytics & Automation:

- Pandas and NumPy
- Custom logic and trigger-based workflows built in Python

Case Study Highlight

Client: Confidential – CRO (Europe)

Challenge:

The client struggled to consolidate market access data coming from dozens of national and regulatory sources. Information was scattered across PDFs, websites, and internal files. Teams manually extracted, cleaned, and analyzed data, often duplicating work and delaying insights. Their legacy infrastructure lacked real-time access, standardization, and global usability.

Solution Delivered:

- Built a centralized analytics platform integrating HTA, reimbursement, regulatory, and clinical data from more than 40 countries
- Automated ETL pipelines to ingest and normalize structured and unstructured data
- Developed intuitive search and exploration features including advanced filters and detailed record views
- Enabled interactive modules for treatment cost analysis and scenario simulation
- Integrated with the client's internal systems and component libraries for seamless user adoption

Business Impact:

- Enabled real-time access to over fifty structured national datasets
- Supported more than one thousand users across fifteen countries
- Replaced manual workflows with automated, auditable processes
- Delivered the full solution in under twelve months, with extensibility for future AI modules and regional variations

ROI

Centralizing and automating fragmented data flows delivers significant long-term savings. For example, replacing manual data extraction and reconciliation with automated ingestion pipelines and unified schemas typically eliminates hundreds of hours of repetitive work each month. In regulated industries, these efficiencies compound by reducing compliance risks and improving decision-making speed. With a specialist team experienced in life sciences, the cost of implementation is kept between €30–60 per hour, allowing most projects to reach break-even within the first year. This approach ensures that budgets go further by avoiding overbuilding and focusing only on features that directly support operational and strategic goals.