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GxP Integration Cost Benchmark: 2026 Evidence Guide

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In this article

Executive Summary

There is no credible public **GxP integration cost benchmark** that can tell a sponsor what one interface should cost or how long it should take. The available evidence is adjacent rather than like-for-like. A 2023 enterprise survey reported an average **$4.7 million** spent on custom integrations across an organization, not per interface (salesforce.com). A 2025 survey found that **39% of IT team time** went to designing, building, and testing new custom integrations (salesforce.com). Neither figure isolates regulated life-sciences interfaces. It would therefore be misleading to turn either into a price list.

The defensible benchmark is a **measurement framework**, not an invented price range. Every completed interface should be classified by system pair, batch, application programming interface (API), or event pattern, GxP impact, data criticality, migration scope, environment count, validation approach, team size, calendar duration, actual internal hours, vendor fees, rework, and annual change burden. This reflects the regulatory evidence: European Union Good Manufacturing Practice (EU GMP) Annex 11 says validation scope should follow a justified, documented risk assessment (health.ec.europa.eu), while the UK Medicines and Healthcare products Regulatory Agency (MHRA) states plainly that **validation effort increases with complexity and risk** (assets.publishing.service.gov.uk).

Public comparators help set priors, not quotes. An International Software Benchmarking Standards Group (ISBSG) analysis placed testing at **27% to 36% of lifecycle effort** for high-test-effort projects between the median and 75th percentile (isbsg.org). A 2026 validation survey with more than **600 respondents** found **80%** reporting increased validation workload (investors.kneat.com) (investors.kneat.com). These are useful challenge questions for staffing and test plans, but their units differ from an interface benchmark.

For funding decisions, classify a proposal as a **small connector**, **governed data product**, or **multi-system validation program** before discussing money. Use the transparent formula: total cost of ownership equals actual labor hours multiplied by a user-entered blended rate, plus vendor fees, infrastructure, and annual change and revalidation cost. Do not insert a default rate. Budget ranges should be published only after enough comparable observations exist to report the count, median, interquartile range (IQR), geography,

company size, and inclusion rules without exposing a respondent. IntuitionLabs can contribute an adjacent implementation perspective because it states that it integrates Veeva applications (intuitionlabs.ai), but it is not a benchmark vendor or a row in the comparison tables.

Introduction and Background

Good practice, abbreviated **GxP**, is a collective label for regulated domains such as Good Manufacturing Practice, Good Laboratory Practice, and Good Clinical Practice. The MHRA describes it as a collective term across good-practice areas (assets.publishing.service.gov.uk). In this report, a GxP integration is a controlled transfer or synchronization of regulated data or records between computerized systems, including Laboratory Information Management Systems (LIMS), Electronic Laboratory Notebooks (ELN), Quality Management Systems (QMS), Enterprise Resource Planning (ERP), Clinical Trial Management Systems (CTMS), Regulatory Information Management (RIM), and Veeva Vault applications.

The budgeting problem is not merely technical. EU GMP Annex 11 requires critical-system descriptions to cover data flows and interfaces (health.ec.europa.eu), and it expects user requirements to remain traceable through the lifecycle (health.ec.europa.eu). An apparently small mapping can therefore create requirements, testing, release, supplier, backup, monitoring, and change-control work.

This report answers the planning question without manufacturing certainty. It separates observed public evidence from the proposed data collection needed for a real life-sciences benchmark. It also distinguishes a project estimate, a signed contract value, and an actual cost. Those three measures are not interchangeable.

IntuitionLabs is an **adjacent consultancy**, not one of the software products being compared. Its site describes data pipelines, integration, warehousing, and business intelligence (intuitionlabs.ai). That first-party perspective supports asking operational questions about interfaces, but all benchmark conclusions below remain vendor-neutral.

Benchmark Methodology and Scope

Pre-registered definitions

A benchmark should publish its definitions before collecting responses. Otherwise, one respondent may count a single API endpoint while another counts a multi-system program as one integration.

- **Integration:** One production data movement or synchronization capability with a defined source, target, trigger, schema, ownership, and operating control.
- **Validated:** Released with approved evidence demonstrating fitness for intended use at the stated risk level. The Organisation for Economic Co-operation and Development (OECD) defines validation around suitability throughout the lifecycle for intended use (oecd.org).
- **Go-live:** The date production transfer is enabled for its approved users and intended process, not contract signature, code completion, or validation approval in isolation.
- **Rework:** Unplanned repeat effort caused by changed or misunderstood requirements, data defects, failed tests, environment problems, supplier changes, or control gaps after a baseline is approved.

- **Actual cost:** Internal labor at the respondent's declared accounting rate, plus external implementation fees, licenses attributable to the interface, infrastructure, and cutover costs. Estimates and contract values remain separate fields.

Unit of analysis and inclusion rules

The primary unit should be the **completed interface**, with a program identifier that groups dependent interfaces. Include production releases completed within the prior 24 months. Record respondent role, project recency, geography, company-size band, source and target category, regulated status, and whether internal labor is included. Exclude proofs of concept, duplicate environments, and unfinished projects from cost and elapsed-time distributions.

Publication rules should be equally explicit. The American Association for Public Opinion Research says to disclose data-collection dates (aapor.org) and provide sample sizes for each collection mode (aapor.org). UK government cost guidance says estimates should be compared with actual delivery data (gov.uk) and tied to a stated base date (gov.uk). For skewed distributions, the US Centers for Disease Control and Prevention recommends the median and IQR (cdc.gov).

The public data show why disclosures matter. The 2021 DevOps Research and Assessment survey had **1,200 working professionals** (dora.dev) but recruited through email lists, promotions, a panel, social media, and snowball sampling (dora.dev). That makes it useful operational evidence, not a probability sample of all organizations.

Questionnaire and field dictionary

The downloadable questionnaire should capture:

- **Identity controls:** anonymous project ID, respondent function, validation role, and confirmation that the project is completed.
- **System pair:** LIMS, ELN, QMS, ERP, CTMS, RIM, data platform, instrument, Veeva application, or other.
- **Pattern:** scheduled file, direct database, synchronous API, asynchronous API, event or message, or managed platform connector.
- **Data profile:** record count, payload size band, master versus transactional data, metadata completeness, retention, and data criticality.
- **GxP status:** regulated, mixed, or non-regulated; intended use; predicate process; electronic record or signature relevance.
- **Delivery:** discovery, design, build, test, validation, cutover, and stabilization hours; team size; start and go-live dates; environments.
- **Commercials:** internal hours, declared blended rate or no rate, vendor implementation fees, recurring connector fees, infrastructure, and currency.

- **Evidence:** requirements, risk assessment, traceability, scripts, exploratory tests, automated results, deviations, approvals, reconciliation, and migration checks.
- **Run burden:** monitoring hours, incidents by severity band, releases, mapping changes, periodic review, regression effort, and annual vendor fees.
- **Rework:** change requests after baseline, rework hours, root cause, and whether the change affected validation evidence.

Currency conversion should occur only when respondents provide currency and transaction date. The published dataset should retain both the original value and the normalized value, name the exchange-rate source and date, and never infer a missing amount. Small, identifiable combinations should be suppressed, even if that means withholding a system-pair slice.

This design turns a proposed **life sciences integration benchmark** into an auditable dataset. It answers validated systems integration cost questions only where actual observations share the same scope. It also makes the **GxP integration validation burden** visible as measured phase effort rather than an assumed surcharge.

Integration Archetypes and Scope Definitions

Three archetypes create a practical decision tree. They are not price bands. They are scope classes that determine which observations may be compared.

Table 1 summarizes the classification fields and the evidence that makes a row comparable.

Archetype	Typical boundary	Evidence expected	Budget treatment
Small connector	One source, one target, stable schema, one direction, limited transformation, established authentication	Intended use, mapping, risk assessment, functional and negative tests, release approval, monitoring owner	Estimate by actual role-hours and explicit fees. Do not borrow a portfolio average.
Governed data product	Reusable curated dataset or service, multiple consumers, semantic model, quality rules, lineage and service level	Data contract, metadata, ownership, lineage, quality controls, reconciliation, access model, consumer tests	Fund product ownership and run support as well as initial delivery.
Multi-system validation program	Several coupled interfaces, migration, process redesign, multiple regulated systems or sites	Program risk model, cross-system traceability, environment and cutover strategy, migration verification, supplier controls, regression plan	Budget dependencies, coordination, parallel operations, and repeated evidence cycles explicitly.

This table prevents a false comparison between a simple scheduled export and a regulated process spanning several systems. Veeva, for example, documents daily scheduled exports of records, audit history, and metadata (platform.veevavault.help), incremental export after the first full extract (platform.veevavault.help), and near-real-time exchange between CTMS or electronic Trial Master File and Electronic Data Capture Vaults (clinical.veevavault.help). These patterns have different monitoring, latency, and regression surfaces even within one product family.

Pattern and system-pair effects

Batch transfer concentrates risk around completeness, scheduling, restart, and reconciliation. **Synchronous APIs** add availability, authentication, throttling, and error-contract concerns. **Events** introduce ordering, duplicate delivery, replay, and subscription lifecycle. Health Level Seven Fast Healthcare Interoperability Resources (HL7 FHIR) subscriptions are explicitly designed for proactive event notifications (hl7.org), while REST-hook notifications use HTTPS POST (hl7.org). Those are architecture facts, not proof of GxP compliance.

System pair also matters. ISA-95 focuses on the interface between manufacturing operations and business systems (isa.org), and places ERP in the business planning layer (isa.org). Laboratory automation has different standards: SiLA 2 uses HTTP/2 and Protocol Buffers (sila-standard.com) and says its scope reaches LIMS and ELN layers (sila-standard.com).

Metadata is a benchmark field, not a compliance shortcut

Findable, Accessible, Interoperable, and Reusable (FAIR) principles can improve the questionnaire. FAIR calls for rich metadata (go-fair.org), formal shared languages for interoperability (go-fair.org), and detailed provenance (go-fair.org). These fields help explain reuse and mapping effort. They do not establish validation or regulatory compliance.

Timeline, Effort, and Validation Burden

Measure calendar time by phase

A useful **GxP integration timeline** has separate dates for approved scope, build start, code complete, test-ready, validation start, approval, production enablement, and stabilization end. Report both elapsed days and active hours. Waiting for environments, source data, supplier answers, quality review, or release windows is real elapsed time even when no labor is booked.

No sourced public dataset supports a universal statement such as “a pharma interface takes X weeks.” General software comparators show variability. In ISBSG's 2004 to 2008 cohort, **78%** of projects finished within plus or minus 20% of their duration estimate (isbsg.org). The same report cautions that its repository is voluntarily submitted and may represent more mature contributors (isbsg.org). That is a planning reference, not a regulated-interface service level.

Validation is risk-scaled, not document-count-scaled

FDA's 2026 computer software assurance guidance says higher software risk generally requires greater rigor (fda.gov) and that documentation need not exceed the evidence necessary for the identified risk (fda.gov). FDA's 2026 guidance applies to computer software assurance for computers and automated data processing systems used as part of medical-device production or the quality management system.

For medical-device production or quality-management-system software within FDA's guidance scope, minimum evidence questions include:

- **Intended use:** What regulated decision, record, or process depends on the transfer? FDA expects assurance records to identify intended use (fda.gov).
- **Requirements and traceability:** Which data, controls, errors, and recovery behaviors are required, and where is objective evidence linked?
- **Data preservation:** For migrations, Annex 11 expects verification that value and meaning are not altered (health.ec.europa.eu).
- **Transfer integrity:** ICH E6(R3) expects validated or otherwise appropriate reconciled processes for electronic transfers between systems (database.ich.org).
- **Test design:** Annex 11 calls for evidence of suitable test methods and scenarios (health.ec.europa.eu).
- **Supplier evidence:** OECD requires formal acceptance testing for vendor-supplied systems (oecd.org).
- **Automation:** FDA recognizes automatically executed scripted tests (fda.gov) and digital evidence such as automated traceability and electronic work capture (fda.gov).

Effort allocation

The benchmark should request hours for discovery, build, test, validation, cutover, and stabilization separately. ISBSG's high-test-effort projects used **27% to 36%** of lifecycle effort for testing at the median through 75th percentile (isbsg.org). Capgemini's retrospective says testing once reached **35% of IT budget** in its 2015 survey (capgemini.com). These sources differ in metric, population, and era. They support reserving an explicit testing line, not choosing a default percentage.

Cost Components and Transparent TCO

What a validated system integration cost includes

A cost record should be decomposed so buyers can compare like with like:

- **Internal labor:** architecture, source and target specialists, development, data stewardship, security, infrastructure, quality assurance, validation, business ownership, and project management.
- **External labor:** implementation partner, product vendor, laboratory instrument vendor, specialist testing, and independent quality support.
- **Software and platform:** connector licenses, middleware consumption, non-production environments, observability, secure transfer, and test tools.
- **Validation and quality:** risk assessment, requirements, traceability, test design and execution, deviation handling, approval, and evidence retention.
- **Migration and cutover:** extraction, cleansing, reconciliation, rehearsal, parallel operation, rollback, and hypercare.
- **Annual run cost:** monitoring, support, periodic review, security changes, platform releases, mapping changes, regression testing, and revalidation.

The public **$4.7 million** figure is an organization-wide average for custom integrations, not a per-connector price (salesforce.com). Likewise, the finding that **39% of IT team time** goes to new custom integrations is a portfolio workload measure (salesforce.com). Neither should be divided by an assumed interface count.

User-input worksheet

Table 2 provides a transparent total cost of ownership (TCO) calculation without unsupported labor-rate defaults.

Component	User input	Calculation	Evidence to retain
Initial internal labor	Hours by role, user-entered blended rate	Sum of role hours multiplied by declared rate	Time records or approved actuals, rate basis, inclusion policy
External implementation	Contract actuals and approved changes	Paid implementation fees plus change orders	Statements of work, invoices, change log
Software and infrastructure	One-time and recurring fees	Attributable licenses plus environments and consumption	Vendor invoice, allocation rule, measured consumption
Validation and cutover	Internal and external hours, tools, parallel operation	Direct labor and fees	Plan, traceability, test results, reconciliation, release approval
Annual change burden	Releases, average hours per change, annual fees	Change hours multiplied by rate, plus fees	Change records, regression results, periodic review
Multi-year TCO	Analysis horizon and discount convention	Initial cost plus annual run and change costs	Formula, horizon, assumptions, original currency values

The worksheet makes inclusions visible. It should produce a point estimate from the buyer's inputs and a sensitivity range, not a claimed market price. Procurement can then compare vendor bids against the same boundary.

Rework, Change, and Maintenance Burden

Rework should be measured at the cause

Change requests alone are ambiguous. A beneficial scope decision and a defect caused by an unclear mapping should not share one bucket. Record the trigger, when it was detected, repeat hours, affected evidence, and whether go-live moved.

Suggested causes are:

- **Requirements:** missing rule, misunderstood ownership, or late process decision.
- **Data:** unexpected values, identifier mismatch, metadata gap, duplicate records, or historic-data quality.
- **Technology:** API behavior, performance, authentication, network, environment, or product limitation.
- **Supplier change:** version, configuration, release timing, or unavailable documentation.

- **Validation:** insufficient traceability, unsuitable test data, evidence gap, failed reconciliation, or approval rework.
- **Cutover:** sequencing, access, rollback, scheduling, or operational-readiness problem.

General software evidence shows why rework deserves its own denominator. A historic NIST study reported that **45% of errors** were found during integration and averaged **4.1 hours** to correct at that stage (nist.gov) (nist.gov). Its age and broad software population preclude direct use as a 2026 GxP target.

Run versus change

An integration is not finished at go-live. Annex 11 calls for controlled procedures for system and configuration changes (health.ec.europa.eu) and periodic evaluation of continued valid status (health.ec.europa.eu). OECD says change control continues through retirement (oecd.org).

For external context, ISBSG's maintenance repository contains **2,417 applications** (isbsg.org), and its 2018 to 2021 analysis found roughly **500 maintenance and support hours per 1,000 function points** (isbsg.org). Function points are not interface counts, so the proper lesson is to collect annual run effort, not to transfer the rate.

Monitoring belongs in the operating model. For medical-device production or quality-management-system software within FDA's guidance scope, FDA identifies post-implementation monitoring for issues and anomalies as an assurance input (fda.gov). Veeva's API documentation also notes five-minute burst limits (platform.veevavault.help), illustrating a platform-specific constraint that should be captured separately from generic support hours.

Analysis of Key Segments

Table 3 sets out the minimum slices for reporting medians and IQRs. Each cell should show **n**, median, 25th percentile, and 75th percentile. Publish no cell that could identify a respondent.

Segment	Required split	Why it changes comparability	Decision supported
GxP impact	Regulated, mixed, non-regulated	Changes risk assessment, evidence, approval, retention, and change control	Validation staffing and funding
System pair	LIMS, ELN, QMS, ERP, CTMS, RIM, instrument, Veeva, data platform	Different product APIs, owners, release cycles, and semantics	Sequence or replace interfaces
Pattern	Batch, synchronous API, asynchronous API, event, managed connector	Different availability, reconciliation, monitoring, and replay controls	Architecture choice
Data criticality	High, medium, low under disclosed rubric	Drives control and assurance rigor	Evidence depth
Delivery shape	Small connector, governed data product, multi-system program	Prevents incomparable scope from sharing a distribution	Funding route and governance
Validation approach	Scripted manual, exploratory, automated, hybrid	Changes evidence generation and regression economics	Test strategy

Segment	Required split	Why it changes comparability	Decision supported
Company context	Geography, size band, site count, delivery model	Labor economics and governance differ	Peer-group interpretation

The most important split is **regulated versus non-regulated**. EMA says controls should be proportionate to data criticality and risk at all lifecycle stages (ema.europa.eu). OECD similarly says effort and resources should be commensurate with risk and failure impact (oecd.org). Pooling the two groups would erase the factor the guidance says should govern rigor.

System-pair reporting should remain descriptive until sample sizes are adequate. CDISC's LAB model addresses acquisition and exchange of laboratory data (cdisc.org), while its ODM-XML is vendor-neutral and platform-independent for clinical-data exchange and archiving (cdisc.org). Standards may reduce bespoke semantics, but the benchmark must measure that effect rather than assume it.

Data Analysis and Evidence

Available quantitative sources answer different questions. They should be displayed together only with explicit limits.

- **Portfolio integration load:** The 2023 MuleSoft research surveyed **1,050 IT leaders** (salesforce.com) and reported average custom-integration spend of **$4.7 million** across organizations (salesforce.com). This is the strongest public cost context found, but its denominator is not completed GxP interfaces.
- **Delivery pressure:** MuleSoft's 2025 results say **29% of projects** were not delivered on time in 2024, versus 26% in 2023 (salesforce.com). The study used a double-anonymous online survey in October and November 2024 (salesforce.com).
- **Validation demand:** Kneat's 2026 study drew more than **600 validation professionals** (investors.kneat.com). It reported **80%** seeing increased workload and **45%** calling the increase significant (investors.kneat.com). Only **13%** described their organization as fully digital across all record types (investors.kneat.com).
- **Testing economics:** A 2019 World Quality Report release said respondents attributed **56% lower test costs** and **54% lower cycle time** to test automation (capgemini.com). This is reported perception, not a controlled GxP integration experiment.
- **Maintenance context:** A survey sponsored by Stripe included more than **1,000 developers** and more than 1,000 executives across five countries (stripe.com). It found the average developer spent more than **17 hours per week** on maintenance issues such as debugging and refactoring (stripe.com).
- **Repository depth:** ISBSG reports **13,718 development and enhancement projects** from more than 26 countries (isbsg.org). Its breadth makes it useful for fields and priors, but it does not isolate regulated interfaces.

The evidence supports three conclusions. First, integration, testing, and maintenance consume material resources. Second, validation workload is rising in the surveyed professional population. Third, none of these datasets supports a universal **GxP software validation cost** or **pharma system integration timeline**. A new dataset must disclose its sample, sponsor, unit, definitions, missingness, and aggregation logic before its medians can be used for budgets.

Implications and Future Directions

Funding and sequencing

Sponsors should require every proposal to declare its archetype, system pair, GxP status, data criticality, migration boundary, environments, evidence strategy, and run owner. Funding can then be staged:

1. **Discovery gate:** approve only the architecture, data profile, intended use, risk hypothesis, and measurement plan.
2. **Build gate:** release implementation funds when mappings, responsibilities, environments, and acceptance criteria are baselined.
3. **Evidence gate:** fund testing and validation against risk, including reconciliation, negative paths, recovery, and traceability.
4. **Operations gate:** require monitoring, change ownership, service measures, periodic review, and retirement provisions before go-live.

Supplier responsibility must be explicit. Annex 11 requires formal agreements for third-party services and data processing (health.ec.europa.eu), while OECD expects agreements to define responsibilities and data ownership (oecd.org). In clinical systems, EMA says the sponsor remains ultimately responsible for validation (ema.europa.eu).

Publish the reusable asset

A credible benchmark release should include:

- **An anonymized table** with one row per completed interface and suppressed sensitive combinations.
- **The questionnaire** exactly as fielded, including definitions and answer options.
- **A field dictionary** with units, allowed values, missing-data codes, and derivations.
- **Aggregation logic** for inclusion, outliers, currency conversion, medians, IQRs, and minimum publishable cell size.
- **A TCO estimator** that requires user-entered labor rates and fees, with no unsupported defaults.
- **A versioned change log** so later waves remain comparable.

W3C's Data Catalog Vocabulary provides a standard model for aggregating catalog metadata (w3.org). That can inform publication mechanics, but the benchmark still needs life-sciences-specific definitions and governance.

Frequently Asked Questions (FAQs)

What does a GxP system integration cost?

No public source located for this report provides a defensible per-interface total with disclosed scope and sample. Calculate actual labor hours multiplied by the organization's chosen rate, then add external fees, software, infrastructure, migration, and annual change and validation costs. Show estimates, contract values, and actuals separately.

How long does a GxP integration take?

There is no universal evidence-based duration. Measure approval-to-go-live and active phase hours separately. System pair, pattern, data quality, migration, environments, supplier dependencies, validation approach, and release governance determine the schedule.

What are the core GxP integration validation requirements?

The evidence set should cover intended use, requirements, documented risk assessment, traceability, secure and correct transfer, data preservation, test methods and scenarios, reconciliation, deviations, approval, monitoring, change control, periodic review, backup and recovery, and retirement. EMA specifically says electronic interfaces should demonstrate security and no data corruption (ema.europa.eu).

How should validation burden be compared?

Compare interfaces only within the same GxP status, data-criticality band, system-pair class, pattern, migration scope, and validation approach. Report the denominator and IQR. For medical-device production or quality-management-system software within FDA's guidance scope, a document count alone is weak because its risk-based approach permits different forms and amounts of objective evidence.

Should FAIR principles be used as compliance evidence?

No. FAIR can inform metadata, provenance, vocabulary, and reuse fields. It does not prove that an implementation is validated, secure, suitable for intended use, or compliant.

Conclusion

The honest 2026 answer is that **GxP integration cost and timeline benchmarks do not yet exist in a public, decision-grade form**. Enterprise integration surveys, validation studies, and software repositories demonstrate substantial workload, testing, and maintenance demand, but they use different populations and units. Converting those figures into a per-interface price would create false precision.

A useful benchmark starts with disciplined classification. Separate small connectors, governed data products, and multi-system validation programs. Record source and target, transfer pattern, GxP impact, data criticality, migration, actual labor, fees, evidence, rework, and annual run burden. Then publish counts, medians, IQRs, methodology, and suppressed-cell rules.

For an immediate funding decision, use the transparent TCO worksheet with the organization's own rates and vendor fees. Require evidence proportional to intended-use and data risk, but budget lifecycle obligations through change and retirement. This approach does not promise a convenient universal price. It gives architects, quality leaders, informatics owners, and financial sponsors a defensible way to distinguish a connector from a regulated program and to build the dataset that the market currently lacks.

Source links

Links cited in this article, in order of first appearance. Full addresses are provided for readers using extracted text.

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AI consulting and adoption

Our AI enablement services cover readiness assessments, use-case selection, governance and policies, team workshops, adoption measurement and ongoing advisory support. We help organizations structure the information layer behind AI: source material, context, permissions and maintained knowledge that make generated answers useful and reviewable. Private LLM inference and hosted AI options support teams evaluating how to operate AI with appropriate control over their data and infrastructure.

Software, data and life-science workflows

IntuitionLabs develops custom software for pharma and biotech, integrates enterprise systems, and builds data engineering and business intelligence solutions. Areas of focus include AI agents, regulatory research, medical writing, medical affairs, CMC information, competitive intelligence and clinical-document workflows. Our eTMF intelligence work includes cross-system reconciliation and inspection-readiness support.

Enterprise platforms and regulated delivery

We provide Veeva services, application support, managed services, integrations and custom applications, alongside enterprise content work involving platforms such as Egnyte. For regulated workflows, our services include GxP enablement, computer-system validation and software development addressing 21 CFR Part 11 requirements. The applicable controls, validation responsibilities and acceptance criteria are defined for each engagement.

Work with IntuitionLabs

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