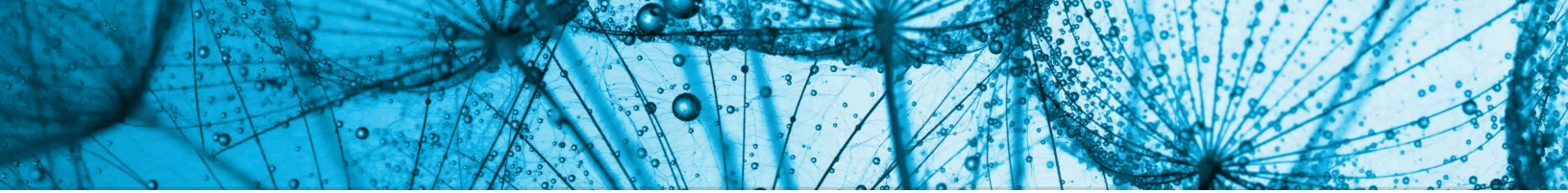




Accelerating Data Integration Across the Clinical Trial Tech Ecosystem

How Vivo enables data unification and harmonization across systems and trials to support real time review.



EXECUTIVE SUMMARY

Clinical data is fragmented. Sponsors can't afford to wait.

Trials run on dozens of disconnected systems. Getting unified, analysis-ready data across a portfolio takes months — and costs far more than it should.

90%+

of the clinical trial technology market covered by Vivo's established integrations

Weeks

to unify data across a sponsor's portfolio instead of months

OUR APPROACH

API-Driven Integration Framework

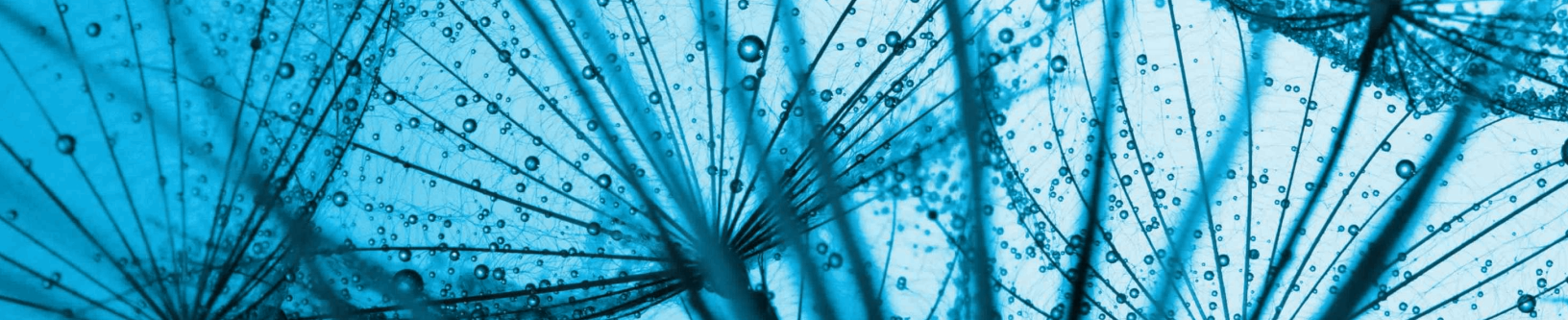
Vivo connects the systems including EDC, CTMS, ePRO, safety platforms quickly and reliably, with flexible ingestion for non-standard vendors.

Built-In CRO Relationships

Partnerships across the vendor ecosystem mean sponsors don't need to negotiate integrations from scratch. We've already done the groundwork.

THE RESULT

Sponsors get a scalable, audit-ready data layer across their entire trial portfolio, reducing time, cost, and operational burden at every stage of development.



The Clinical Trial Technology Landscape

The clinical trial technology landscape spans a wide range of systems and vendors across:

Core platforms (EDC, CTMS, eTMF)

Patient-facing technologies (ePROs/eCOAs)

Safety & Regulatory

Labs, Imaging, and Biomarkers

Data infrastructure + Analytics tools

This ecosystem is inherently fragmented:

1. Enterprise platforms such as Veeva, Medidata, Oracle, and IQVIA anchor core workflows
2. Specialized vendors lead in high-value domains like RBQM, imaging, and patient engagement
3. A long tail of emerging vendors continues to expand the landscape
4. As a result, sponsors depend on multiple systems across every trial, each generating critical but disconnected data.

The Integration Challenge

Despite widespread recognition of the need for integration, most approaches fall short in three key ways:

1. COVERAGE GAPS

No single vendor integrates across the full ecosystem. While major platforms are often accessible, many systems:

- Offer limited integration capabilities
- Provide inconsistent data access
- Or lack modern APIs entirely

2. TIME TO VALUE

Traditional integration efforts are:

- Custom-built
- Resource-intensive
- Slow to deliver usable outputs

In many cases, sponsors wait months before data is meaningfully usable

3. DATA IS NOT AI-READY

Even when integrations are completed, they are not immediately able to be leveraged by AI. To be truly AI-ready, data must be up-to-date and contain cross-domain context through carefully curated data model-level relationships and access to large vocabularies and ontologies.

Without these elements, and proper governance considerations (e.g. RBAC, audit trails, etc.) people and AI cannot act on the data in a timely manner.

Vivo's Approach to Data Integration

Focus on High-Value Systems

Vivo prioritizes integration with the systems that contain the most critical data for trial oversight and decision-making, including:

EDC platforms CTMS and operational systems Central and specialty labs
eCOA / ePRO platforms Imaging and safety systems

These integrations represent the majority of operational and clinical data required to monitor and manage active trials.

API Flexible Data Integration

Where modern APIs are available, Vivo leverages them to enable rapid data ingestion, scalable integration pipelines, and near real-time data availability.

At the same time, Vivo is designed to work across a heterogeneous ecosystem.

Data can be incorporated from:

- Systems with limited or no API support
- CRO-managed environments
- Vendor-delivered datasets

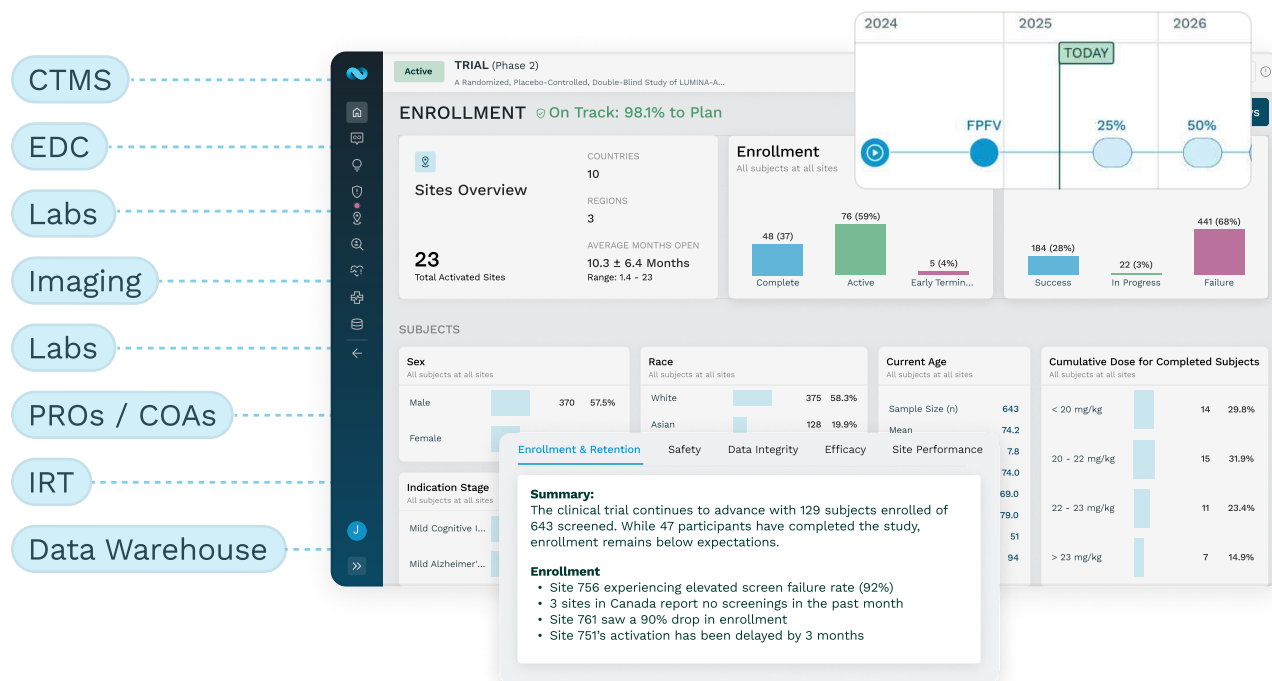
This ensures that integration progress is not constrained by the least flexible systems in the stack.

Integration as a Scalable Capability

Vivo does not treat integration as a one-off engineering effort. Instead, it is delivered through:

- Best-practice approach for executing data processing addendums (GDPR DPA) and compliant data transfer specifications among all parties: sponsor, CRO, vendor
- Pre-built pipelines across major platforms
- Direct, secure/encrypted API integrations
- Standardized data models aligned to clinical domains
- Repeatable onboarding processes

This enables consistent, predictable delivery across studies and sponsors.



EXECUTION ADVANTAGE:

Relationships

Integration speed is not driven by technology alone.

As a neutral third party, OmniScience is continuously expanding its working relationships across the clinical trial technology ecosystem, including:

- CROs
- Core platform vendors
- Data providers across clinical domains

These relationships enable:

- Faster data access and coordination
- Reduced onboarding friction
- More efficient issue resolution

As a result, integration timelines are significantly compressed compared to traditional approaches.

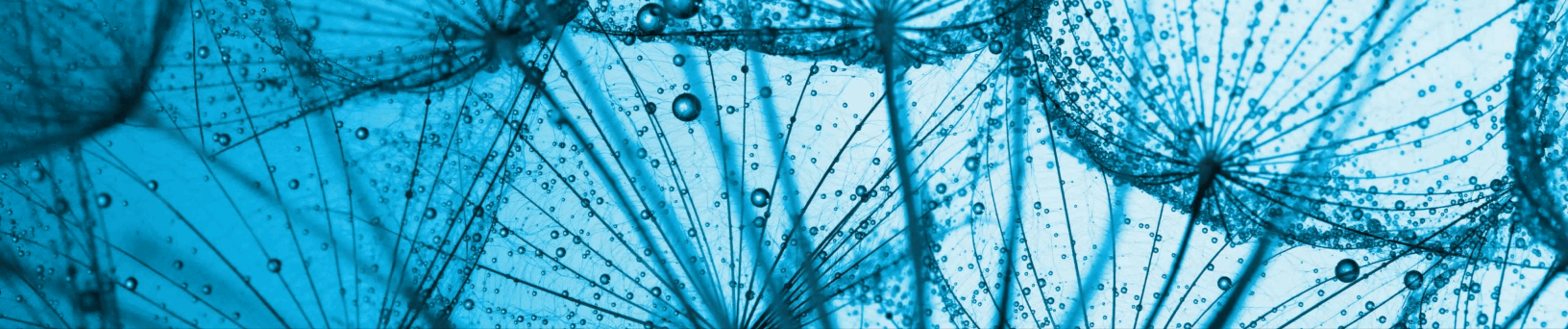


CUSTOMER CASE STUDY

Enabling Real-Time EDC Data Sync

During an active Phase 2 clinical trial, OmniScience connected Vivo to *Medidata Rave* through a secure, read-only API integration, allowing approved study data to sync into Vivo on a recurring, near-real-time cadence while Rave remained the system of record. Before activation, OmniScience, the sponsor, and the sponsor's CRO completed the required Data Transfer Agreement (DTA), defining the data scope, access permissions, transfer method, and refresh cadence. Because the sponsor's CRO owned and administered the Rave instance,

OmniScience coordinated with *Medidata* through the CRO partner. With sponsor and CRO approval in place, OmniScience generated the required authentication keys, the CRO provided those keys to *Medidata*, and *Medidata* enabled the connection through its standard Rave API setup process. Once live, Vivo securely ingested approved *Rave* data on a fixed cadence aligned with sponsor requirements, giving their teams a current, traceable view of enrollment, safety, data quality, and operational signals without disrupting the CRO's existing EDC workflow.



Time to Value

Vivo's integration model is designed to deliver AI-ready data quickly.

ACROSS IMPLEMENTATIONS, TEAMS REPORT:

Data unification within weeks Rapid cross-study visibility Flagging of data quality issues

THIS ACCELERATION REDUCES:

Manual data reconciliation effort Delays in identifying risks Downstream rework and costs

Impact Across the Trial Lifecycle

By enabling earlier and more continuous access to unified data, Vivo supports:

- Faster aggregation of site performance data
- Early identification of enrollment risks
- Ongoing monitoring of data quality and site performance
- Earlier detection of operational issues
- Reduced reconciliation burden
- Improved data completeness and readiness

The cumulative impact goes beyond streamlining costs and timelines to enabling a more efficient and predictable trial lifecycle.

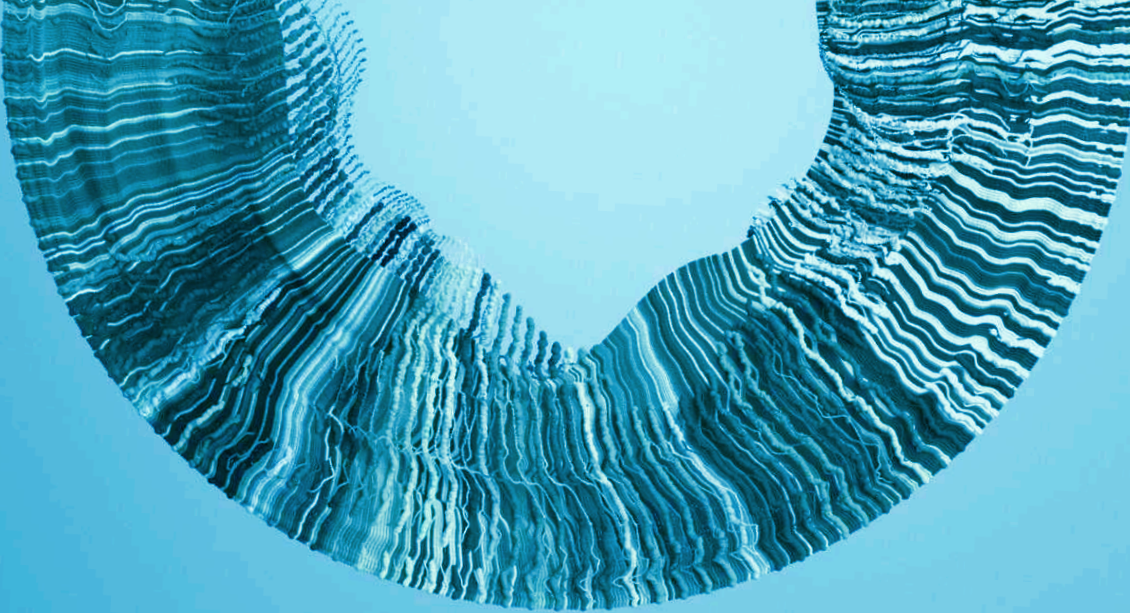
A Practical Perspective on Ecosystem Coverage

The clinical trial ecosystem will continue to evolve, with new vendors and technologies emerging regularly.

Vivo's approach is designed to remain effective in this environment by:

- Prioritizing integration with widely adopted, high-impact systems
- Maintaining flexibility to incorporate additional data sources as needed, and
- Avoiding dependency on full ecosystem standardization

This ensures that sponsors can achieve meaningful data unification without waiting.



Conclusion

Data integration remains one of the most persistent challenges in clinical trials—not due to lack of effort, but due to the structure of the ecosystem itself.

OmniScience Vivo addresses this challenge with a focused, scalable approach that combines:

- Integration across the most critical systems
- Flexible ingestion of diverse data sources
- Strong execution supported by ecosystem relationships

By enabling sponsors to unify and access their data within weeks, Vivo reduces operational burden, accelerates decision-making, and improves overall trial efficiency.

CONNECT WITH US

At OmniScience our mission is to transform clinical trial operations to deliver life-changing medicines to patients faster.

We built Vivo, the first agentic AI-powered control tower for clinical trials. Vivo unifies fragmented clinical, safety, and operational data, and delivers real-time, explainable insights, enabling teams to move from reactive reporting to proactive oversight.

To learn more about Vivo, contact us at hello@omniscience.bio or connect with us on [LinkedIn](#).

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