



# Avoiding the CTMS Shelf-Ware Trap

WHITE PAPER

**Why So Many CTMS Implementations Underdeliver, and the Selection Criteria That Predict Adoption**

## Abstract

Eighty-seven percent of clinical trial sites ran at least one decentralized study in the past year, and yet most still depend on spreadsheets to manage the operational complexity that comes with it, a gap that persists even at organizations that have already purchased a clinical trial management system. A CTMS is meant to function as an operational command center for study startup, site activation, enrollment, monitoring, and investigator relationships, but a system that sits alongside the spreadsheets rather than replacing them has become shelf-ware: paid for, technically implemented, and functionally ignored by the staff who were supposed to use it daily. The pattern is rarely a failure of the software's capability. It is a failure of selection and adoption design, choosing a platform for its feature list rather than for how well it fits into the actual workflow of the CRAs, site coordinators, and study managers who will use it under real time pressure. This white paper applies established connected trial systems and data integration best practices to CTMS selection and adoption specifically, laying out the criteria that actually predict whether a CTMS gets used or quietly becomes another login nobody opens.

## The Gap Between Purchased and Actually Used

Decentralized and hybrid trial designs have become the operational norm rather than the exception: 87% of clinical trial sites ran at least one decentralized study in the past year. That shift has made trial operations meaningfully more complex, more remote monitoring, more distributed data collection, more moving parts to track across more locations. And yet most sites still depend on spreadsheets to manage that complexity, a workaround that persists even at organizations that have already licensed a CTMS built specifically to replace it.<sup>1</sup>

That persistence is the shelf-ware trap in its clearest form. A CTMS that gets implemented technically, populated with initial study data, and then abandoned in favor of the spreadsheet everyone already knew how to use is not a technology failure in the conventional sense. The software works. It simply never became the tool people actually reach for when they need to get something done under deadline pressure.

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## Why CTMS Implementations Underdeliver

A CTMS is meant to function as an operational command center, covering study startup, site activation, enrollment tracking, monitoring visit scheduling, budgets, and investigator relationships in one connected system, with the broader industry shift moving from retrospective tracking toward predictive operational control, catching site performance and recruitment risk signals early rather than discovering problems after the fact.<sup>2</sup>

That vision only holds if the system is actually the place where daily work happens. Selection processes too often prioritize a comprehensive feature list and executive-level reporting capability over the specific, unglamorous question of whether a CRA can log a monitoring visit finding faster inside the CTMS than in the spreadsheet they have used for years. When the answer to that question is no, even by a small margin, the CTMS loses the daily-use battle regardless of how sophisticated its dashboard looks in a sales demo. Smaller organizations face a related but distinct pressure: economic barriers that historically pushed manual processes onto smaller biotechs and academic research groups persist even as SaaS pricing has made CTMS platforms more accessible, meaning the tool itself is now within reach but the organizational discipline to actually adopt it is not automatically included with the subscription.

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## Applying Best Practices: Selection Criteria That Predict Adoption

A foundational best practice in connected trial systems design holds that a connected ecosystem only delivers value if data actually flows through it as intended, rather than living in silos the system was meant to eliminate. Applied to CTMS selection specifically, that means evaluating a platform on the criteria that predict daily adoption, not just the criteria that look impressive in a procurement scorecard.

1. **Time-to-Task as a Selection Criterion.** Test how long it actually takes a CRA or site coordinator to complete the specific tasks they perform most often, monitoring visit logging, enrollment updates, against the same tasks in their current workaround, before selecting a platform based on feature breadth alone.
2. **Integration With EDC, eTMF, and IRT as a Requirement, Not a Roadmap Item.** Require genuine interoperability with the other systems in the trial technology stack at selection time, so the CTMS becomes the connected hub the ecosystem needs rather than one more isolated system contributing to the same fragmentation it was meant to solve.



3. **Adoption Design as a Named Workstream From Day One.** Treat user adoption as a deliberate implementation deliverable with its own plan, training, and measurement, not an assumed byproduct of a successful technical rollout.
4. **A Sunset Plan for the Workaround Being Replaced.** Explicitly retire the spreadsheet or legacy process a CTMS is meant to replace, rather than allowing it to persist as a parallel system that quietly absorbs daily work while the CTMS collects data nobody actively maintains.

None of this requires a longer procurement process for its own sake. It requires weighting selection criteria toward what actually predicts whether frontline staff adopt the system, which is rarely the same list of criteria a feature comparison spreadsheet naturally surfaces.

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## What Adoption-First Selection Buys, and Where It Gets Hard

### Advantages

- **Genuine, not nominal, system utilization:** a CTMS selected and implemented around actual daily workflow fit is far more likely to become the tool staff reach for by default.
- **Real-time operational visibility instead of stale reports:** when CRAs and site staff actually log data in the CTMS as they work, the predictive monitoring capability the platform promises becomes possible rather than theoretical.
- **Reduced duplicate data entry burden:** retiring the parallel spreadsheet eliminates the double work of maintaining two systems that frontline staff otherwise quietly perform to keep both current.
- **Stronger ROI on an already significant investment:** adoption-first selection protects the value of a CTMS purchase that a shelf-ware outcome would otherwise waste entirely.

### Risks and Barriers

- **Time-to-task testing requires real frontline involvement in selection:** meaningfully evaluating daily workflow fit means including the CRAs and site coordinators who will actually use the system in the vendor evaluation process, not just IT and clinical operations leadership.
  - **Sunsetting a familiar workaround meets real resistance:** staff who have relied on a spreadsheet for years will not abandon it simply because a new system exists, and forcing the transition requires deliberate change management.
  - **Integration requirements can narrow the viable vendor field:** requiring genuine interoperability with EDC, eTMF, and IRT at selection time may eliminate otherwise attractive platforms that do not integrate well.
  - **Adoption measurement requires ongoing attention past go-live:** confirming a CTMS has actually become the primary system of record, rather than assuming it has, requires monitoring usage patterns well beyond the initial rollout period.
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## Case in Point: The Dashboard Nobody Trusted

A mid-size CRO implemented a new CTMS across its active trial portfolio, completing a technically thorough rollout with training sessions for every CRA and site coordinator involved. Six months later, a leadership review of the



platform's reporting dashboard found enrollment and monitoring visit data that did not match what individual study teams knew to be true on the ground, numbers that were stale, incomplete, or simply absent for several active studies.

Interviews with CRAs revealed the actual pattern: most had continued updating a shared spreadsheet they had used for years alongside the new CTMS, entering data into the CTMS only when a manager specifically asked for a report, rather than as part of their daily workflow. The spreadsheet remained faster for the specific, frequent tasks CRAs performed constantly, logging a quick monitoring visit note, checking a site's current enrollment count, and nobody had formally retired it or measured whether the CTMS was actually replacing it in practice.

The CRO's fix involved going back to basics: timing the specific daily tasks CRAs performed most often inside both the CTMS and the spreadsheet, identifying exactly where the CTMS was slower or more cumbersome, and working with the vendor to streamline those specific workflows before mandating a hard cutover date for the spreadsheet. Dashboard accuracy improved substantially once CRAs were actually entering data as they worked rather than reconstructing it later from a source system leadership had assumed was already the primary one.

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## Recommendations for Clinical Operations Leaders

1. **Include frontline CRAs and site coordinators directly in CTMS vendor evaluation.** testing real daily tasks rather than relying solely on feature demonstrations delivered to leadership.
2. **Require EDC, eTMF, and IRT integration as a selection criterion, not a future roadmap promise.** so the CTMS becomes a genuine connected hub rather than an additional silo.
3. **Build a formal adoption plan alongside the technical implementation plan.** with its own training, measurement, and executive attention rather than assuming adoption follows automatically from a successful technical rollout.
4. **Set a hard sunset date for the workaround the CTMS is meant to replace.** rather than allowing a familiar spreadsheet to persist indefinitely as an unofficial parallel system.
5. **Monitor actual usage patterns for months after go-live, not just at launch.** since a system that looks adopted in week one can quietly revert to shelf-ware by month six without active measurement.
6. **Treat time-to-task as a first-class selection metric.** weighting how quickly frontline staff can complete their most frequent tasks as heavily as the platform's broader feature set.

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## Measuring Success: KPIs for CTMS Adoption

- **Daily active usage rate:** the percentage of CRAs and site coordinators actively entering data into the CTMS as part of their regular workflow, tracked well past initial go-live.
- **Parallel workaround retirement rate:** the percentage of legacy spreadsheets or manual processes formally retired following CTMS implementation, tracked toward full replacement.
- **Data currency lag:** the gap between when an operational event occurs and when it is reflected in the CTMS, tracked toward near-real-time as an indicator of genuine adoption.



- **Time-to-task benchmark:** how long common frontline tasks take inside the CTMS compared to the workaround it replaced, tracked to confirm the system is actually faster in daily practice.

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## Conclusion

A CTMS that goes live technically and then quietly loses to a familiar spreadsheet has not failed as software. It has failed as an adoption project, and that failure is predictable and preventable if selection criteria weight daily workflow fit as heavily as feature breadth from the very beginning.

Applying disciplined best practices to CTMS selection and adoption, built around time-to-task testing, genuine ecosystem integration, a named adoption workstream, and a real sunset plan for the workaround being replaced, closes the gap between a system that is purchased and one that actually becomes the operational command center it was meant to be.

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## About OmniTek & Contact Information

OmniTek Consulting is a trusted partner for organizations seeking to enhance governance, operational agility, and decision-making. We specialize in modernizing business processes with a blend of human-centered design, technology expertise, and hands-on change management.

For clinical operations leaders selecting or troubleshooting a CTMS, OmniTek applies proven best practices to build a practical adoption-first selection practice: time-to-task testing with real frontline staff, genuine ecosystem integration requirements, and a formal plan to retire the workaround the new system is meant to replace. Whether you are scoping your next CTMS vendor evaluation or diagnosing why an existing implementation has quietly become shelf-ware, OmniTek can help you build a system your teams actually use.

Contact us today to explore how OmniTek can support your transformation journey and drive lasting results.



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## Endnotes

<sup>i</sup> Clinical Trial Vanguard, "SaaS Platforms Gain Traction in Clinical Trials Despite Spreadsheet Reliance," citing decentralized trial site survey data and persistent manual process adoption barriers, available at <https://www.clinicaltrialvanguard.com/news/saas-platforms-gain-traction-in-clinical-trials-despite-spreadsheet-reliance/>

<sup>ii</sup> Astrix, "The Strategic Guide to Clinical Research Technology in 2026," on CTMS as an operational command center and the shift toward predictive operational control, available at <https://www.astrixinc.com/blog/the-strategic-guide-to-clinical-research-technology-in-2026/>

