

SECTOR ANALYSIS • REAL ESTATE & CONSTRUCTION

Small Estates, Very Large Transactions

This sector has the smallest technology estates in the series and the largest individual transactions. A closing-day failure jeopardises a deal worth more than the entire annual IT budget.

THALAMUS ADVISORY • ENTERPRISE RESILIENCE PRACTICE

01 — THE SIGNAL

A different argument entirely

Every other sector in this series argues from scale — millions of transactions, thousands of services, incidents measured per week. Real estate and construction argue from the opposite direction, and the case is stronger for it.

US construction spending runs to roughly \$2.5 trillion, and real estate contributes around 17% of GDP including imputed rent. But the technology estates are small, the incident counts are low, and the digital maturity is the lowest of the ten. What makes reliability matter here is not volume. It is that individual transactions are enormous, infrequent, and time-bound.

02 — THE MECHANISM

Deadlines that cannot slip

A mortgage origination has a rate lock with an expiry. A closing has a date with lawyers, funds and counterparties assembled around it. A construction milestone has a contractual liquidated-damages clause. A bid has a submission deadline measured to the minute.

None of these move because a system was unavailable. A closing-day failure does not delay revenue — it re-prices a loan, forfeits a deposit, or triggers a penalty.

Low transaction volume does not mean low stakes. It means every transaction is individually significant, and the loss from one is not averaged away by the others.

The second pattern is field connectivity. Construction systems must work offline and reconcile later, and reconciliation failures are discovered late — often after a week of field data turns out to be missing. Property and facilities systems have a third: building management has physical consequences, and an access-control failure is an emergency rather than a ticket.

03 — THE COST

Where it actually lands

SURFACE	HOW IT PRESENTS
Rate-lock expiry	A closing-day system failure re-prices a loan. The cost is immediate, quantified, and attributable to a specific outage.
Contractual milestones	Liquidated damages on construction programmes, where a delay has a per-day price written into the contract.
Field reconciliation gaps	Offline-captured data that never syncs, discovered weeks later, with the rework falling on the project rather than on IT.
Tenant impact	For industrial and commercial landlords, a building-systems failure stops a tenant's operation, and their loss dwarfs the rent.
Physical access	Smart access-control failure locks residents or staff out. An emergency, not an incident queue item.

04 — THE AI STAKES

A thin estate meets a cheap attacker

This sector's exposure is disproportionate to its technology spend. Real estate transactions are a long-standing target for business email compromise and wire fraud, and the economics of that attack have improved dramatically for the attacker: convincing impersonation of a lawyer, agent or title company is now cheap to produce at quality.

The defensive problem is that these organisations rarely have the security operations capability of a bank while moving comparable sums. Lean IT means fewer people to notice, and the transaction cadence means an anomaly has no strong baseline to stand out against.

Construction adds an operational-technology dimension as building systems and site equipment become connected — typically without the security practice that industrial operators have built up over decades.

05 — THE REMEDY

Proportionate, and aimed at the transaction

- **Instrument the transaction path first.** Origination, closing, bid submission, milestone reporting. Not the whole estate — the paths where a failure has a contractual consequence.
- **Set SLOs against deadlines, not uptime.** The objective is that the closing completes, not that the server was available.
- **Make absent sync a breach.** Throughput SLOs on reconciliation pipelines so missing field data alerts within hours rather than being discovered in a fortnight.
- **Guardrail anything physical.** Access control and building systems should escalate to a human by policy.
- **Accept that automated investigation substitutes for headcount here.** With lean IT, the constraint is investigation capacity, not detection — which is precisely the profile where automation returns most.

06 — IN PRACTICE

Hosted, or customized for your estate

Hosted on Thalamus AI Cloud

This is the sector where hosted is almost always the right answer. There is rarely a regulatory reason to self-host, the estates are small enough that a managed instance covers them comfortably, and — decisively — these organisations do not have the platform engineering capacity to run observability infrastructure themselves. An instance provisions in minutes and needs no dedicated team to keep it running, which is the only model that survives contact with a fifteen-person IT function.

Customized for your enterprise

Larger brokerages and construction firms with managed-services obligations to clients sometimes need more. Customization typically means: per-client tenancy for facilities managers running other companies' buildings, with signed webhooks delivering correlated problems into each client's own process; SLO templates expressed as transaction-path objectives rather than service ones; and collectors positioned to handle intermittent field connectivity with local buffering and later reconciliation.

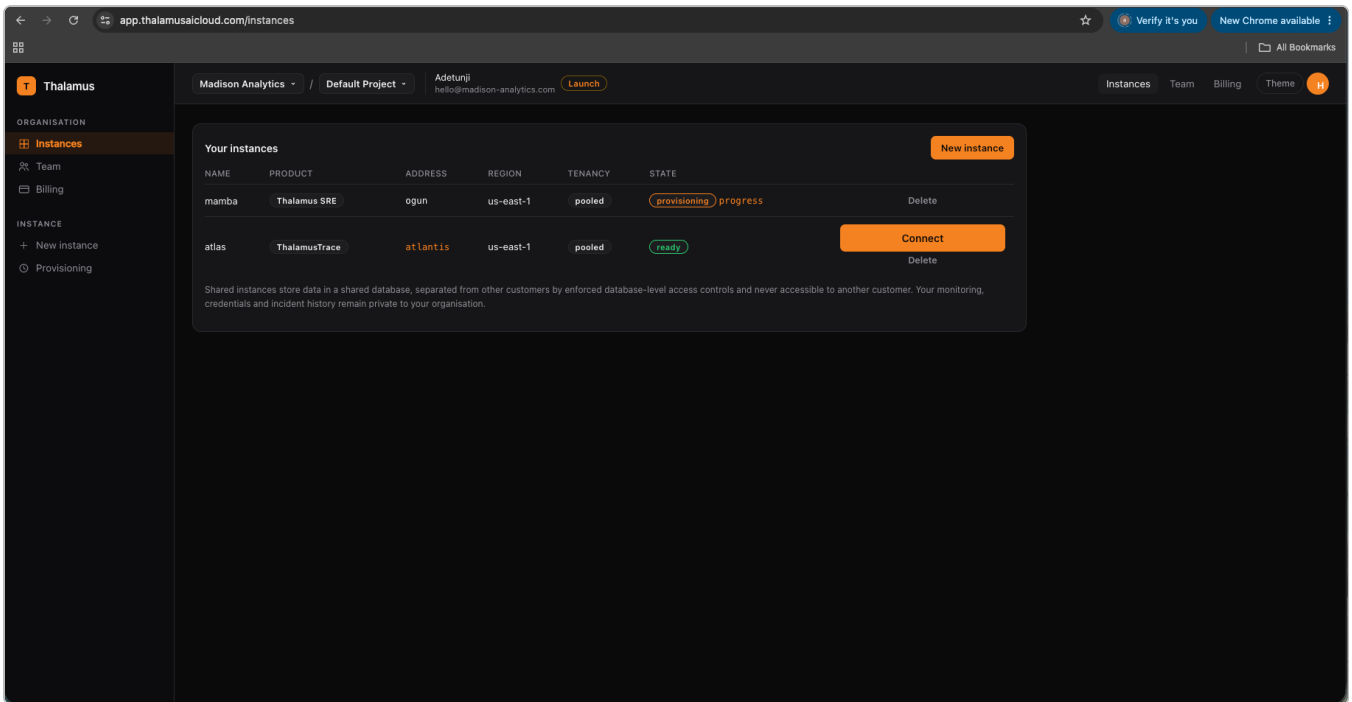


FIGURE 1 — THALAMUS AI CLOUD

No platform team required. Both products provision as managed instances from one console — region and tenancy selected, running in minutes. For a sector where IT functions are measured in tens of people rather than hundreds, this is the difference between a reliability programme that happens and one that is permanently deferred behind more urgent work.

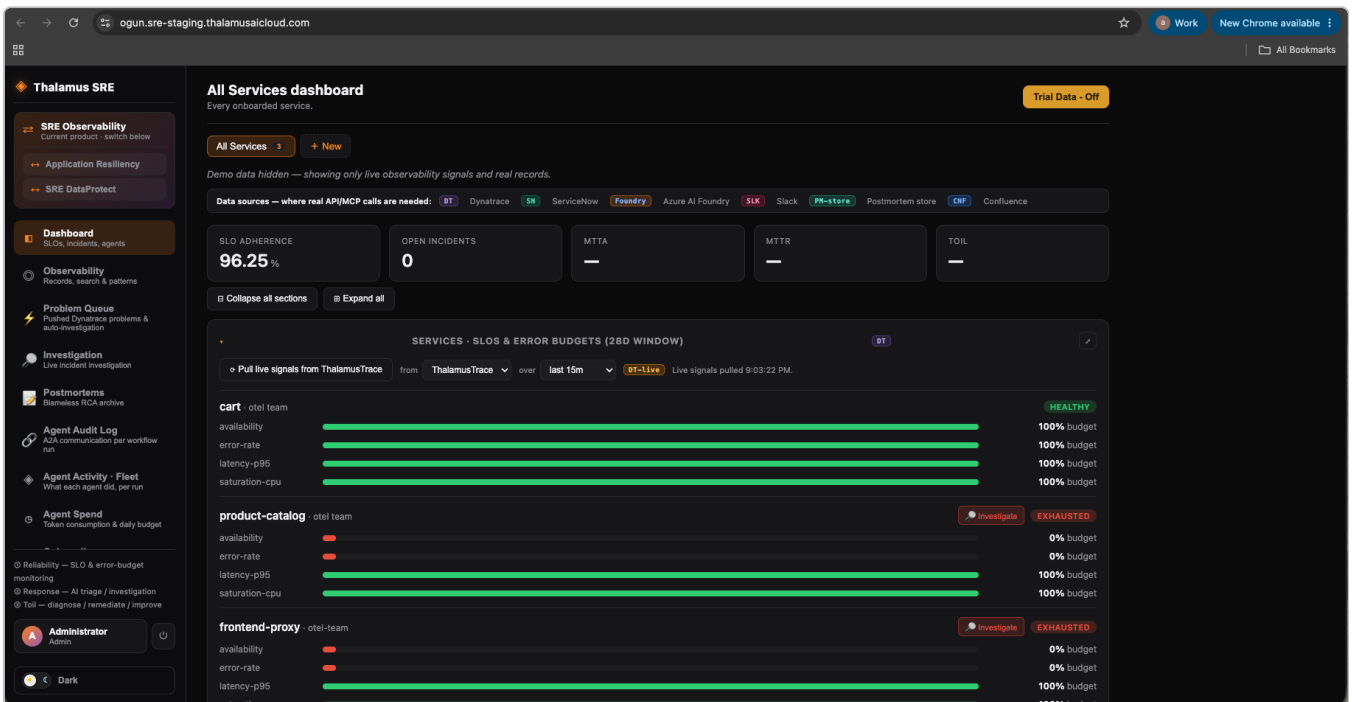


FIGURE 2 — THALAMUS SRE • SLO & ERROR BUDGETS

Objectives on the paths that carry contractual consequence. Rather than instrumenting everything, the transaction paths — origination, closing, bid submission, milestone reporting — carry explicit availability and latency objectives with error budgets. A small estate does not need a large programme; it needs the right dozen objectives.

How Thalamus Advisory helps

ENGAGEMENT

WHAT IT PRODUCES

Transaction Path Review 2–3 weeks	Which application paths carry contractual or financial deadlines, what depends on them, and what a failure at the wrong moment actually costs in your contracts.
Proportionate Instrumentation 3–4 weeks	A hosted deployment covering those paths only, sized to a small IT function, with objectives written against deadlines rather than uptime.
Field Sync Assurance 3 weeks	Throughput SLOs and reconciliation counts across offline-capture pipelines so missing field data surfaces in hours.
Client-Facing SLAs 4 weeks	For facilities and property managers: per-client objectives and evidence suitable to put in front of the client whose building you operate.

THE COUNTER-ARGUMENT, MADE HONESTLY

Most organisations in this sector do not need a reliability programme, and would be poorly served by one designed for a bank. The incident volumes do not justify a dedicated SRE function, and a large platform investment here would be difficult to defend.

What is defensible is narrow and cheap: instrument the handful of paths where a failure costs more than the programme, host it so nobody has to run it, and leave the rest alone. If a vendor proposes to instrument your entire estate, they are sizing the engagement for their revenue rather than your risk.



ONE NUMBER

One. Transactions that need to fail at the wrong moment to exceed the annual cost of the reliability investment described here.

That is the entire argument for this sector. It does not rest on volume, efficiency or scale — it rests on the size of a single deal relative to a small IT budget.

Where to start on Monday

Identify the **three application paths** where a two-hour outage at the wrong moment would cost more than your annual IT budget.

Most organisations in this sector can name them immediately and have never instrumented any of them. That list is the whole scope of the work.

Thalamus Advisory

Enterprise resilience for the age of autonomous systems. We help organisations build operational practice that stays trustworthy when the systems making decisions are no longer entirely human.

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Every figure we print carries its assumptions. Where we model, we say so.

Written for engineering leaders. Forward it to one.