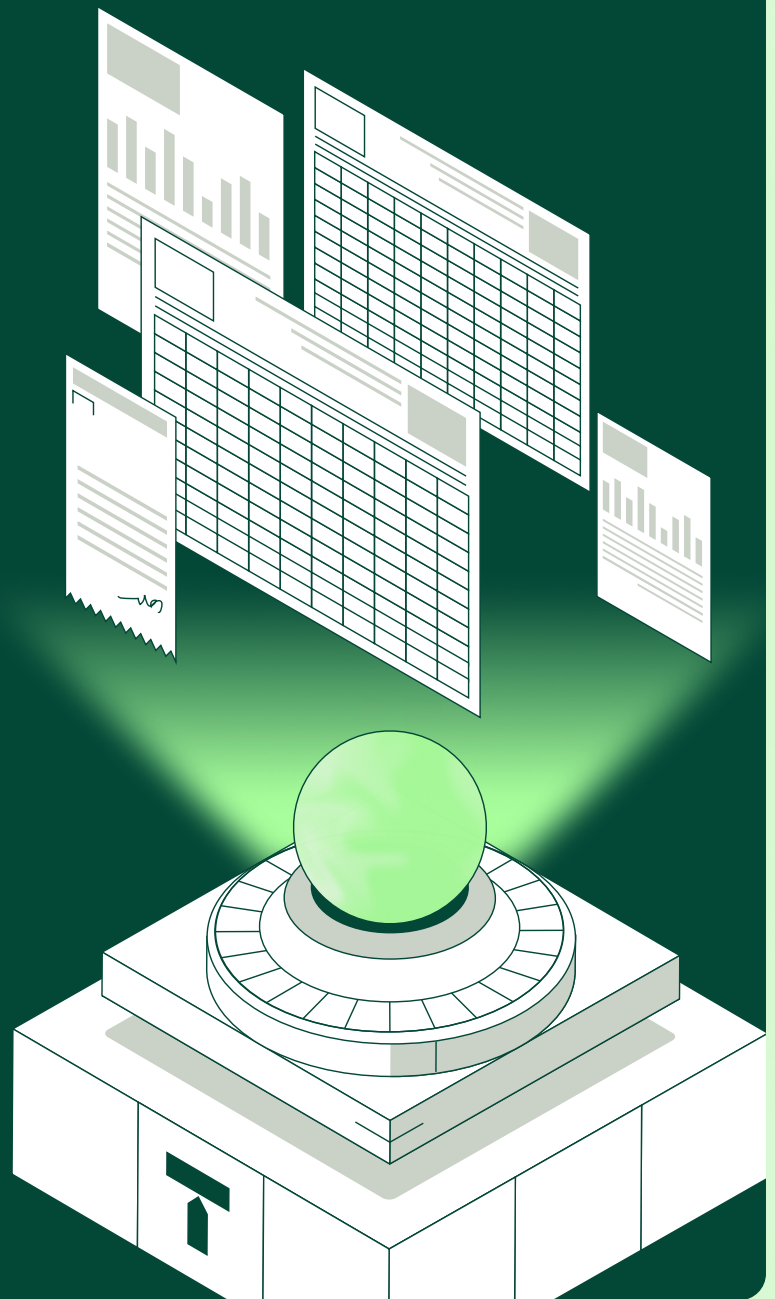




eBook

AI-powered lease abstraction:

Unlocking speed, accuracy, and compliance



Introduction

AI is redefining the speed and precision possible in lease abstraction. What once took hours of manual review can now be completed in minutes — with every data point mapped to ASC 842, IFRS 16, or GASB 87, and fully traceable back to its source.

By combining automation with built-in compliance logic, AI-powered platforms not only accelerate close cycles but also strengthen audit readiness. In this guide, we'll explore how to leverage this technology to move faster, stay compliant, and scale with ease.

Why lease abstraction needs reinvention

Lease abstraction — extracting and summarizing key data from lease agreements — is critical for accounting, compliance, and effective lease management. But most organizations still depend on slow, error-prone processes — sifting through contracts manually, rekeying data into spreadsheets, and struggling with version control — that can't keep pace with the complexity and audit demands of evolving ASC 842 and IFRS 16 standards.

PwC reports IFRS 16 requires capturing over 40 data points per lease. RSM estimates it takes three to four hours to abstract a real estate lease manually, and one to two hours for an equipment lease. Multiply that across hundreds and thousands of contracts, and the burden becomes clear.

The challenge is compounded by inconsistent lease formats, varied terminology, and unstructured documents such as PDFs and scans. Manual processes struggle to deliver the speed, accuracy, and traceability required under tight reporting deadlines.

A new approach is needed — one that combines precision and efficiency without compromising compliance.

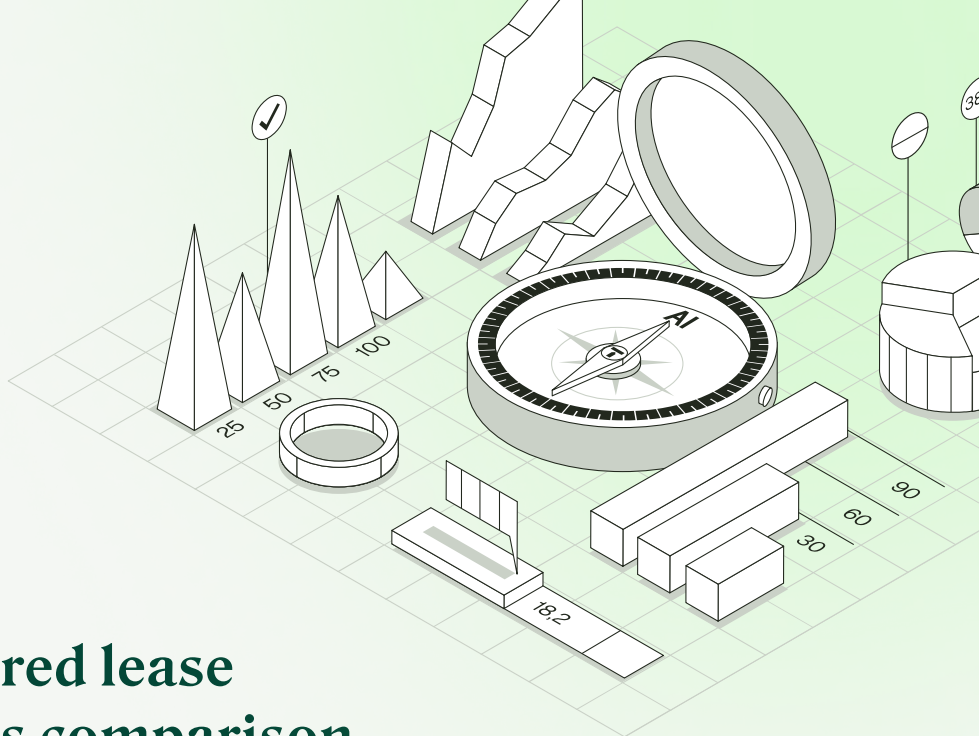
In this guide, we'll explore how AI-powered solutions transform lease abstraction, with practical steps for implementation.

Trullion makes this possible through AI-powered data extraction, custom prompts tailored to your business, and built-in source traceability — delivering compliance-ready results in minutes instead of weeks.

The risks of manual lease abstraction

Manual abstraction creates a fragile foundation for one of the most compliance-sensitive areas of accounting. Common risks include:

- ✗ **Delays.** Slow document reviews extend close cycles and reporting timelines.
- ✗ **Errors.** Typos or misinterpretations create compliance gaps.
- ✗ **Redundancy.** Duplicate data entry increases workload and inconsistency.
- ✗ **Audit difficulties.** Lack of traceability complicates reviews.
- ✗ **Scalability limits.** Lease growth, renewals, and modifications cause bottlenecks.



Manual vs. AI-powered lease abstraction: Process comparison

The difference between manual and AI-powered lease abstraction isn't just speed — it's the entire way work gets done.

Manual lease abstraction

- **Initial review.** Analysts identify which data points to extract.
- **Document review.** Teams scan lengthy documents — up to hundreds of pages, line by line — to locate key terms.
- **Manual data entry.** Key terms like payment schedules and renewal options are keyed into spreadsheets and accounting systems.
- **Validation.** Each data point is reviewed for accuracy, often without a reliable link back to the source document.
- **Change tracking.** Amendments, renewals, and modifications are handled manually, usually across disconnected files.

AI-powered lease abstraction

- **Bulk upload.** Hundreds to thousands of leases – PDFs, scans, or digital files — are uploaded into the platform.
- **Automated extraction.** AI interprets clauses and extracts data across 90+ pre-built fields or through custom prompts tailored to your industry and business.
- **Review with traceability.** Each data point is linked back to its source for instant verification from the team.
- **Intelligent updates.** Amendments are detected, with only changed fields flagged for review.
- **Structured output.** Built-in integrations allow outputs to flow directly into ERP and lease accounting systems.

Hours of manual effort are reduced to minutes, with higher accuracy and audit-ready transparency.

What AI-powered lease abstraction actually does

Optical Character Recognition (OCR)-based tools can scan and digitize lease text, but can't interpret its meaning. Teams are still left to manually identify relevant clauses, organize the data, and map it to the correct accounting standards.

AI-powered lease abstraction goes further. Instead of just reading text, it understands context and meaning. It can summarize documents, handle multiple languages, and extract tables — even from messy, scanned PDFs.

In practice, organizations reduce abstraction times from hours to under 30 minutes per lease — reducing costs, accelerating cycles, and minimizing reliance on manual effort or outsourcing.

Platforms like Trullion deliver context-aware automation:

- ✓ **Natural Language Processing (NLP)** interprets contract language and nuances across varied formats.
- ✓ **Pre-built models** cover 90+ essential lease accounting fields, with options for custom prompts such as triple net obligations or maintenance responsibilities.
- ✓ **Accounting logic** maps extracted data directly to ASC 842, IFRS 16, and GASB 87 requirements.
- ✓ **Amendment detection** flags changes without reprocessing entire documents.
- ✓ **Audit-ready traceability** links each data point back to its original source for instant validation.
- ✓ **Structured outputs** feed results directly into ERP and lease accounting systems.

Lease abstraction methods compared

| Feature | Manual abstraction | OCR-based extraction | AI-powered abstraction |
|--|----------------------|----------------------------|-----------------------------|
| Speed | Hours/days per lease | Faster but limited context | Minutes per lease |
| Accuracy | High with diligence | Error-prone | 95-99% with review |
| Contextual understanding | Human nuance | None | NLP trained on contracts |
| Amendment handling | Manual | Manual | Intelligent detection |
| Compliance mapping (e.g. ASC 842, IFRS 16) | Manual | None | Built-in logic |
| Audit trail | Excel/PDF notes | None | Automated logs & versioning |
| Integrations with ERPs & other systems | Manual uploads | None | API/CSV connectors |

How AI transforms lease abstraction

AI makes lease abstraction faster, more accurate, and easier to manage — while reducing the risks of manual processes.

Case study: Fortune-100 company achieves 80% time savings

A global retailer faced challenges across scale, staffing, and error risk across thousands of leases. With Trullion, they automated the most time-intensive steps to **save over 2,400 staff hours each month** — improving accuracy and lowering external audit fees.

Key use cases

- **Custom abstraction.** Build custom templates and prompts to capture the data points you need, from payment schedules to escalation clauses.
- **Seamless data extraction.** AI interprets clauses, summarizes content, and extracts structured fields — even from messy, scanned PDFs.
- **Effortless review.** Every extracted field links back to its source. Discrepancies are flagged automatically with fuzzy matching, and searchable with Trullion's proprietary Guidepoint engine.
- **Collaboration in context.** Tag clauses, ask questions, and resolve issues in real time, without switching platforms.
- **Continuous monitoring.** AI tracks amendments and changes, identifying what's new or requires attention.

- **Agentic AI assistant.** Trulli provides answers to your questions with sources, based on your accounting standards, policies, and spreadsheets. It can also analyze and summarize documents, and surface insights from your data.

× Challenge

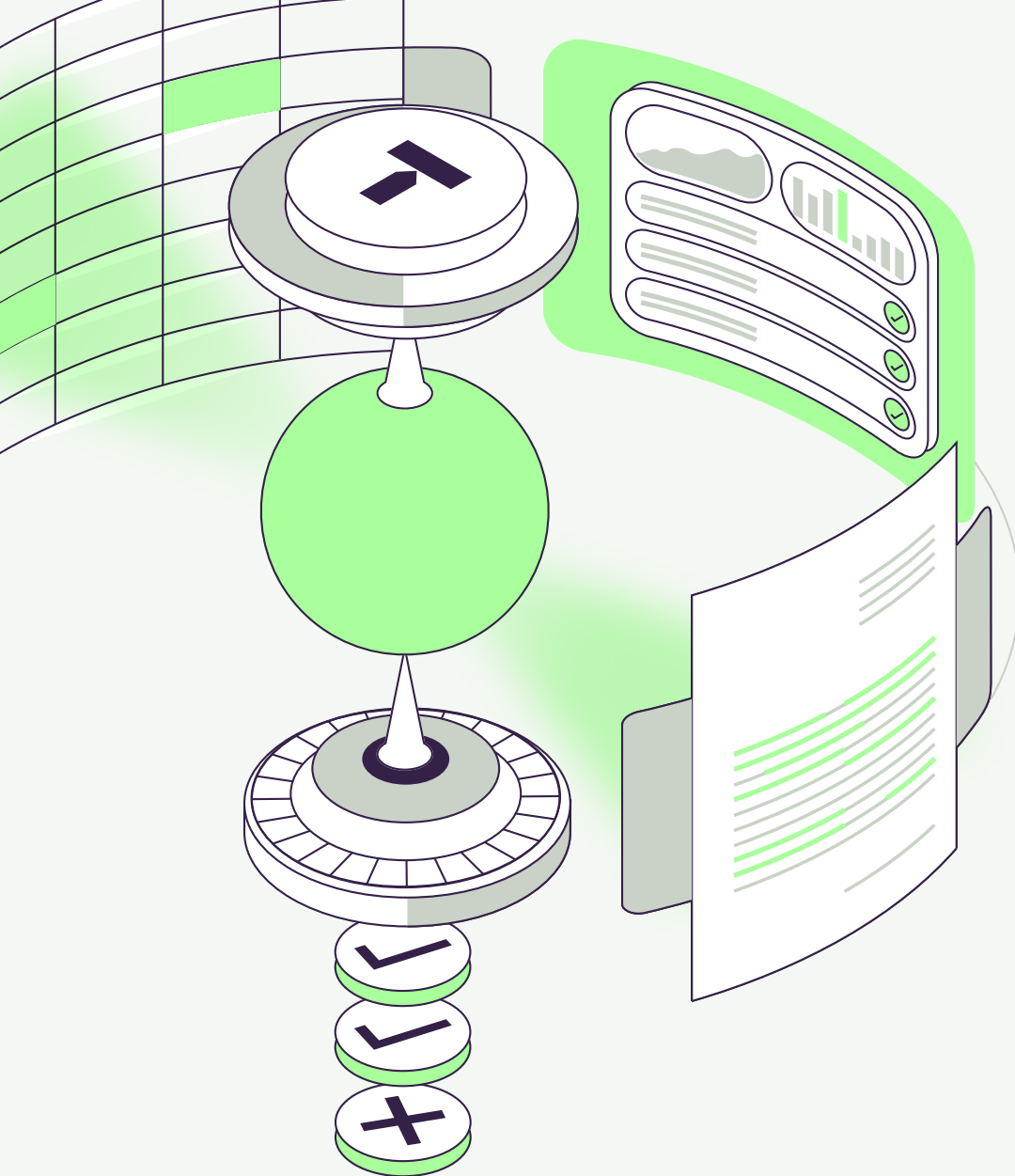
- Thousands of leases across diverse templates and multiple accounting systems
- Manual abstraction requiring multiple dedicated FTEs
- High error risk, intensified by frequent onboarding of new staff

→ Solution

- AI-powered extraction from complex PDFs, including English and Spanish contracts
- Data extraction to Trullion's 90+ pre-built fields, plus 50+ custom fields
- Structured data automatically mapped into accounting workflows

✓ Results

- Processed 400+ contracts monthly, with real estate leases cut from 6–12 hours to under 30 minutes
- Accuracy increased 28% across all extracted fields, with 80–90% time savings per contract
- Audit readiness achieved with 100% traceability back to source data



The top reasons organizations switch to AI-powered lease abstraction

- ✓ **Time savings.** AI reduces lease abstraction from hours to minutes.
- ✓ **Accuracy and auditability.** Custom prompts and traceable outputs improve precision.
- ✓ **Scalability.** Organizations can grow their lease portfolios — without extra accountant work or overall headcount increases.
- ✓ **Centralization.** Cloud-based workflows replace scattered spreadsheets and emails, with a single source of truth for data and workflows ensuring that nothing slips through the cracks.
- ✓ **Compliance readiness.** Versioned, tracked outputs align with ASC 842, IFRS 16, and GASB 87.

Risks of AI abstraction — and how Trullion mitigates them

Lease accounting data feeds directly into financial statements and audits, so AI must be implemented with structure and care. Trullion ensures accuracy, transparency, and compliance through built-in safeguards:

| Risk | What it means | How Trullion mitigates it |
|--|---|--|
| Model hallucination or misclassification | AI sometimes “hallucinates” — generating incorrect results or misclassifying data. | Trullion uses confidence thresholds to flag uncertain outputs, and requires mandatory human review of low-confidence results to prevent errors. |
| Missed clauses in poor-quality scans | Important details in leases can be overlooked if the documents are scanned poorly or contain formatting issues. | Trullion applies OCR preprocessing to clean and enhance scanned PDFs, then layers on AI analysis to extract even hard-to-read clauses. |
| Audit limitations | Without transparency, auditors may reject AI-generated data if they can’t trace it back to the source. | Trullion maintains full audit logs, version control, and approval trails, ensuring every data point is fully traceable to its original document. |
| Over-reliance on AI | If teams depend solely on AI, human judgment could be sidelined — increasing risk if the AI misses context. | Trullion uses hybrid workflows where AI handles repetitive tasks, but team members maintain final review authority. |

The hybrid advantage

Trullion combines AI efficiency with human oversight. AI handles repetitive tasks, while people make the final decisions. Every AI action is fully traceable, ensuring transparency for internal and external audits. This approach gives organizations both the speed and scalability of AI, and the accountability of experienced professionals.

Implementing AI for lease abstraction:

Practical steps

1

Assess your current workflows

Where are the bottlenecks? Are they in document review, data entry, or validation? Pinpointing friction points can help determine where AI will have the greatest immediate impact.

Which data points are most critical and time-consuming? Focus on high-effort data points like rent schedules and renewal clauses.

2

Identify high-impact use cases

Once you understand your workflow challenges, map them to solutions that drive lasting value. For example:

Centralize all lease data with a full audit trail. Maintain a single source of truth by consolidating all leases in one platform. Ensure every record — even previously validated ones — is tracked with full traceability.

Evaluate modifications and renewals. Quickly detect changes in amended leases to update your records without repeating the full abstraction process.

Prepare data for accounting system imports. Automatically structure extracted data so it's ready to load directly into your ERP or lease accounting platform.

3

Plan onboarding and training

A smooth transition requires preparation. This planning stage minimizes disruption and accelerates adoption across departments.

Involve your accounting, finance, and IT teams early to ensure buy-in and to address any integration or compliance considerations.

Develop process checklists so every team member knows the correct steps for uploading leases, reviewing AI outputs, and finalizing entries.

4

Integrate with existing accounting systems

For maximum efficiency, AI-powered lease abstraction should seamlessly connect with your ERP or lease accounting system. Direct API integrations and standardized CSV exports eliminate repetitive manual uploads and ensure your systems always have the most accurate, up-to-date lease data.

5

Measure success

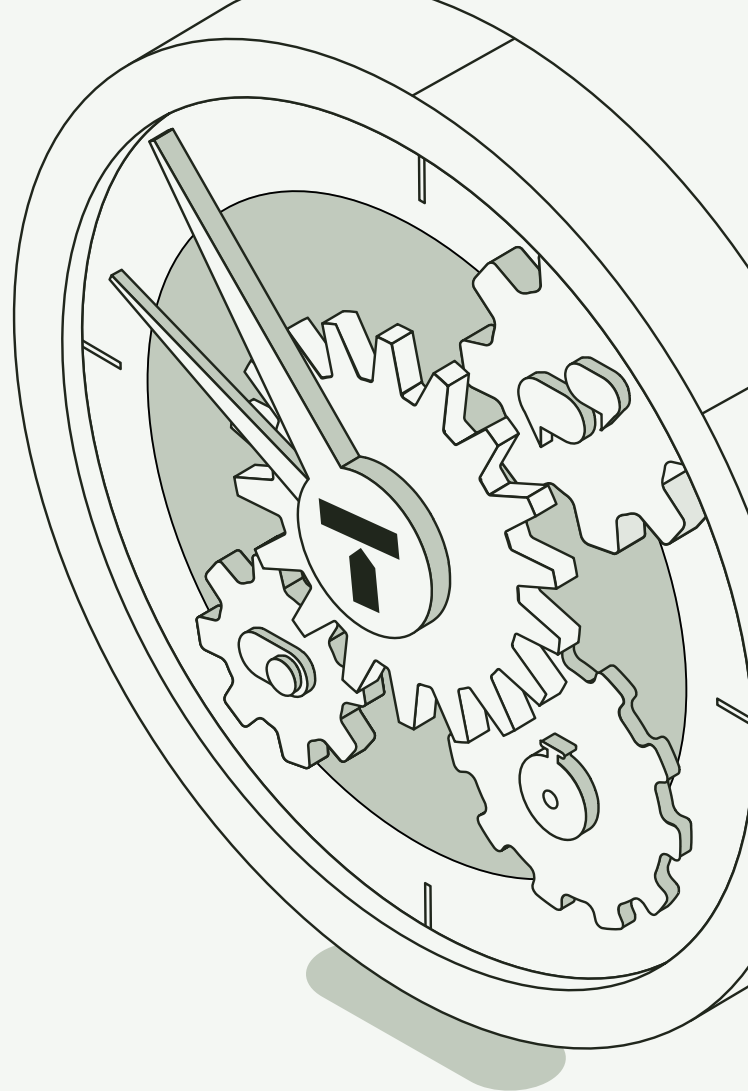
To prove the value of AI-powered abstraction, you need measurable results.

Track time savings to see how quickly leases move from upload to ready-for-use data.

Monitor error reduction by comparing AI-assisted outputs to historical manual results.

Evaluate compliance outcomes to confirm that your abstraction process supports accurate disclosures and audit readiness.

These metrics help quantify ROI and make the case for expanding AI adoption in other parts of your lease management process.



Conclusion: The future of lease abstraction is now

Manual lease abstraction is no longer sustainable. Reviewing contracts line by line, manually extracting data, and tracking changes in spreadsheets isn't just painstakingly slow. It also increases the risk of errors and compliance gaps.

As lease portfolios grow and standards evolve, this manual approach becomes a serious liability.

AI-powered platforms like Trullion offer a smarter, faster alternative. By combining automation with human expertise, organizations gain the speed, accuracy, and transparency needed to manage leases at scale:

- Structured, centralized data
- Built-in logic for ASC 842, IFRS 16, and GASB 87
- Full audit traceability back to the source

This isn't just about working faster. It's a transformation in how lease data is captured, understood, and leveraged. AI won't replace human expertise, but it will elevate it — and enable teams to manage leases with more clarity, compliance, and control.

Ready to see AI-powered lease abstraction in action? Book a demo to explore real use cases for your team.



For more information



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