



Long Duration Targeted Improvements (LDTI) lessons learned

Over the past five years, the life, annuity, and health insurance industry has embarked on the most significant regulatory and accounting change in over two decades. In August of 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update 2018-12 (ASU 2018-12 or LDTI or Standard), which amended the accounting model under US Generally Accepted Accounting Principles (US GAAP)

for certain long-duration insurance contracts. The FASB's intent was for the ASU's targeted improvements to provide more timely and useful information to financial statement users in addition to simplifying how insurers apply certain aspects of the accounting model for long duration contracts.







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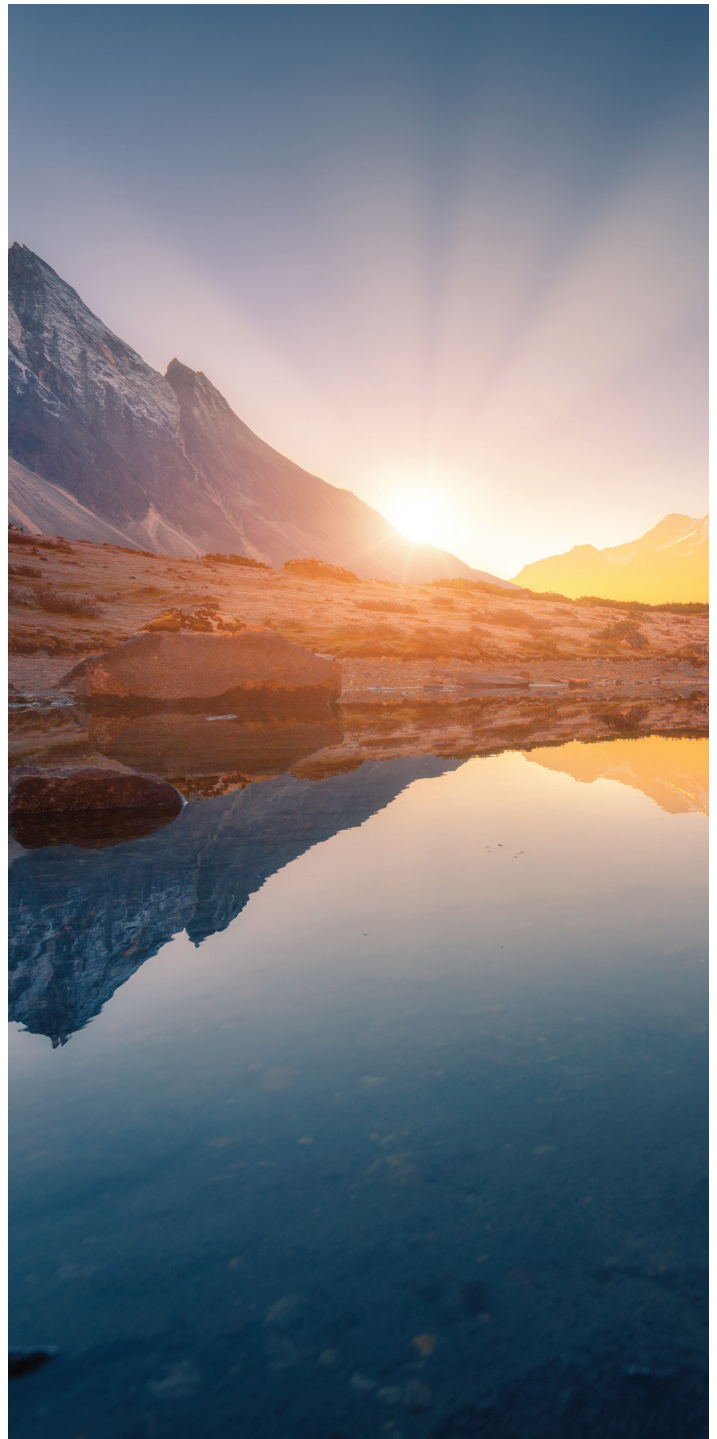
Long duration targeted improvements (LDTI) lessons learned

Now that the first wave of LDTI adopters has published initial LDTI results across 1Q 2023 10-Qs, with more complete recast financial results published in various quarterly financial statements and 8-K filings, it is an appropriate time to take stock of how companies handled the implementation, what could have gone differently, and implications for both 2023 and 2025 LDTI adopters.

As additional LDTI results are released over the course of the next few years, companies will take additional stock of how their policy, methodology, and modeling decisions may have impacted their results relative to peers. As further LDTI results emerge, we can still draw important takeaways on how companies approached the implementations in six key areas:

-  **Policy and methodology decisions**
-  **Technology and data storage upgrades**
-  **Model enhancements and restatement work**
-  **Training, education, and organizational change management (OCM)**
-  **Budget, program, and resource management**
-  **Reporting, financial planning and analysis (FP&A), and key performance indicator (KPI) redesign**

Across each of these areas, we will highlight key observations and lessons learned and what it means for 2023 and 2025 filers and the industry moving forward.



Policy and methodology decisions

Intuitive policy decisions that promoted operational efficiency outweighed the benefit gained from evaluating all possible alternatives.

Given the breadth of impacts that LDTI has, companies naturally spent a considerable amount of time interpreting the standard and evaluating different policy and methodology alternatives, including the potential financial impacts. Much of this time was well spent, as it not only helped companies settle on concrete, implementable policies, but it also deepened the understanding of the standard across actuarial, finance, and accounting functions. However, there are areas where companies may have potentially overengineered policy decisions or spent too much time evaluating options:

- **Cohort/unit of account:** While it appears companies generally settled on cohorts with an appropriate level of granularity, a considerable amount of time was spent on evaluating ways to set cohorts at too high a level, which ultimately created more problems than it solved by limiting analysis and drill-down capabilities. Ultimately, the cohort definitions that most companies settled on were relatively intuitive, and the granularity of cohorts did not induce additional reserve volatility, which was a concern for many companies.
- **Discount rate assumption:** Considering that this piece of the standard was intended to bring consistency across the insurance industry, companies were anticipating that the FASB would provide the specific discount rate assumption to be used by all; however, that was not the case. Companies were left to determine the upper-medium discount rate and spent a considerable amount of time evaluating alternatives and stretching the limits of the language, in areas including:
 - Source of yield curve data,
 - Extrapolation of the yield curve,
 - Frequency of yield curve updates within a calendar year,
 - Approach for locking in the discount curve in the year of issue,
 - Adjustments to the yield curve,
 - Treatment of foreign yield curves, and
 - Conversion of yield curves to single-equivalent rates.

In certain instances, companies seemed to be overcomplicating the derivation of the yield curve, which would be a tricky exercise in a stable rate environment but was even more challenging given the volatility in rates during the restatement period. Companies that

had the most success used an observable yield curve with minimal interpretation (e.g., Bloomberg BVAL), chose an operationally simple interpolation method (e.g., linear), and tied the long-term view to something already used in the business.

- **Deferred acquisition cost (DAC) amortization approaches:** Similar to the discount rate assumption, companies took a piece of the standard that seemed to be a true simplification and spent a considerable amount of time evaluating alternatives—and this time could have been spent elsewhere. Ultimately, many companies settled on a cohort-level approach (as opposed to seriatim) with policy count or product related balances (e.g., face amount for life insurance, deposits for annuities) as their amortization basis. Additionally, most companies have coalesced around the “alternative” approach, which replaces expected experience with actual as of the beginning of the period, such that the “experience adjustment” line of the DAC roll-forward is not needed.

As opposed to these areas (where potentially too much time was spent debating alternatives), companies had to play catch up on reinsurance accounting and the practical implications of the standard, particularly the need to get new additional data to exchange between TPAs/direct writers/reinsurers. Future reinsurance deals are anticipated to have a stronger focus on the timeliness and granularity of data that passes between parties in reinsurance transactions to allow for more accurate LDTI calculations and reporting.

While LDTI was a substantial accounting change, it certainly will not be the last. Companies should consider retaining what worked during the policy and methodology setting process, which often included:

- A stronger framework for collectively making policy decisions across actuarial and accounting.
- An enhanced focus on setting policies that are quick and easy to implement and allow for an effective quarterly close.
- A methodology for quickly evaluating the impact of alternatives without extensive modeling effort.

The above behaviors help strengthen decision-making across the organization, beyond the confines of accounting decisions, and they should continue to be engrained in leadership culture.

Technology and data storage upgrades

Implementing a cloud solution was often a necessary, but not sufficient stand-alone solution to LDTI data and technology needs; complementary process and workforce behavior changes were required to maximize business value.

Companies generally understood early on in the implementation journey that LDTI drastically increases the volume of calculations and the amount of data that needs to be stored to meet reporting requirements. Many companies elected to either develop or expand cloud computing and cloud data storage capabilities. However, simply moving to the cloud or enhancing data warehouse capabilities alone were generally not sufficient to drive the business outcomes. The most successful companies in this industry started with the end in mind and designed standardized data models that worked for both LDTI reporting requirements and redesigned general ledger granularity. The following themes emerged across technology enhancements:

- **Misestimation of cloud costs:** Traditionally, the movement to cloud can be a beneficial but costly investment, even under standard time pressures. Combining the movement to cloud with the adoption of LDTI compounded this, as companies had less ability to cut scope/extend timelines and, rather, had to spend their way through implementation issues.

On top of that, given the need to restate two full years of financial results, many companies used their cloud functionality more consistently than will be needed in a future steady state. Many companies also spent time running sensitivities that were more of an intellectual curiosity as opposed to something that provided business value. Each of these sensitivities and what-ifs comes with a direct cash cost. Going forward, companies need to implement appropriate behavioral changes to how actuarial and finance professionals access and report from cloud data to begin to achieve both the cost and capability benefits that cloud infrastructure can provide.

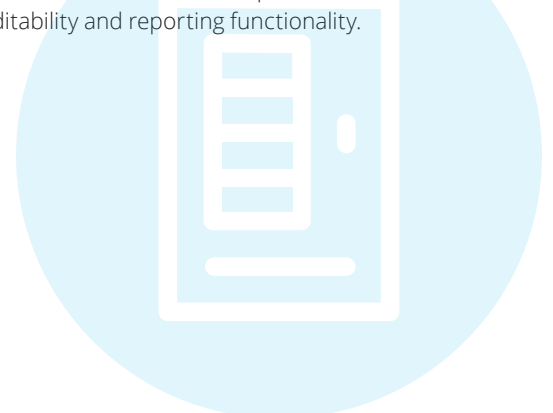
- **Standardization of data models:** LDTI presented an opportunity for companies to standardize their data models across lines of business, distribution channels, and legal entities to achieve a single data framework for valuation and accounting data. Beyond standardizing merely data names and structures, companies also were able to standardize the liability for future policy benefits

and market risk benefit (MRB) and run attribution order across models, which allowed for data to be loaded and reported on in a consistent manner.

This standardization allows businesses to use the cloud in an organized and optimized fashion, which in turn can enable leaders to get quicker, more actionable reporting. Companies that did not take advantage of this opportunity may have less ability to drill down into LDTI/other reporting to explain results and gain insights. Day two work may be required to clean up data post-go-live to maximize the business benefits of a cloud implementation.

- **Subledger implementation/ledger modification:** The efficient movement of data from the actuarial models to the general ledger was a common pain point across LDTI implementations. Issues tended to vary by approach:
 - For companies that use a custom-built solution to convert actuarial data into accounting data, the expertise for these systems tended to be understood by a small number of individuals in the company, leading to the system feeling like a black box to others. This made modifying existing systems for LDTI time consuming and at risk of key-person dependency. Additionally, these custom-built systems tend to have less built-in reporting functionality, so some analysis capability is commonly lost during the movement from an actuarial data warehouse to the general ledger.
 - For companies that implemented a vendor-managed subledger solution, these solutions were being built/modified during the implementation (as opposed to the actuarial modeling systems, which implemented LDTI functionality rather quickly). This led to extensive customization during the implementation process, with some solutions not fully meeting initial expectations.

Across both situations, the overarching theme is that companies have work to do to optimize the way data moves into the general ledger and to allow for efficient and transparent movement of data with proper auditability and reporting functionality.



Model enhancements and restatement work

A standardized, single actuarial platform has become table stakes in the industry and significantly reduced the already onerous task to get models to be LDTI compliant.

For many 2023 LDTI adopters, companies had performed model conversions over the past decade that moved them closer to a single-source solution. As such, most of the LDTI modeling work was focused on four key areas:

- Model consolidation and standardization:** The complexity of the new LDTI disclosures highlighted the importance of getting as much business as possible fully modeled and on a single actuarial platform. Combining data from multiple actuarial models, as well as folding in results for non-modeled business, presented a cumbersome data and reporting challenge. Many companies were successful in moving core actuarial calculations into the model, but some functionality (e.g., reinsurance calculations) often still resides outside the model in other systems.
- Setting up models for multipurpose LDTI reporting and other applications:** Companies that took the time to set up model runs in a way that allowed for automated LDTI disclosures had a more successful restatement effort and, ultimately, a more successful Q1 2023 close. This was true whether companies used system-generated disclosures or organized data to feed into alternative reporting environments downstream. Consistency in run attribution steps, output vectors, and more allowed for quicker results, with more time to fix errors. Beyond LDTI, organizations still have an opportunity to assess where modeling capabilities and design can be improved to be more multipurpose (e.g., simultaneous GAAP, Cash Flow Testing (CFT), and Financial Planning and Analysis (FP&A) runs; sensitivities running alongside actual results).
- Automation/orchestration of model runs:** Extending from the above point, the amount of attribution steps required to generate LDTI disclosures compelled most companies to automate the process for loading in-force files and assumptions into actuarial modeling systems and orchestrate the subsequent series of runs. Companies that are executing models manually will likely find themselves struggling to meet traditional quarter close deadlines and will want to improve these processes during the last half of 2023. As an example of this, during the restatement window, a number of companies struggled to execute fully retrospective MRB calculations, as they did not take the time initially to automate decades worth of reruns to get to the current valuation date.
- Movement to cloud:** Many companies that were not already running actuarial models in the cloud used LDTI as an opportunity to do so. While most companies ended in a good position with efficient run times, the journey to that point was often not straightforward. Moving actuarial models to the cloud requires a deeper understanding of how calculations are distributed, how often data and calculations write data output, and the specific cloud structure used at the company. These findings should serve as valuable inputs into future cloud migrations, to help accelerate those movements and avoid rework/lengthy optimization timelines.

Once LDTI actuarial models were upgraded, tested, and deployed, companies began to turn their attention to restating 2021 and 2022 LDTI results. The amount of time and effort needed to restate LDTI results was consistently underestimated, particularly for MRBs.



Training, board education, and organizational change management

Companies have few professionals that have a deep knowledge of both technical and practical applications of the standard and thus underestimated the training and change management required.

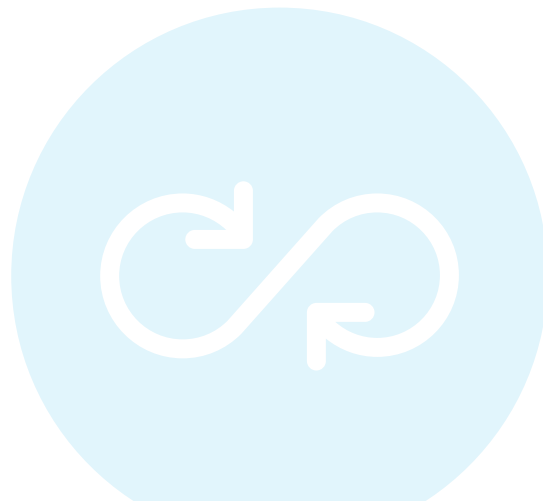
Over the past decade, many companies have put in concerted efforts to reduce instances of key-person dependency in organizations as they work to move to a nimbler and more adaptive workforce. However, the implementation of LDTI has reintroduced or entrenched a number of behavioral issues, including limited expertise outside a few key experts and maintaining old working norms while using new technology. As companies move forward, a number of initiatives are required in short order to ensure that the full set of benefits from the LDTI implementation are not quickly lost:

- **Technical and process training:** As a baseline, most organizations did a moderate job of training actuarial and finance professionals on the basics of LDTI—what it is, what impacts it has, what the new balances are, what the new reports are, etc. However, many companies were so busy with the implementation of new models, Extract, Transform, Load (ETL) solutions, data warehouse upgrades, and new reporting that proper documentation and training of the LDTI technology/process future state is lacking. As such, functions may find themselves two or three resignations away from facing a huge expertise gap. For 2023 filers, companies should invest the time while the implementation is still fresh to bulk up documentation and “resource-proof” the new LDTI close. For 2025 filers, an opportunity still presents itself to more efficiently document and train along the way.
- **Board and C-suite education:** As noted in the reporting section, given the amount of new publicly available information in the LDTI disclosures, there is an expectation that C-suite executives will face not just more questions but more in-depth questions as analysts compare LDTI results across the industry. However, many companies have taken an approach to executive education that is more in line with the old standard. There is a need to increase both the deeper technical expertise and the broader education on how own company results relate to the industry at large.

- **Organization change management:** This may be the largest gap stopping companies from realizing the full value of their LDTI implementations. While many companies adopted or adapted new models, technology, and processes, very few took the time to adapt the way their workforces utilize the new future state. Particularly for implementations with a cloud component, companies have faced issues across the board, including:

- *Challenge adapting to new capabilities:* The coexistence of legacy and cloud technology during the transition leads to resources falling into old patterns of working, from downloading data from cloud-based warehouses to manipulate in spreadsheets to treating grid/run capacity as a fixed cost.
- *Difficulty realizing business value:* Measurable value from new technology adoptions is not hitting bottom line, as upskilling challenges limit the ability to hit cloud consumption targets in the interim state (particularly during restatements/first years of LDTI adoption).
- *Inability to adapt to new operating model/organization design:* Project-focused teams often did not work with a “future workforce” in mind and are now facing a scarcity of the technical and cloud-first talent required to get the most out of technology upgrades.

To address all of the above areas, leadership buy-in at the top is essential. Training and OCM aspects of large-scale implementations are often the first things cut as companies face time and resource crunches, but for both 2023 and 2025 adopters, there is time to stand up the right foundation to make sure LDTI technology and process upgrades are more than a compliance exercise and help move the company forward on a modernization journey.



Budget, program, and resource management

Companies can take lessons on resource-misestimation during LDTI implementations and ensure that future large-scale hybrid projects are delivered in a more streamlined fashion.

Across the industry, the implementation of LDTI will likely go down as one of the most challenging projects many actuarial, finance, and IT professionals will have faced in their lifetimes. Organizations faced challenges from all sides, ranging from a continuously moving LDTI adoption target to a competition for actuarial and cloud-first talent to the move to virtual/hybrid work in March 2020 as many projects were hitting their stride.

For 2023 filers, there is an opportunity to assess what went well from a program and resource management perspective and carry forward those behaviors onto future engagements. For 2025 filers, there is still time to ensure the remaining build, test, and restatement work is completed as efficiently and effectively as possible.

- **Budget estimation:** Essentially no company estimated the total cost of their LDTI implementation accurately at the start of 2019 (or even again as the last LDTI deferral was announced), and all companies faced some degree of budget overrun. For LDTI alone, we estimate insurance companies have spent more than \$1 billion over the past four years to prepare for Q1 2023. Common mistakes included:

- Underestimating the amount of technology talent that would be required.
- Overestimating the amount of business-as-usual work that actuarial and finance resources could manage simultaneously.
- Underestimating the hard dollar cost of cloud technology usage.
- Assuming too much of an ability to cut scope relative to other past projects.

Going forward, companies can use their LDTI budget “miss” to build in the appropriate amount of cushion on future engagements and more accurately estimate costs related to specialized talent.

- **Program management:** Particularly with the unexpected move to a virtual implementation, companies faced a number of program management challenges. Common challenges included overscheduling of meetings as a way to keep teams informed, lack of appropriate use of virtual collaboration tools, and, particularly in

the early part of the pandemic, simply using program management as a way to “keep score” relative to deadlines as opposed to using program management as a proactive way to ensure the LDTI implementation stayed on track.

Particularly in 2020 and 2021, program management would report delays and adjust/compress timelines as opposed to driving hard to keep to the original plan. This resulted in many companies not having sufficient time to complete restatements, with some companies not performing any mock or true parallel runs in advance of the LDTI go-live. While this isn't necessarily a new lesson, it's an important reminder in a hybrid-working world that program managements should be just that—management; it should not simply be a “report and adjust” function.

- **Resource management:** The most successful implementations were those that moved quickly to secure additional resources to take over soon-to-be-retired business-as-usual processes. This allowed companies to focus their own actuarial, finance, and IT talent on the new LDTI standard, working to retain as much of the new information in house as opposed to with outside vendors. This opportunity presents itself going forward, as companies can look to offload “non-core” processes and allow top talent to focus on driving business insights that are at the heart of being an actuarial/finance professional.



Reporting, FP&A, and KPI redesign

While not widely considered a “Day 1 Item,” FP&A and KPI capabilities will be differentiators for companies as they analyze results over the coming years.

Despite the amount of time, money, and resources many companies put toward the LDTI implementation leading into 2023, many companies did not have sufficient bandwidth to reach their likely future state for reporting, analytics, and financial planning. Based on a recent survey of 2023 adopters, more than two thirds of respondents planned to make enhancements to the way they use analytic LDTI results and generate business insights in 2023 and 2024. Primary areas of focus include:

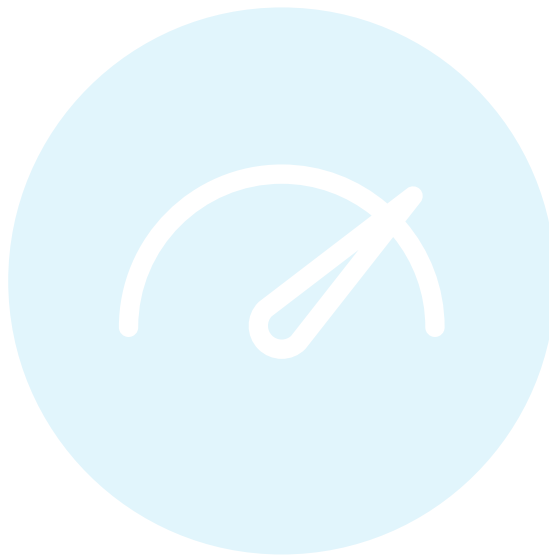
- **Automated reporting and drill-down capability:** Most companies quickly understood that analysis of results becomes tricky at any level that is more or less granular than the LDTI cohort level unless they set up their modeling system to also calculate true “sub-cohort level” net premium ratios (NPR). However, even drilling down to the cohort level was often a manual process during the Q1 2023 close. Companies need to ensure data structures and reporting software allow for quick “double-clicks” into disaggregated roll-forwards using a single source of data.
- **Integrating FP&A with LDTI data:** At many insurance companies, the process of setting the one-, three-, five-year plan is a tedious, resource-intensive, one-time-a-year manual exercise, which can involve up to hundreds of professionals across actuarial and finance. The end result of the standard FP&A process is a plan that is top-sided and massaged to a degree that management and measurement against the plan is difficult, and leaders lose the ability to make strategic decisions as actual results roll in. LDTI has presented a once-in-a-generation opportunity to rethink financial planning.

Companies now have at their fingertips cohort- and policy-level best estimate unpadded cash flows that update on a monthly or quarterly basis. These cash flows can serve as the foundation to move from a static, cumbersome FP&A process to a process that updates in real time as GAAP results are created. This allows

individual segment leaders, product owners, and corporate executives to understand how actuals are coming in relative to plan and how the plan is evolving so that they can take actions that can help enhance the bottom line for their respective businesses.

- **Redefining KPIs and management analysis:** As companies generate more LDTI results and additional quarter-over-quarter and year-over-year trends emerge, companies will need to rethink their internal KPIs and how they manage analysis results. Traditional GAAP reporting metrics are unlikely to tell a complete story, partly due to dampening effects from the transition pivot balances. Over time, as more and more business is issued post-transition, management analysis needs to adapt to quickly explain new trends in MRB movements, NPR movements, and other cash flow/balance changes.

LDTI can greatly increase the amount of public information in 10-Q and 10-K filings, and companies will be faced with deeper and more frequent questions on business performance from internal and external stakeholders, including analysts, private equity firms, and auditors. Companies that are not prepared to answer these questions will find themselves at a disadvantage, and a public inability to answer tough questions could lead to decreased confidence in the business and leadership, which in turn can have a real dollar impact on stock price and financial metrics.



The road ahead

On both an organizational and individual level, the implementation of LDTI has been (and for 2025 filers, will continue to be) a challenging and rewarding experience, and the insurance industry collectively may need a moment to reflect and recharge. Much work has been done and there are many opportunities in the journey ahead as LDTI results emerge and the industry collectively adapts to the new world. Despite all of the work that has taken place over the past four years, this is simply the beginning of LDTI, and the companies that continue to invest in enhancing reporting, expanding education, and optimizing technology will likely have a leg up over the years to come.



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