



A Larsen & Toubro
Group Company

LTM

Enterprise Testing Services

Enterprise Data & Analytics Assurance

AI-powered Quality Engineering for Trusted Data in
Modern Platforms

When Enterprise Data Must Keep Pace with Change

Data powers every business decision. Modern enterprises rely on data lakes, warehouses, real-time pipelines, and AI-driven insights to run critical operations. As organizations modernize their data ecosystems, every migration, integration, schema change, and data refresh introduces new risks to data quality, compliance, and business outcomes.

Enterprise Testing Services helps organizations Outcreate fragmented data quality practices through AI-powered, data-centric quality engineering. By bringing together intelligent automation, synthetic data generation, and continuous validation, LTM combines human expertise and intelligent systems to deliver a holistic picture of enterprise data quality across interconnected platforms. The result is trusted, compliant, and production-ready data that supports confident business decisions.

Why Traditional Data Quality Falls Short

Modern data ecosystems continue to grow in complexity, while quality practices often remain fragmented.

- Fragmented validation: Data quality checks remain disconnected across ETL pipelines, APIs, data lakes, and downstream systems
- Manual reconciliation: Time-intensive validation slows releases and delays business outcomes.
- Limited compliant test data: Generating secure, representative test data remains a persistent challenge.
- Privacy and regulatory risks: Growing regulatory requirements increase pressure on governance and data protection
- Limited end-to-end visibility: Teams struggle to understand data quality across the complete data lifecycle

The result: Delayed insights, faulty analytics, and reduced business confidence.

Our Solution

Data Testing & Test Data Management (TDM) Assurance

Data Testing & TDM Assurance delivers an AI-led, data-centric quality engineering approach that validates trusted data from source to consumption. The solution combines intelligent automation, AI-powered validation, and governed test data management to improve quality, accelerate delivery, and strengthen confidence across modern data platforms.

What Enterprise Data & Analytics Assurance Delivers

The solution brings together specialized assurance capabilities across the digital experience landscape.

Data Testing - AI Data Quality Accessor AI-driven test generation	Automatically generates source-to-target comparison queries, reconciliation scripts, business-rule validations, and data quality checks from mapping documents and requirements. This reduces manual effort by up to 70%.
Automated data validation engine	Validates completeness, accuracy, consistency, referential integrity, duplicate detection, and anomalies through rule-based and AI-driven validation.
Executive dashboard & reporting	Provides real-time visibility into test execution, data quality scores, defect trends, reconciliation results, and business-rule compliance metrics.
Run history & audit trail	Maintains complete execution history, validation comparisons, trend analysis, audit logs, and compliance reporting.
Industry-standard data quality checks	Applies validation across completeness, accuracy, consistency, validity, uniqueness, timeliness, integrity, and conformity to deliver business-ready data.

Multi-Source Data Validation

-  **File-to-Database (File → DB) Validation**
Validates source files including CSV, JSON, XML, Excel, Parquet, and fixed-width formats against target databases for completeness, transformations, and business rules.
-  **Database-to-Database (DB → DB) Validation**
Reconciles source and target databases across migrations, ETL and ELT pipelines, cloud modernization, and enterprise data warehouses.
-  **File-to-File (File → File) Comparison**
Compares structured and semi-structured files with schema validation, content validation, nested JSON validation, and change detection.
-  **Conditional Data Comparison**
Performs SQL-like validation using custom rules, joins, filters, aggregates, and business logic to validate relevant datasets.

AI-Powered Test Data Management

AI TDM – Test Data Management Accelerator

Self-service test data portal

- ✓ Enables testers, developers, and business users to discover, request, generate, mask, subset, and provision governed test data on demand.

Synthetic test data generation

- ✓ Creates production-like test data while preserving data relationships, business scenarios, and edge cases without exposing sensitive information.

Data masking & privacy compliance

- ✓ Supports dynamic and static masking of PII, PHI, and sensitive business data aligned with GDPR, HIPAA, PCI-DSS, and enterprise security standards.

Business Outcomes

The solution helps enterprises modernize data quality engineering while improving trust, governance, and delivery confidence.

Up to 2x faster releases through automated data testing and on-demand test data provisioning.

Up to 50% lower testing costs through optimized test data management and automation.

Over 90% test coverage across data pipelines, ETL, and analytics layers.

99.9% data reliability through continuous validation and governed test data.

Stories of Outcreation

- Fortune 50 Enterprise: Achieved 99.9% Data Reliability and Reduced Reconciliation Effort by 40%
- Global Insurance Leader: Enabled AI-Driven TDM Reducing Test Data Setup Time

Why LTM

As a Business Creativity partner, LTM brings together human expertise and intelligent systems to help enterprises establish trusted data at scale. Through AI-powered quality engineering, intelligent automation, and governed validation, LTM enables organizations to strengthen Enterprise Application Testing with a holistic picture of data quality across interconnected platforms and modern data ecosystems.

What's Next

Build Trusted Data With AI-Powered Assurance

Write to us at datatesting.enterpriseplatforms@ltm.com