

tcs ADD™



TCS ADD™ Metadata Repository Platform



Life sciences industry routinely face inconsistencies and challenges in managing diverse data standards and output templates, leading to process inefficiencies. Across the entire study build process — protocol, data collection, and submission — life sciences industry has to deal with non-standard data. In addition, manual programming and disjointed downstream processing adds to the process time for study data tabulation models (SDTM). The aim, thus, is to build an all in one automated and integrated metadata-driven solution that is easy to configure and provides compliance to industry clinical and regulatory standards.

The vision of TCS ADD™ is to enable digital data flow by automating all deliverables from protocol and data collection to submission.

TCS ADD™ Metadata Repository provides a single source of truth for any type of metadata (i.e., SDTM, ADaM, C-DASH, non-CRF, etc.) and assures standards compliance. Its metadata harmonization provides automated study build and transformation into submission-ready formats, enabling faster study set-up, increased quality, and compliance. In addition, the macro-based solution includes a comprehensive library of derivations and validations compliant with regulations like CDISC. The platform leverages intuitive mappings, real-time data availability and impact analysis, Enabling digital data flow across the clinical value chain by leveraging standards and artificial intelligence (AI).

Overview

The challenges for life sciences industry start at the study level, with limited business and scientific content management across different products and therapeutic areas. Organizations seek an automated, integrated and controlled environment for assured standards compliance. The current process limits integration and usage of data from diverse sources, and historical and legacy data, leading to reduced statistical power and reliability. Further, the absence of a governance model for handling and maintaining ever evolving standards and its versions hamper cross-departmental data lineage and oversight. Converting data to a submission-ready format is yet another challenge with disjointed downstream processing increasing SDTM processing time. It leads to delay in ADaM dataset creation process due to often dependency on SDTM datasets.

Traceability back to raw data or SDTM dataset for ADaM datasets variables is always a crucial task, and maintaining this traceability can be challenging.

TCS ADD™ Metadata Repository Platform provides an out-of-the-box next-gen platform to manage clinical standards for industry and sponsors. It automates the entire study build process while providing robust governance throughout the cycle. The platform comprises of a clinical study design workbench with automated data transfer agreements, automated study build capabilities, and the ability to generate submission ready SDTM data and packages. The platform offers a controlled environment for biometrics and provisions-integrated metadata management for any type of data including SDTM, ADaM, C-DASH, non-CRF, etc., This facilitates real-time availability of data for downstream processing.

Who we are?

TCS ADD™ Metadata Repository Platform is a ready to use, interoperable metadata solution that automates study build, provides robust governance and enables cross- departmental data lineage. The platform facilitates effortless configuration, 100% compliance to CDISC standards and integrates with market-leading EDCs.

Our solution

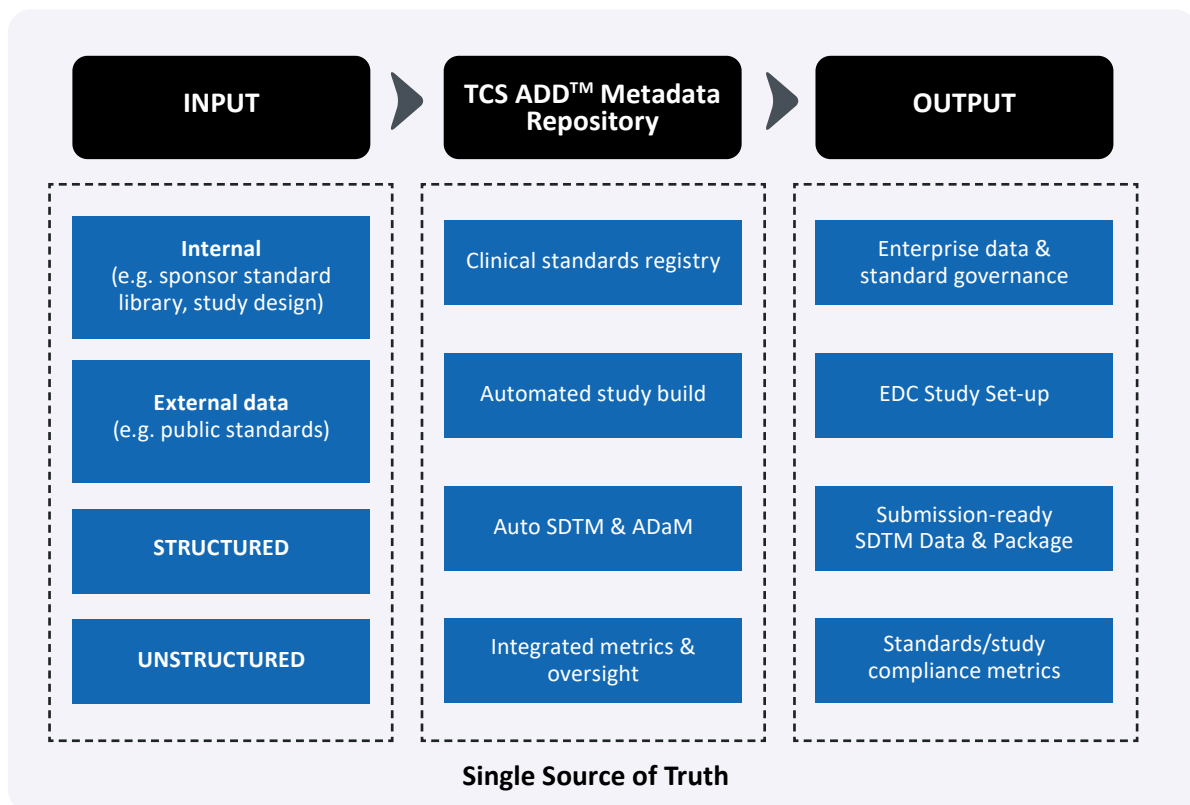
TCS ADD™ Metadata Repository Platform comes equipped with the following key components:

- **Clinical standards registry:** Scalable Metadata Repository (MDR) for multiple standards and templates, including source collection EDC [(Electronic data capture) and non-EDC(Electronic data capture)], SDTM(Study Data Tabulation Model), and ADaM(Analyst Data Model).
- **Automated study build:** Automated study design based on standards and templates via bidirectional integration to the EDC system. Bidirectional integration also allows users to compare metadata set up in MDR and EDC.
- **Automated SDTM / ADaM transformation:** – Automated creation of transformation metadata for newer source collection using cognitive technologies like AI/ML. This includes functionalities such as extracting the transformation metadata based on standards, identifying target structures, and predicting transformation metadata for a new source database.

Downstream automation of study setup of ready to use SDTM metadata using standards and aiding the ADaM setup based on study analysis requirement using standard libraries. For SDTM and ADaM setup automation, the setup also includes the setup of domain/dataset metadata and transformation metadata.

By incorporating these automations, we streamline metadata management, reduce errors, and accelerate the analysis submission process

- **Integrated Metrics & Oversight:** Interconnected CRF, SDTM, ADaM data models across the entire study lifecycle.

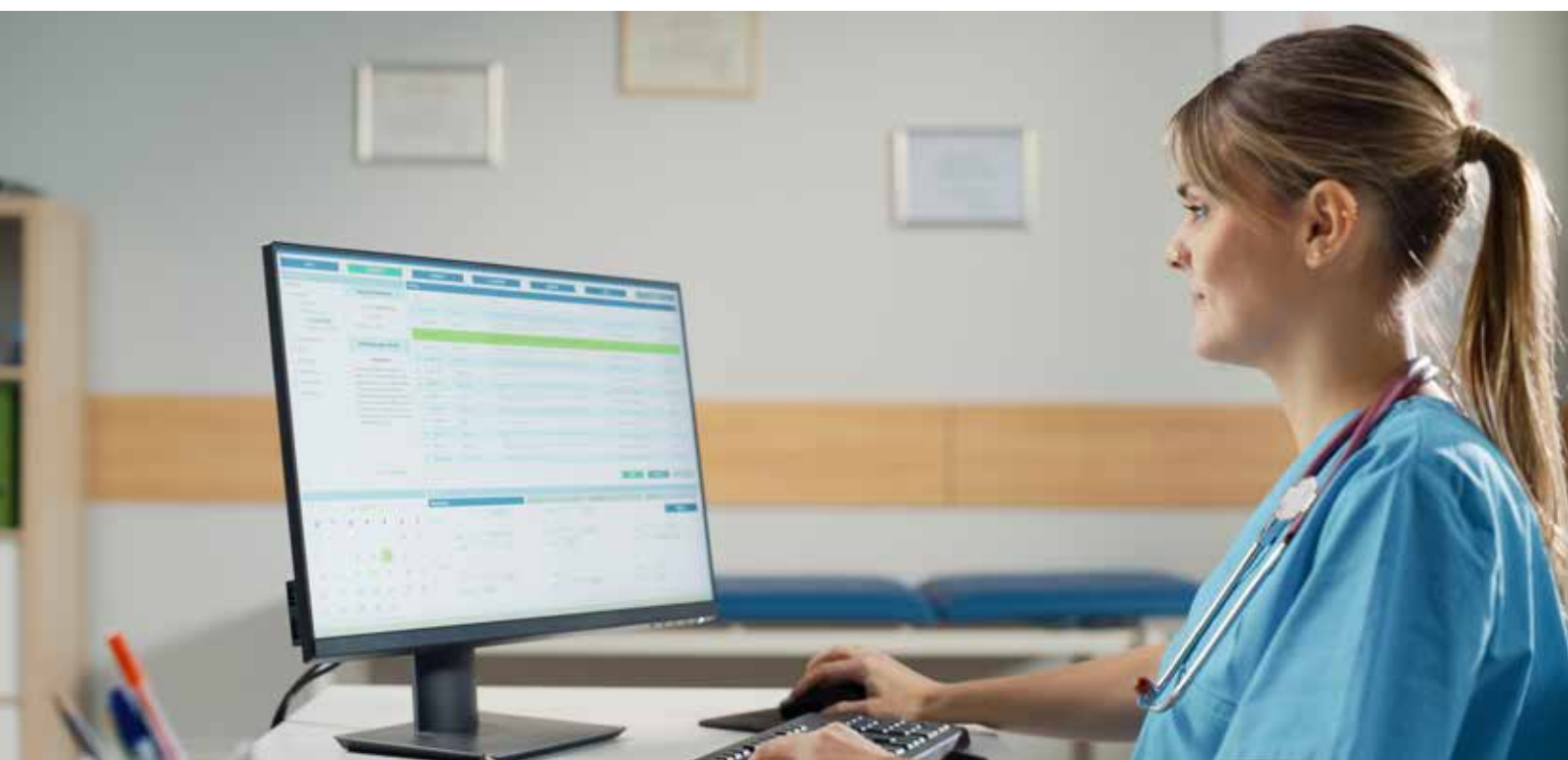


TCS ADD™ Metadata Repository Platform: Schematic Overview

Benefits

TCS ADD™ Metadata Repository Platform offers the following benefits:

- **Increased efficiencies & reduced workload:**
 - Standardized metadata across different studies, making it easier to integrate data from multiple studies for combined analysis on ADaM datasets
 - Regulatory Submission (SDTM) data preparation process reduced from 4 weeks to 3 days
 - Reduced Last Subject Last Visit to Data Base Lock timelines
 - Increased efficiencies, productivity, and timelines across the product life cycle (study till commercial) by AI & automated analytics solutions
 - Enhanced business agility by maximum reuse of standards
 - Rapid retrieval of information due to a unified repository
- **Improved data quality & oversight:**
 - Enhanced Quality of Standards
 - With a central repository metadata (Such as variable names and derivations) can be reused across multiple studies, significantly reducing the time and effort needed for ADaM dataset creation
 - Elimination of data inconsistencies across R&D and Clinical Trial processes
 - Increased compliance with industry and sponsor standards
 - Easy accessible audit trail across all activities
 - Reuse of metadata and their industry level standards at other projects/Studies
 - Cross-depth data lineage oversight
 - The integration of Standard and AI-driven mapping significantly decreases SDTM efforts at the study level
 - Instantaneous SDTM availability as soon as RAW data arrives
 - Industry leading SDTM efficiency matrix requires only 6 person-days (2 Developers, 3 Days) per study, significantly surpassing the industry average by a huge margin





The TCS advantage

TCS ADD™ Metadata Repository Platform comes with these unique advantages:

- **Agile approach:** Ready-to-use data integration and standardization helps users perform data operations on demand. Our platform allows quick and hassle-free onboarding of CDISC-compliant SDTM and NCI-controlled terminology metadata.
- **Focus on reusability:** Our platform offers an exhaustive library of derivations and validations conforming to CDISC regulations. Data can be auto-mapped to ongoing or concluded clinical studies, and users can create copies of data or metadata from existing projects and the global library. Transmission mapping can be reused and auto-mapped based on study metadata.
- **Scalability, Flexibility:** Our platform can be scaled to any level based on the business need and can be implemented as a standalone solution or on top of existing solutions.
- **Supplementary services:** The platform extends Standards Governance Advisory (SGA) services for customers in need along with supporting SDTM compliant deliverables through its services capabilities
- **Technology and domain expertise:** TCS-certified subject matter experts combine our extensive capabilities as clinical research services provider, platform solution provider and global systems integrator to deliver strategic solutions.



Awards and accolades

- TCS named as the second most valuable brand in the “Most Valuable IT Services Brands **2024**” by **Brand Finance**
- TCS Named to World’s Most Admired Companies List 2023 by **FORTUNE® Magazine**
- TCS recognized as a most valuable global brand 2023 by **Kantar Brandz**
- TCS ranked number one for tenth consecutive year in Customer Satisfaction by **Whitelane Research Survey 2023**
- TCS Europe Listed as a 2023 Top Employer by **Top Employers Institute**

TCS ADD™ Awards and Recognition

- TCS ADD™ four times winner of **India Pharma Awards**
 - 2023 for “Excellence in Ancillary Pharma Services” and “Excellence in use of Technology” awarded to TCS ADD™ Metadata Repository
 - 2022 for “Excellence in Ancillary Pharma Services” awarded to TCS ADD™ Connected Clinical Trials
 - 2021 for “Excellence in Ancillary Pharma Services” awarded to TCS ADD™ Regulatory
 - 2019 for “Excellence in Ancillary Pharma Services” awarded to TCS ADD™ Metadata Repository Platform
- Won the Global Annual AI Awards for transforming safety case processing to reduce time and increase throughput for TCS ADD™ Safety platform at **Awards.AI Awards 2021**
- Won the “Best Patient Facing Tech Initiative” award for technology excellence in clinical research & drug development for TCS ADD™ Connected Clinical Trials platform at **Citeline Awards 2020**
- Won the “European Innovation Awards” for applying thoughtful approach to solve tough industry problems for TCS ADD™ Connected Clinical Trials platform at **Scope Europe 2019**

About TCS ADD™ Platforms

TCS ADD™ is a modern and open drug development platform for life sciences that enables digital ecosystems, simplifies data complexity and provides faster access to new and effective drugs for patients in need. The platform is powered by our proprietary cognitive intelligence engine data driven smart analytics and Internet of Things (IoT) that makes clinical trials more agile and safe. TCS ADD™ leverages the best of cloud architecture and personalized user experience design in compliance with quality guidelines and privacy regulations.

To know more

Visit the <https://www.tcs.com/what-we-do/products-platforms/tcs-add/solution/tcs-add-metadata-repository-platform>

Email: add.platform@tcs.com

About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services is a purpose-led transformation partner to many of the world’s largest businesses. For more than 50 years, it has been collaborating with clients and communities to build a greater future through innovation and collective knowledge. TCS offers an integrated portfolio of cognitive powered business, technology, and engineering services and solutions. The company’s 469,000 consultants in 46 countries help empower individuals, enterprises, and societies to build on belief.

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