

tcs ADD™



# TCS ADD™ Metadata Repository

A next generation, inter-operable, end-to-end metadata management platform

Simple | Modular | Scalable | Flexible | Future-Fit







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 a ready-to-use SaaS-based solution for Easy Onboarding of Standards, Robust Standards Management & Governance. The industry leading metadata driven AI solution with Connected Metadata that automates study build, enables robust governance through cross-departmental data lineage and rapidly transforms and generates submission-ready datasets for CDASH, SDTM, ADaM, non-CRF or any other industry data standard. 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 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

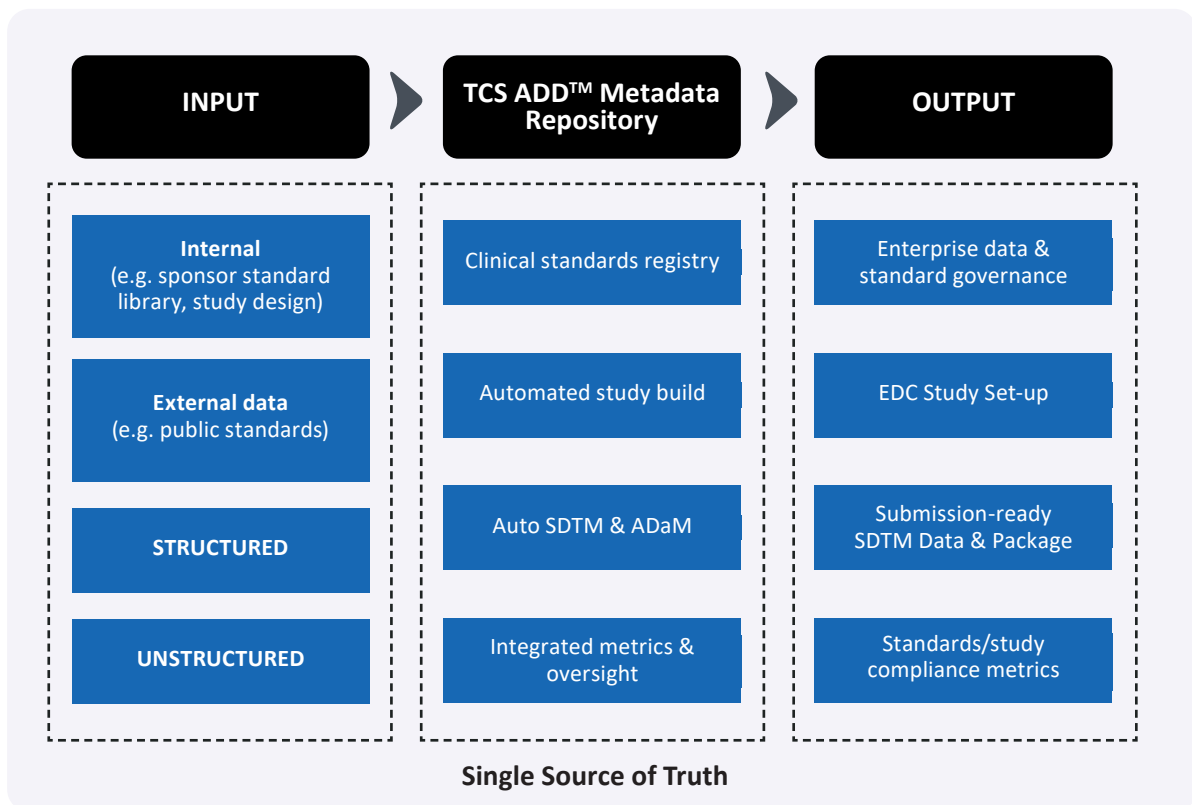
TCS ADD™ Metadata Repository Platform comes equipped with the following key components:

- **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 and downstream setup of transformation metadata for newer source collections leverage cognitive technologies like AI/ ML to deliver efficiency and accuracy. This process includes seamless API integration, extracting transformation metadata based on standards, identifying target structures, and leveraging AI-driven mapping to predict transformation metadata for new source databases.

The automation extends to study setup, enabling the creation of ready-to-use SDTM metadata and facilitating ADaM transformation based on study analysis requirements using standard libraries. It also encompasses the setup of domain/dataset metadata and transformation metadata for both SDTM and ADaM.

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

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

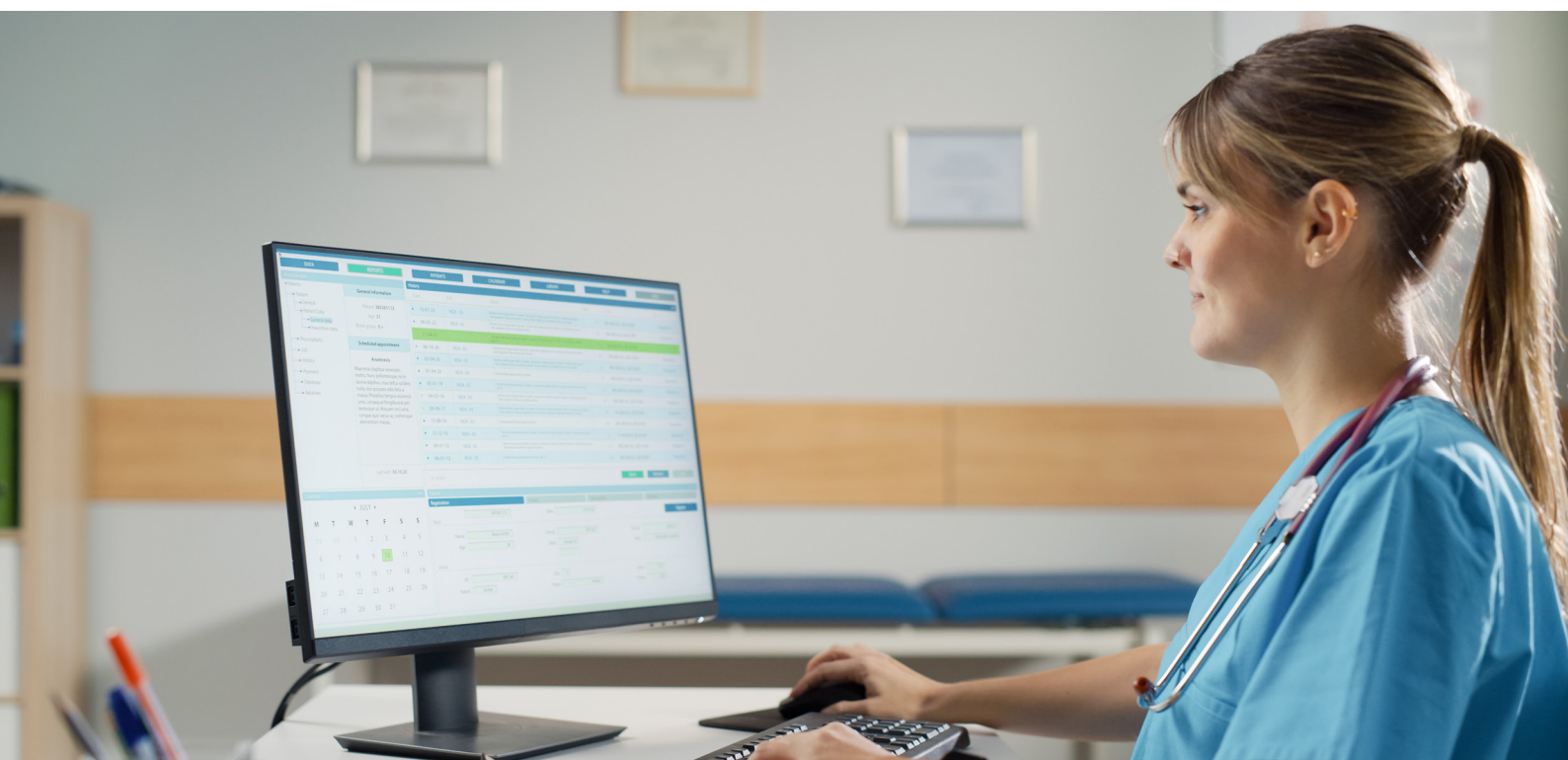


TCS ADD™ Metadata Repository Platform: Schematic Overview

# Benefits

TCS ADD™ Metadata Repository 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.





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Name	Abteilung	Fach	Diagnose	Behandlung	Prognose
Dr. Müller	Kardiologie	Koronar	Myokardinfarkt	Medikation	Stabil
Dr. Schmidt	Neurologie	Stroke	Ischämischer Schlaganfall	Physiotherapie	Erholend
Dr. Weber	Orthopädie	Wirbelsäule	Lendenwirbelsäule	Chirurgie	Stabil
Dr. Klein	Onkologie	Hämatologie	Blutkreislapp	Chemotherapie	Stabil
Dr. Fischer	Diagnostik	Labordiagnostik	Blutchemie	Medikation	Stabil
Dr. Richter	Diagnostik	Strahlendiagnostik	Röntgen	Medikation	Stabil
Dr. Bauer	Diagnostik	Strahlendiagnostik	Ultraschall	Medikation	Stabil
Dr. Meier	Diagnostik	Strahlendiagnostik	CT	Medikation	Stabil
Dr. Wolf	Diagnostik	Strahlendiagnostik	MRT	Medikation	Stabil
Dr. Müller	Diagnostik	Strahlendiagnostik	FDZ	Medikation	Stabil
Dr. Klein	Diagnostik	Strahlendiagnostik	Radionuklid	Medikation	Stabil
Dr. Fischer	Diagnostik	Strahlendiagnostik	Pathologie	Medikation	Stabil
Dr. Richter	Diagnostik	Strahlendiagnostik	Pathologie	Medikation	Stabil
Dr. Bauer	Diagnostik	Strahlendiagnostik	Pathologie	Medikation	Stabil
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Dr. Fischer	Diagnostik	Strahlendiagnostik	Pathologie	Medikation	Stabil
Dr. Richter	Diagnostik	Strahlendiagnostik	Pathologie	Medikation	Stabil
Dr. Bauer	Diagnostik	Strahlendiagnostik	Pathologie	Medikation	Stabil
Dr. Meier	Diagnostik	Strahlendiagnostik	Pathologie	Medikation	Stabil
Dr. Wolf	Diagnostik	Strahlendiagnostik	Pathologie	Medikation	Stabil
Dr. Müller	Diagnostik	Strahlendiagnostik	Pathologie	Medikation	Stabil

# 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™ 7 times winner of **India Pharma Awards**
  - 2024 for “Excellence in Ancillary Pharma Services” awarded to TCS ADD™ Safety and “Excellence in the Use of New Age Technology” awarded to TCS ADD™ Risk Based Quality Management
  - 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™ Platform

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



Email: [add.platform@tcs.com](mailto:add.platform@tcs.com)

### About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organization that has been partnering with many of the world’s largest businesses in their transformation journeys for over 56 years. Its consulting-led, cognitive powered, portfolio of business, technology and engineering services and solutions is delivered through its unique Location Independent Agile™ delivery model, recognized as a benchmark of excellence in software development.

A part of the Tata group, India’s largest multinational business group, TCS has over 601,000 of the world’s best-trained consultants in 55 countries. The company generated consolidated revenues of US \$29 billion in the fiscal year ended March 31, 2024, and is listed on the BSE and the NSE in India. TCS’ proactive stance on climate change and award-winning work with communities across the world have earned it a place in leading sustainability indices such as the MSCI Global Sustainability Index and the FTSE4Good Emerging Index.

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