ADD Analytics and Insights

The life sciences sector is at a unique inflection point. Advancements in medicine and emerging demand have opened up new potential markets – however, absence of centralized information with data present in diverse systems & formats and reliance on human memory in the clinical trial site selection and execution process impedes market deployment. The firms need a data-science led solution that leverages AI & ML technologies to provide predictive use cases like adaptive monitoring and site feasibility to for quicker data-driven decisions and greater market success.

Our ADD Analytics and Insights solution enables a single pane of glass for site monitoring insights, accelerating site selection, and product market submission. The platform ingests data from both internal (project management tools, budgeting systems, master data management systems) and external (wearables, government websites) channels. The solution speeds-up study start-up and targeted interventions. The companies can use our platform to select the best-fit sites, informed by patient population insights and performance metrics.
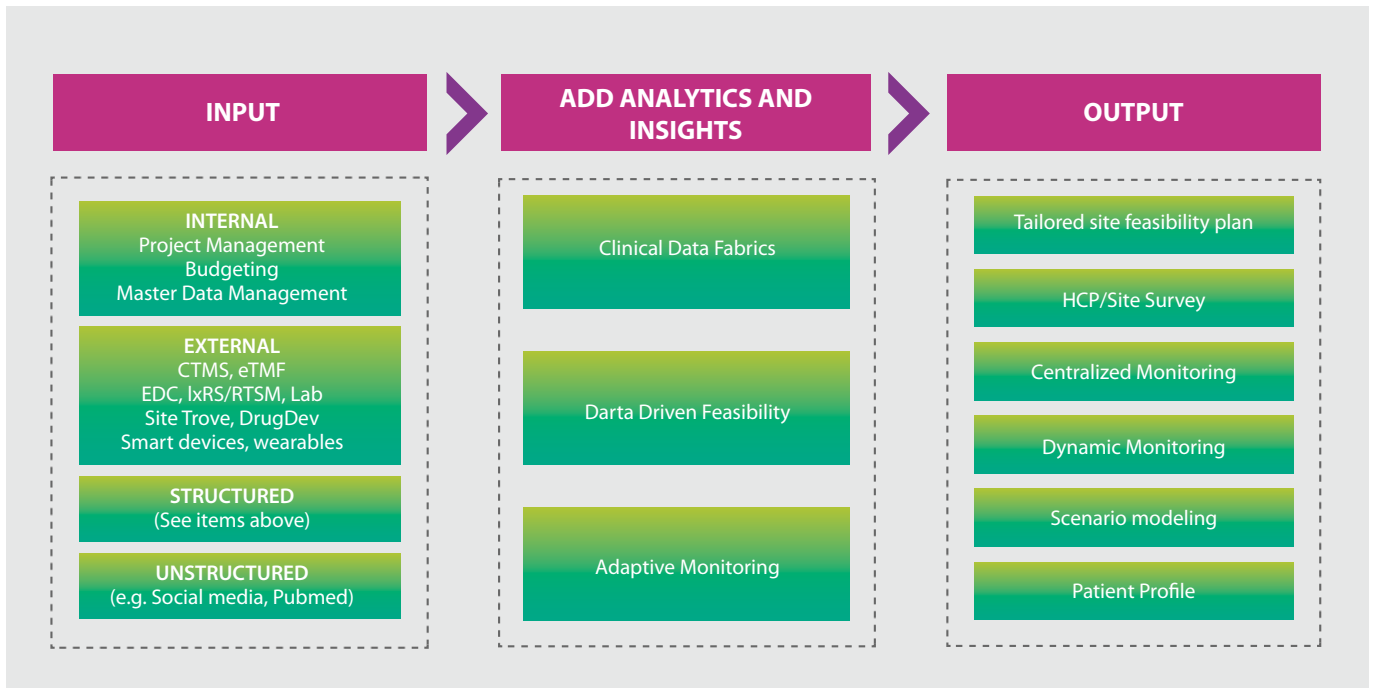
Overview

Currently, life sciences industries follow a highly siloed methodology to monitor and select sites for clinical trials. In the absence of a unified clinical database, there are several management inefficiencies – not to mention dissonance between multiple data sources, latencies, and formats. As a result, it becomes difficult to make timely decisions (for example, resource allocation), denting the timelines and efficacy of the trials. Clearly, life sciences companies need to integrate and apply advanced analytics to the fragmented data if they are to achieve optimal efficiency when managing trials.

Tata Consultancy Services (TCS) introduces the ADD Analytics and Insights solution to help companies achieve a consolidated view of critical information pertaining to site selection, project management, and patient feasibility. The solution offers a complete suite of modular features with out-of-the-box key performance and risk indicator library and workflow for effective risk assessment and communication. ADD Analytics and Insights solution offers discrete analytics models to ingest data from multiple sources via clinical data fabric, conduct data-driven feasibility assessments, and drive adaptive monitoring. This equips companies with tailored insights, enabling smarter trial decisions.

Solution

ADD Analytics and Insights solution comprises three key components:

- **Clinical Data Fabric:** facilitates data ingestion from multiple sources including EDC, Planning, CTMS, IxRS, eTMF, Labs, Investigator Portal, Finance, Training, Compliance, Master Data Management; provides a multi-layered data as a service architecture with plug-n-play orchestration.

- **Data-Driven Feasibility:** provides automated site ranking and tiers; incorporates Indication, Protocol and Site Feasibility Modules; provisions flexible & dynamic feasibility plans; allows integrated e-Surveys.

- **Adaptive Monitoring:** helps with Integrated risk assessment & categorization, including Transcelerate templates; provides configurable KPI/KRI library; enables automated and customizable workflow, alerts, and oversight; provisions real-life predictive analytics based on a model trained using historical data facilitates patient profiling and medical monitoring.

INPUT	ADD ANALYTICS AND INSIGHTS	OUTPUT
INTERNAL Project Management Budgeting Master Data Management	Clinical Data Fabrics	Tailored site feasibility plan
EXTERNAL CTMS, eTMF EDC, IxRS/RTSM, Lab Site Trove, DrugDev Smart devices, wearables	Darta Driven Feasibility	HCP/Site Survey
STRUCTURED (See items above)		Centralized Monitoring
UNSTRUCTURED (e.g. Social media, Pubmed)	Adaptive Monitoring	Dynamic Monitoring
		Scenario modeling
		Patient Profile

TCS ADD Analytics and Insights: Schematic Overview

Benefits

By utilizing the TCS ADD Analytics and Insights solution, companies can:

- **Increase efficiencies:** reduce site monitoring costs by 20% through triggered remote monitoring, targeted Source Data Verification (SDV), and predictive analytics.

- **Reduce workloads:** enable data access and drill down navigation with integrated task lists; leverage use case-specific algorithms and visualizations for quick and easy decisions (for example, understanding training effectiveness) when conducting trials.

- **Improve data quality and oversight:** optimize data quality & integrity by detecting duplicates, collecting any missing data, and achieving early identification of trends and signals.

- **Accelerate the product market submission process:** automate data ingestion from various data sources to extract insights through AI/ML, expediting the development of use case-specific algorithms and visualizations.

The TCS Advantage

By partnering with TCS, companies can leverage the following key differentiators:

- **Scalability:** Life sciences companies can scale up the TCS ADD Analytics and Insights solution to any level commensurate to the business needs on hand.

- **Modular:** The platform is highly modular with its components capable of being implemented separately or in combination, mapped to the business requirement.

- **Flexible:** Companies can implement the platform as a standalone solution, on top of the existing solutions, or integrated with other TCS solutions for life sciences.

- **Cross-solution integration:** The platform supports easy and seamless integration with other TCS ADD offerings such as ADD Data Standardization & Biometrics solution for SDTM automation, etc.

- **Technology and domain expertise:** TCS certified subject matter experts combine the capabilities as clinical research service providers, platform solution providers, and global systems integrators to deliver strategic solutions fulfilling all customer requirements.

- **Analyst recognition -** TCS ADD platforms have been consistently recognized by leading analysts including Everest Group PEAK™ Matrix, IDC MarketScape, HFS Research, 451 Research, and others, as a key enabler to meet the increasing need of life sciences firms for commercial off-the-shelf digital solutions.

Awards & Recognition

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 artificial 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/advanced-drug-development** page on **tcs.com**
Email: **ADD.Platforms@tcs.com**

About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development. A part of the Tata Group, India's largest industrial conglomerate, TCS has a global footprint and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

For more information, visit us at **www.tcs.com**

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