



CERTIFICATION PREPARED FOR

TCS

2023 UPDATE FEBRUARY 16, 2023
AUDIT COMPLETION JANUARY 18, 2022

CONFIDENTIAL



HEREBY GRANTS THIS

RealCDP CERTIFICATE 2023

PRESENTED TO

TCS Customer Intelligence & Insights™

Entitled to be known as a RealCDP™ and authorized to display the RealCDP™ badge for successfully completing a comprehensive evaluation and providing satisfactory proof that meets all qualifications set forth by the Customer Data Platform Institute.

In Witness Whereof, this Sixteenth day of February 2023.

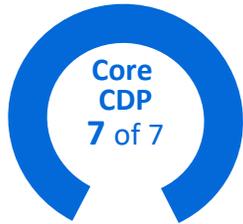
A handwritten signature in blue ink that reads 'David M Raab'.

DAVID RAAB
President, CDP Institute



A handwritten signature in blue ink that reads 'Vernon Tirey'.

VERNON TIREY
RealCDP Auditor



- ✓ **Ingest Data**
- ✓ **Maintain Data**
- ✓ **Store Historical Data**
- ✓ **Unified Customer Profile**
- ✓ **Privacy**
- ✓ **Share Customer Data**
- ✓ **Real Time Data Updates**

TCS Customer Intelligence & Insights™ CDP meets all core CDP requirements. TCS CI&I CDP supports B2C companies in select industries with a platform that can be hosted in a public cloud, private cloud or on-premises. Structured, semi-structured and unstructured data can be ingested in real time or batch into a schema-free load; pre-built connectors are provided; and additional connectors can be added. Full detail data is maintained in Hadoop and PostgreSQL data stores with industry-specific data models provided for retail, banking and insurance companies (more industries are on the roadmap). Historical data storage with an audit trail allows for recovery and reconstruction. The unified customer profile, with a persistent ID called “Human ID,” is created via deterministic and probabilistic matching, tracking both known and unknown customers. Data is encrypted at rest and in-motion to ensure privacy for PII; consent management relies on data from client preference management systems and privacy enforcement is set up during implementation. Real time updates are fully enabled. Data can be shared anywhere in batch and real time and can be managed by non-technical resources in a no-code environment.



- ✓ **Channels Supported**
- ✓ **Data Sources Supported**
- ✓ **3rd Party Applications**
- ✓ **Real Time Processing**
- ✓ **Data Hygiene**
- ✓ **End User Training**

TCS CI&I CDP meets most enhanced RealCDP requirements. The platform integrates easily with multiple types of 3rd party engagement platforms for ingesting and sending data, with the exception of social media advertising (files can be sent via an API). Over 130 pre-built connectors to leading platforms are provided via a partnership with Dell Boomi. TCS will build additional connectors as needed. The platform is designed to enable real time personalized customer journeys but is not a message delivery platform —CI&I CDP relies on 3rd party marketing platforms for delivery of email, SMS, etc. Real time data processing is strong (via Spark and Kafka), with sub-second ingestion, profile updates, scoring and recommendation delivery to external systems. Data hygiene includes rules-based data quality, cleaning and standardization routines but does not include a postal hygiene offering. TCS was founded as a services company and provides excellent technical and analytic support services, including in-depth training post-implementation and additional training via the professional services team. Manuals and complete documentation are available online for users.



- ✓ **Analytics & Reporting**
- ✓ **Model Building & Scoring**
- ✓ **Personalization**
- ✓ **Journey Orchestration**

TCS CI&I CDP meets all CDP Stack requirements. CI&I CDP comes with a built-in framework for designing reports and dashboards to track and visualize results. Customer insights are categorized into stratification, analysis and 360-degree view. The platform also connects to 3rd party tools such as Qlik and Tableau for broader reporting capabilities. Customer journey paths are tracked and displayed automatically (“Journey Discovery”) to provide important feedback on actual journeys (as opposed to user-defined journeys). Robust model-building capabilities are provided with both supervised and unsupervised ML/AI options. Pre-built models include propensity, next best product/offer and contextual offer ranking. In addition to ad hoc segment creation, non-technical users can create customer personas with a drag and drop cluster modeling interface, a unique and powerful offering. Personalization is solid, with access to all raw and derived data as well as the scores generated by the various modeling options. CI&I CDP does not provide content management and message design, relying on 3rd party messaging and engagement systems for those functions. Journey Modeler provides robust journey orchestration, including multi-step, multi-channel and real time capabilities. Real time interactions and recommendations are powered by an ensemble technique that uses tiered combinations of ML/AI rules depending on how much data is available on the customer, enabling more accurate automated recommendations both in-session and as the customer journey evolves.

OTHER

TCS CI&I is one of the few CDPs that offer a Loyalty Management module as part of its solution suite. With tighter data integration than can be realized via a CDP data exchange with a 3rd party loyalty platform this native solution is unique.

SUMMARY

TCS CI&I CDP is a RealCDP that leverages the company’s strong heritage in data management and advanced analytics to provide outstanding real time personalization capabilities. A growing number of industry specific solutions deliver a rich set of features and functions OOTB. The deep bench and geographically dispersed TCS services team ensures solid implementations and ongoing support for larger enterprises around the globe.

* The CDP Institute requires all CDP vendors to provide client references so that we can confirm commercial viability. TCS has not yet provided client references.

TCS CI&I CDP Findings

The CDP Institute audits 17 CDP related capabilities. Below are the high-level findings for TCS Limited.

Requirements fall into three categories:

- ✓ Meets All Requirements
- ⚡ Meets Some Requirements
- ✗ Meets No Requirements

CAPABILITY	TYPE	Findings
✓ Ingest Data	Core CDP	Meets all requirements
✓ Maintain Data	Core CDP	Meets all requirements
✓ Store Historical Data	Core CDP	Meets all requirements
✓ Unified Customer Profile	Core CDP	Meets all requirements
✓ Privacy	Core CDP	Meets all requirements
✓ Share Customer Data	Core CDP	Meets all requirements
✓ Real Time Updates	Core CDP	Meets all requirements
✓ Channels	CDP Enhancement	Meets all requirements
✓ Data Sources Supported	CDP Enhancement	Meets all requirements
✓ 3rd Party Applications	CDP Enhancement	Meets all requirements
✓ Real Time Processing	CDP Enhancement	Meets all requirements
⚡ Data Hygiene	CDP Enhancement	CDP supports but does not include full ETL and data hygiene functionality
✓ End User Training	CDP Enhancement	Meets all requirements
✓ Analytics & Reporting	CDP Stack	Meets all requirements
✓ Model Building & Scoring	CDP Stack	Meets all requirements
✓ Personalization	CDP Stack	Meets all requirements
✓ Journey Orchestration	CDP Stack	Meets all requirements

Directory of Audited CDP Capabilities

For a full description of CDP capabilities please see the [RealCDP Audit Guide](#). Below is a brief description of each CDP capability reviewed in the RealCDP Certification Audit. To qualify as a RealCDP a vendor must fully support all Core CDP capabilities.

CAPABILITY	TYPE	DESCRIPTION
Ingest Data	Core CDP	Data ingestion and data capture capabilities for all data types
Maintain Data	Core CDP	Maintain and manage all required customer and demand-side data
Store Historical Data	Core CDP	Store all detailed historical and longitudinal data required by Users
Unified Customer Profile	Core CDP	Create and manage unified customer profiles
Privacy	Core CDP	Manage personal identifiers, consent & privacy management, privacy enforcement
Share Customer Data	Core CDP	Distribute and/or syndicate data wherever (and ideally whenever) needed
Real Time Updates	Core CDP	Capture, update, share, and decision data in real time
Channels	CDP Enhancement	CDP supported Channels and available Connectors to capture and distribute data
Data Sources Supported	CDP Enhancement	Third Party Applications that provide, pre-integrate, and or support the CDP system
3rd Party Applications	CDP Enhancement	Third Party Applications that provide, pre-integrate, and or support the CDP system
Real Time Processing	CDP Enhancement	Enhanced Real-time processing update capabilities (ideally in sub-second speed)
Data Hygiene	CDP Enhancement	Data scrubbing, filtering, standardizing, formatting, and matching capabilities
End User Training	CDP Enhancement	End User training, workshops, documentation, and educational materials
Analytics & Reporting	CDP Stack	Report building and sharing for data, program performance and customer analytics
Model Building & Scoring	CDP Stack	Model development and data scoring in support of targeting and decisioning
Personalization	CDP Stack	Customer Personalization solutions including tools, technologies, and techniques
Journey Orchestration	CDP Stack	Customer Journey Orchestration solutions for multi-touch, multi-channel marketing