ORACLE LIVE

Oracle Autonomous Data Warehouse

Empowering business innovators on the cloud

NEW Expanded Vision for Autonomous Data Warehouse

Empowering innovators with new self-service data management tools

Data Analysts

Data Scientists

LoB Developers

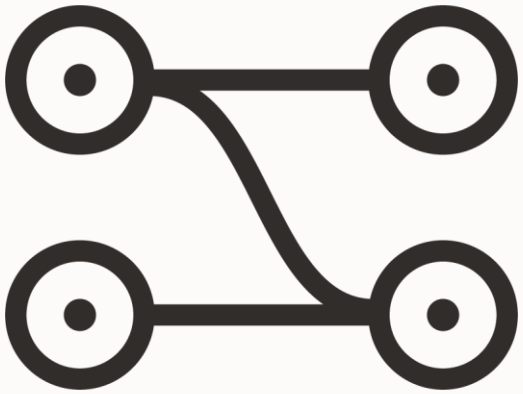
NEW Self-Service Tools for Data Analysts

From data to insights with built-in self-service data tools

NEW Load

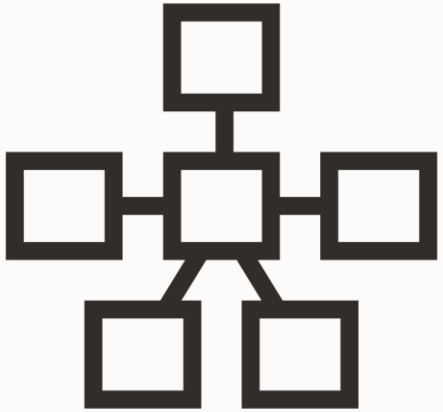
Simple drag & drop loading

NEW Transforms



Declarative transformations and data cleansing

NEW Business Model



Automatically create powerful business models

NEW Insights

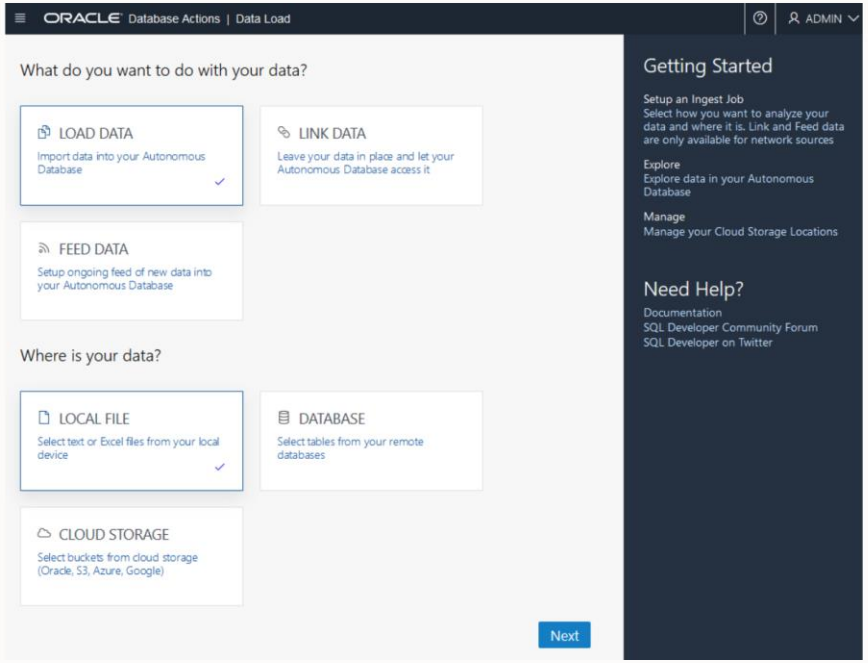
Guided discovery of hidden patterns and anomalies

Loading data warehouse tables – Autonomous Data Warehouse

Load Data with Oracle Database Actions

Oracle Database Actions provides a web-based interface that provides development, data tools, administration, and monitoring features and lets you load or access data from local files or remote databases.

On the Database Actions Data Load page, you can choose to load data from a file on your local device or from a database. You can also choose to explore the data in your Oracle Autonomous Database. See The Data Load Page for detailed information on the data loading options using Database Actions.



https://docs.oracle.com/en/cloud/paas/autonomous-database/adbsa/load-data-database-actions.html

Development

SQL
Execute queries and scripts, and create database objects

DATA MODELER
Create relational diagrams for database objects

REST
Deploy REST APIs for your database

JSON
Manage your JSON Document Database

Data Tools

DATA LOAD
Load or access data from local files or remote databases

CATALOG
Understand data dependencies and the impact of changes

DATA INSIGHTS
Discover anomalies, outliers and hidden patterns in your data

BUSINESS MODELS
Create business models for performance and analysis

Getting Started

RESTful Web Services
Deploy REST APIs for your Oracle database - GET, PUT, POST and DELETE securely using HTTPS with your Oracle data and stored procedures.

Load Data
Populate existing tables or build new ones from local files (Avro, JSON, XML, CSV, or Excel) using our data loading wizard.

JSON
Create collections, documents, add, edit, delete, and browse your documents, and visualize your JSON Data Guides.

Available On-Premises
SQL Developer Web is now available for your On-Premises Oracle Databases too!

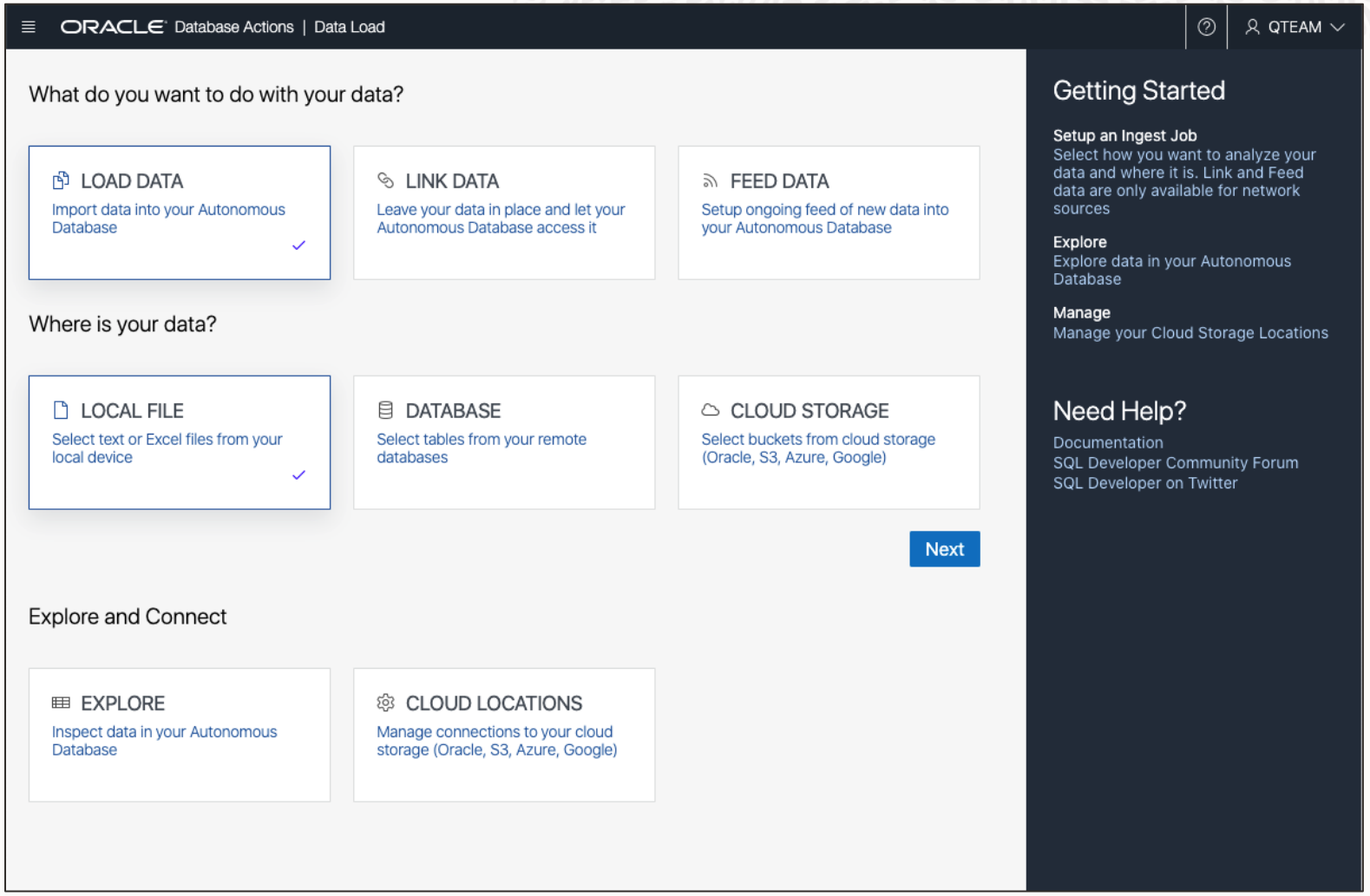
Need Help?

Documentation
SQL Developer Community Forum
SQL Developer on Twitter

Data Load

Simple “drag-and-drop” data loading

- Files on local computer
- Files in Cloud Storage (including AWS S3 & Azure Blob Storage)
- Oracle Databases (on-premises and in cloud)



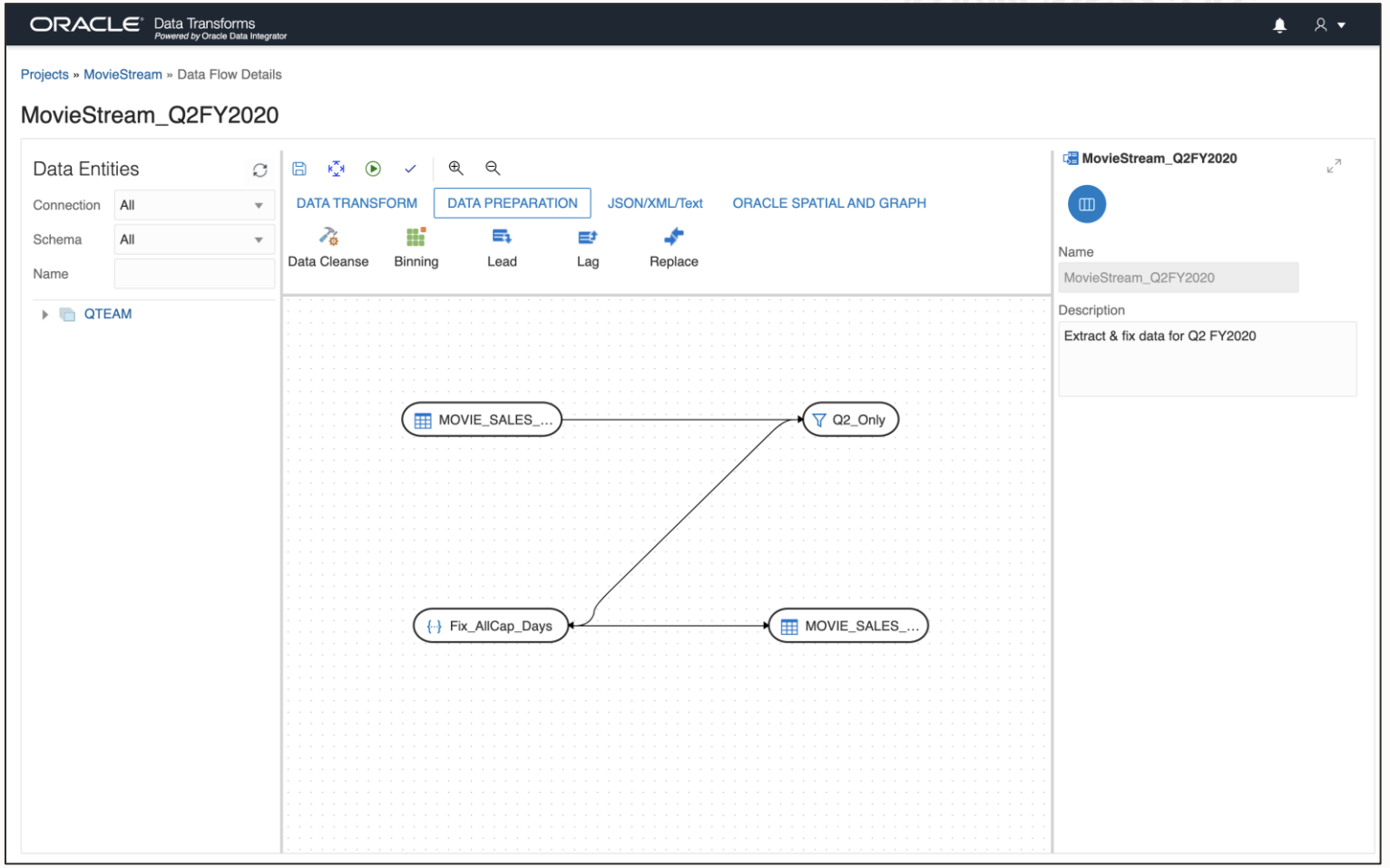
Data Transforms

Simple “drag-and-drop” data transformations

- Auto code generation for all ODI sources and targets including Fusion, NetSuite and Salesforce
- Built-in data quality

Based upon Oracle Data Integrator

- New, easy-to-use web UI
- Simple migration to ADB for ODI customers
- Exposes all built-in database operators



Business Models

Analytic Views

- Enable high-performance multi-dimensional analysis over relational data

Automatic creation

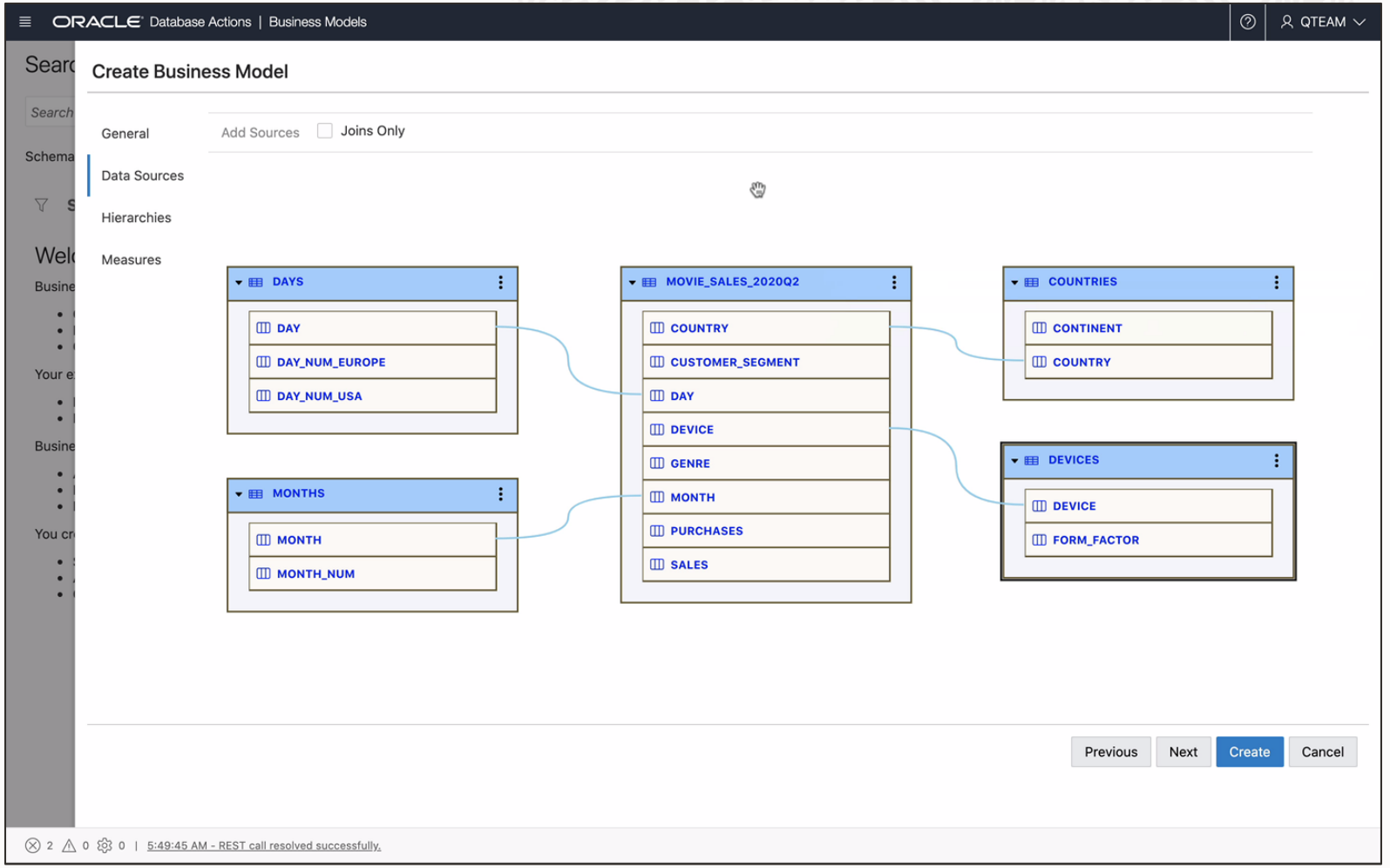
- Business models embedded in ADW

Automatic multi-dimensional cache

- For both local and remote data

Use with any analytics tool

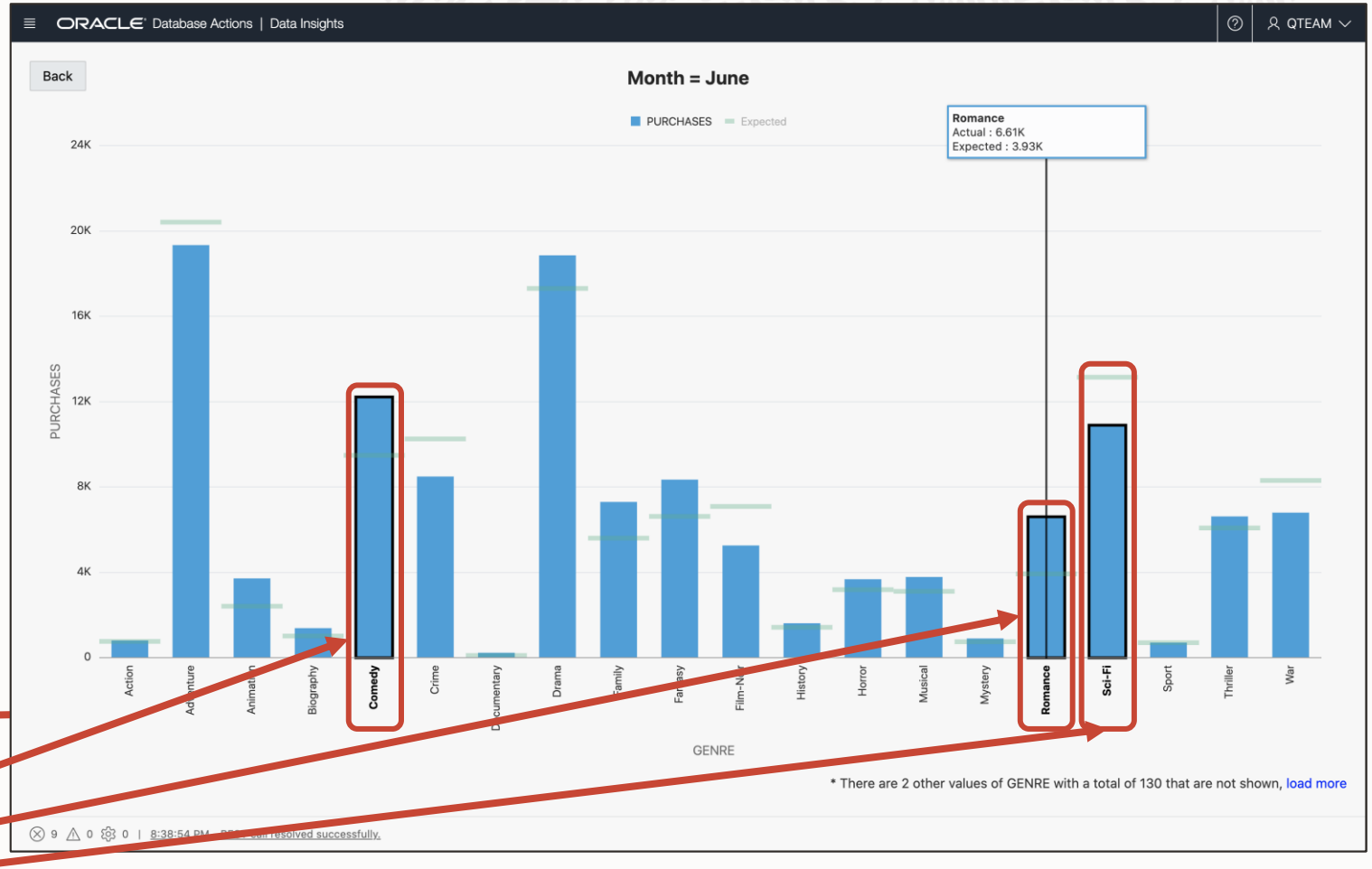
- Standard SQL queries
- No application changes required



Data Insights

Automatic insight discovery

- Crawls over business model, running as background process
- Discovers hidden patterns, anomalies and outliers
- Variety of algorithms including regression slope



Usage

1. Drill down on specific insight
2. Significant differences between predicted and actual values highlighted

Catalog

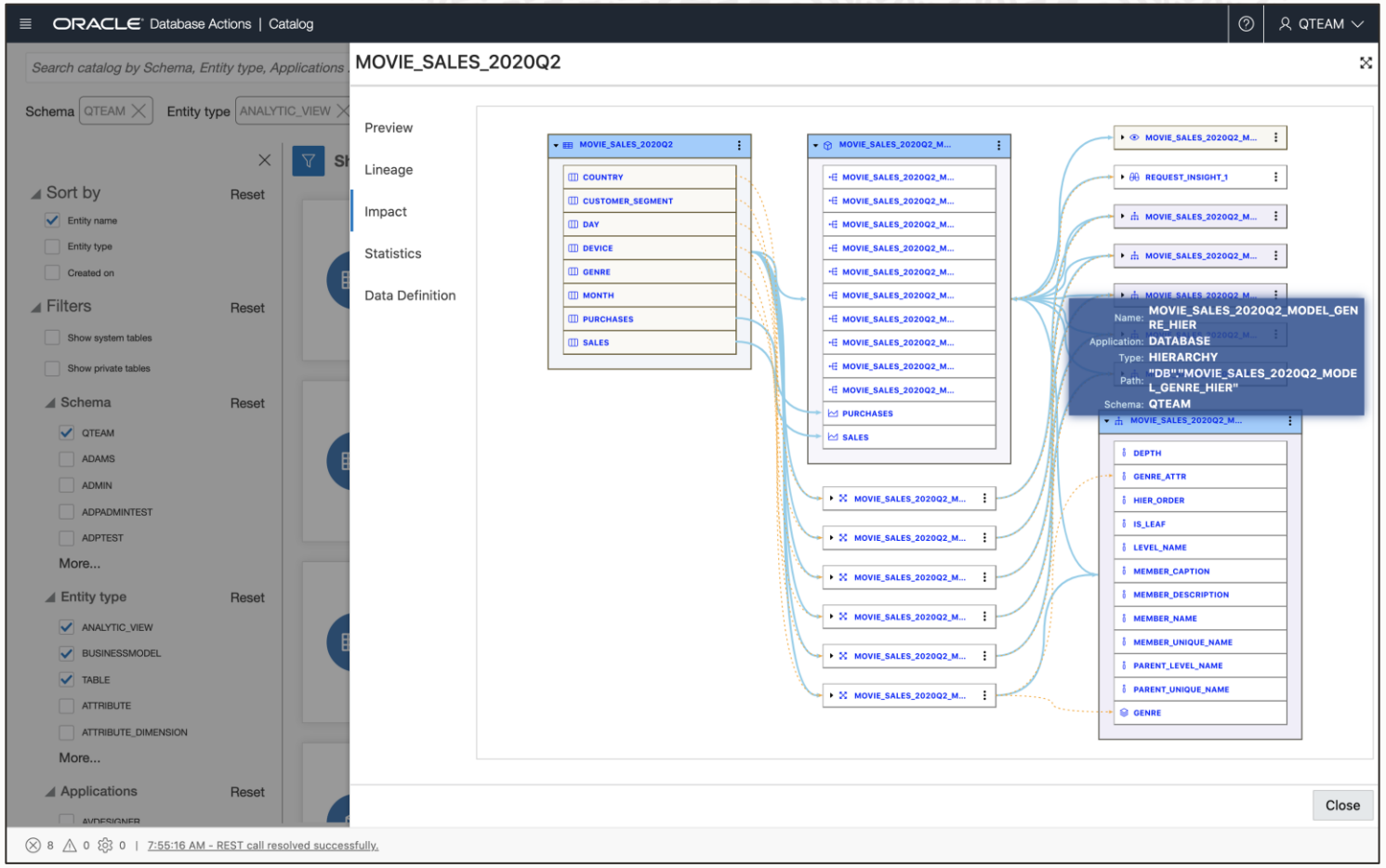
Data lineage and impact analysis

Built-in metadata repository

- Shared across all components
- Future integration with OCI Data Catalog

UI for data lineage and impact analysis

- Visible to all users
- SQL and PL/SQL interfaces



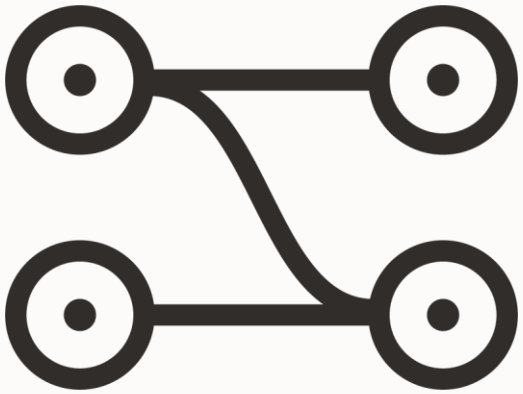
NEW Self-Service Tools for Citizen Data Scientists

Build and deploy machine learning models quickly and easily

NEW Load

Simple drag & drop loading

NEW Transform

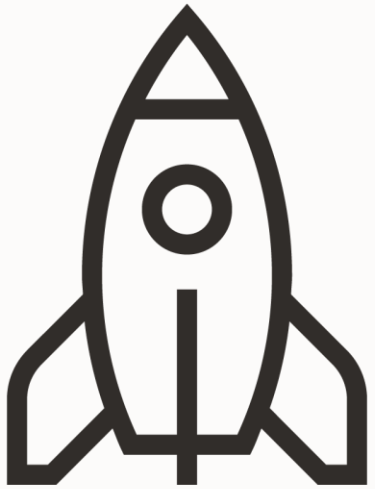


Explore, prepare and transform data sets

NEW Model

Easily create models with AutoML

NEW Deploy



Integrate ML models into apps via REST or SQL

Built-in Machine Learning Algorithms and Functions

Classification
- Naïve Bayes
- Logistic Regression
- Decision Tree
- Random Forest
- Neural Network
- Support Vector Machine
- Explicit Semantic Analysis
- XGBoost*

Clustering
- Hierarchical K-Means
- Hierarchical O-Cluster
- Expectation Maximization (EM)

Anomaly Detection
- One-Class SVM
- MSET-SPRT*

Time Series
- Forecasting - Exponential Smoothing
- Includes popular models
  e.g. Holt-Winters with trends, seasonality, irregularity, missing data

Regression
- Linear Model
- Generalized Linear Model
- Support Vector Machine
- Stepwise Linear regression
- Neural Network
- XGBoost*

Attribute Importance
- Minimum Description Length
- Principal Comp Analysis (PCA)
- Unsupervised Pair-wise KL Div
- CUR decomposition for row & AI

Association Rules
- A priori/ market basket

Predictive Queries
- Predict, cluster, detect, features

SQL Analytics
- SQL Windows
- SQL Patterns
- SQL Aggregates

Feature Extraction
- Principal Comp Analysis (PCA)
- Non-negative Matrix Factorization
- Singular Value Decomposition (SVD)
- Explicit Semantic Analysis (ESA)

Text Mining Support
- Algorithms support text
- Tokenization and theme extraction
- Explicit Semantic Analysis (ESA) for document similarity

Statistical Functions
- Basic statistics: min, max, median, stdev, t-test, F-test, Pearson's, Chi-Sq, ANOVA, etc.

R & Python
- Third-party R & Python Packages through Embedded Execution
- Spark MLlib algorithm integration

* New in 21c

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Self-Service Tools for LoB Developers

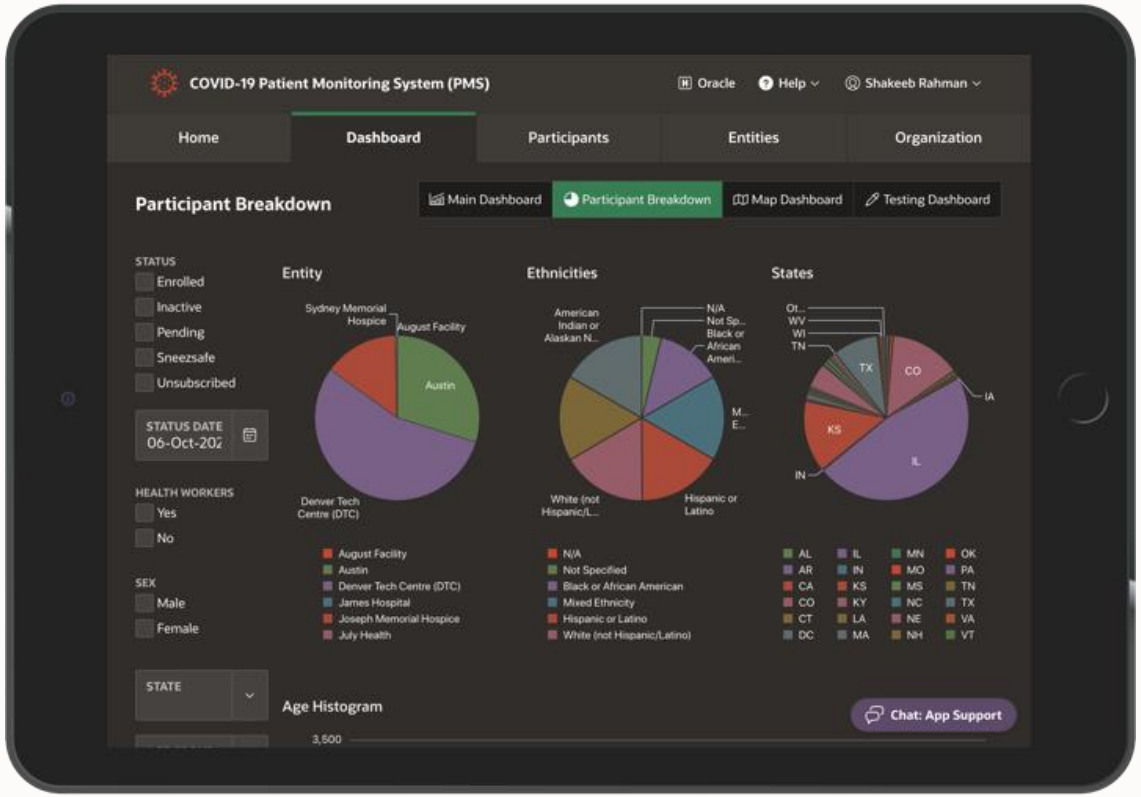
Modern tools to build data-driven apps fast

Low-Code AppDev

Build, deploy and manage data-driven applications

API Driven Development

RESTful Services and open standard APIs



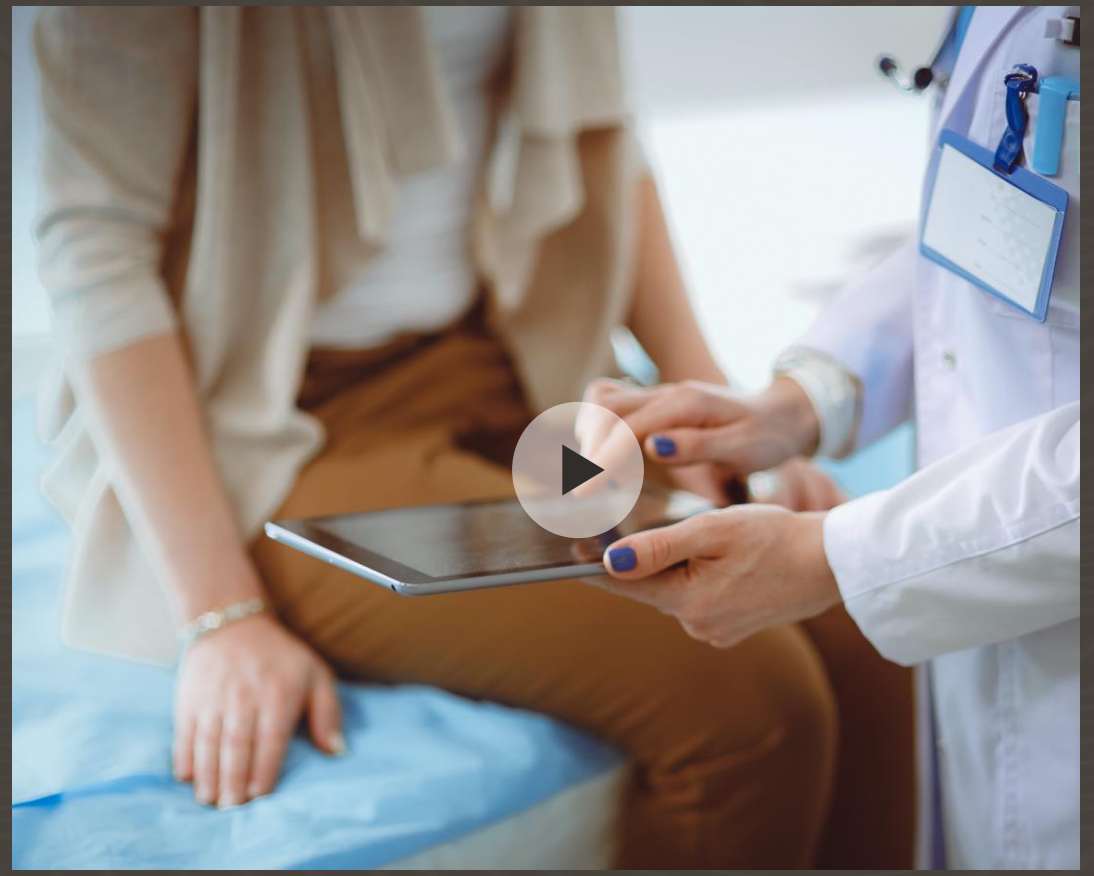
MineSense accelerates time to value

- Leader in intelligent digital mining improves operational profitability and sustainability
- ADW ingests GBs of daily IoT sensor data at 2X faster performance and with flexible auto-scaling
- 65% reduction in DBA workloads increases productivity on development and reporting
- Built-in APEX speeds development to deployment of new low code apps from 6 weeks to 1 week

Sensa Analytics

Sensa Analytics speeds healthcare intelligence

- Leading analytics firm helps hospitals and surgery centers become more efficient
- ADW securely and easily gathers data from multiple EMR, accounting, and patient systems
- Created COVID-19 testing app with built-in APEX in 1 month compared to 4-5X longer in Python
- Analytics allows physicians and to visualize insurance rates with surgery costs
- Medical institutions and professionals focus less on administration and more on patient care



Autonomous Data Warehouse Is Open

Strong integration with third-party tools and other clouds

Use with your choice of tools

Business Analytics

ORACLE Analytics Cloud

tableau, Microsoft, Qlik, looker, TIBCO Spotfire, SAP Business Objects, MicroStrategy

Data Integration

ORACLE GoldenGate, Data Integrator, OCI Data Integration

Informatica, IBM, talend, data virtuality

Easily use with data and tools in other clouds

Load from AWS, Azure, Google

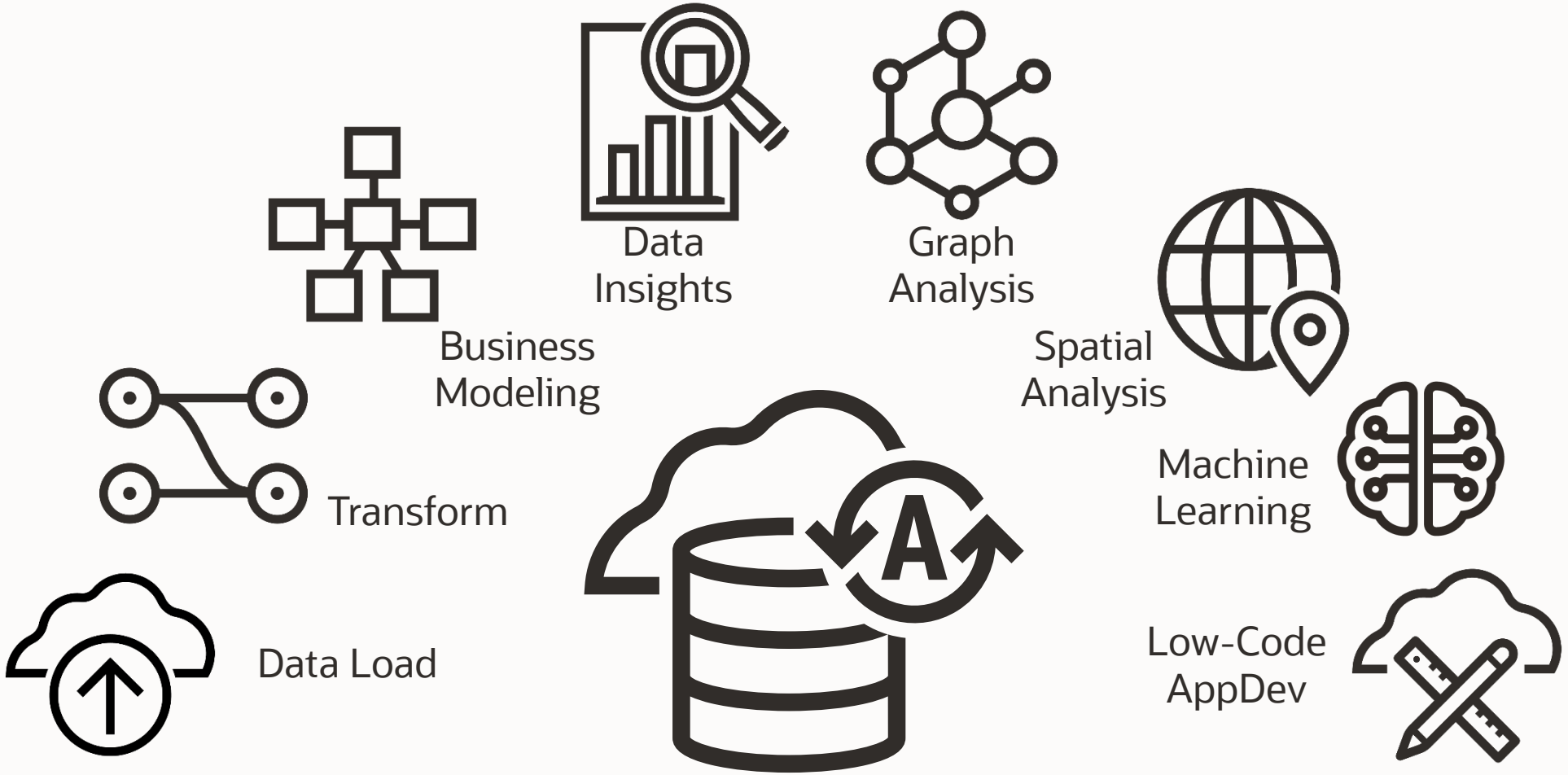
- Built-in loading from object storage

Cross-cloud interconnect between Oracle and Microsoft Azure regions

- Simpler integration of Azure-based systems with Autonomous Data Warehouse

Oracle Autonomous Data Warehouse

Empowering innovators with new self-service data management tools



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