

ORACLE



Oracle Analytics értéke és újdonságai

Analytics Server és Analytics Cloud

Fekete Zoltán

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Principal Solution Engineer
Oracle Hungary

2022. május 18.

Red Bull Racing – OCI based analytics

<https://www.oracle.com/redbullracing>

Oracle Red Bull Racing is here –
driven by data, built to win

The defending champion Formula 1 team expands its Oracle partnership, relying on Oracle Cloud to power race strategy, engine development, fan engagement, and more.

[Read the press release](#)



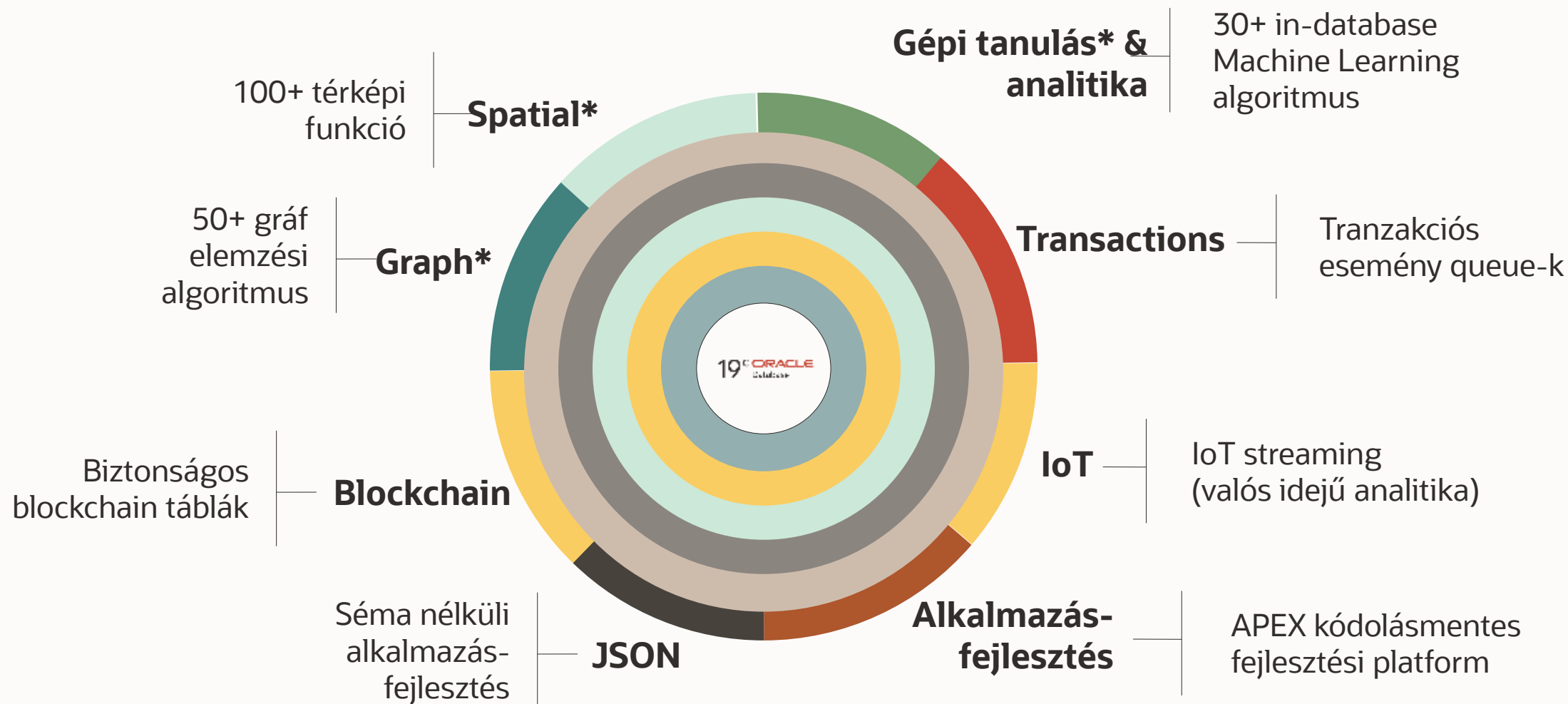
[Oracle Cloud Infrastructure](#)

[Oracle Analytics Cloud](#)

[Oracle Data Science Platform](#)

[Oracle CX: Responsys, CrowdTwist, OCM—Sauce Video, Unity, Eloqua, Infinity IQ, Maxymiser](#)

Oracle Database – konvergensre tervezve: multi-tenant, -model, -workload

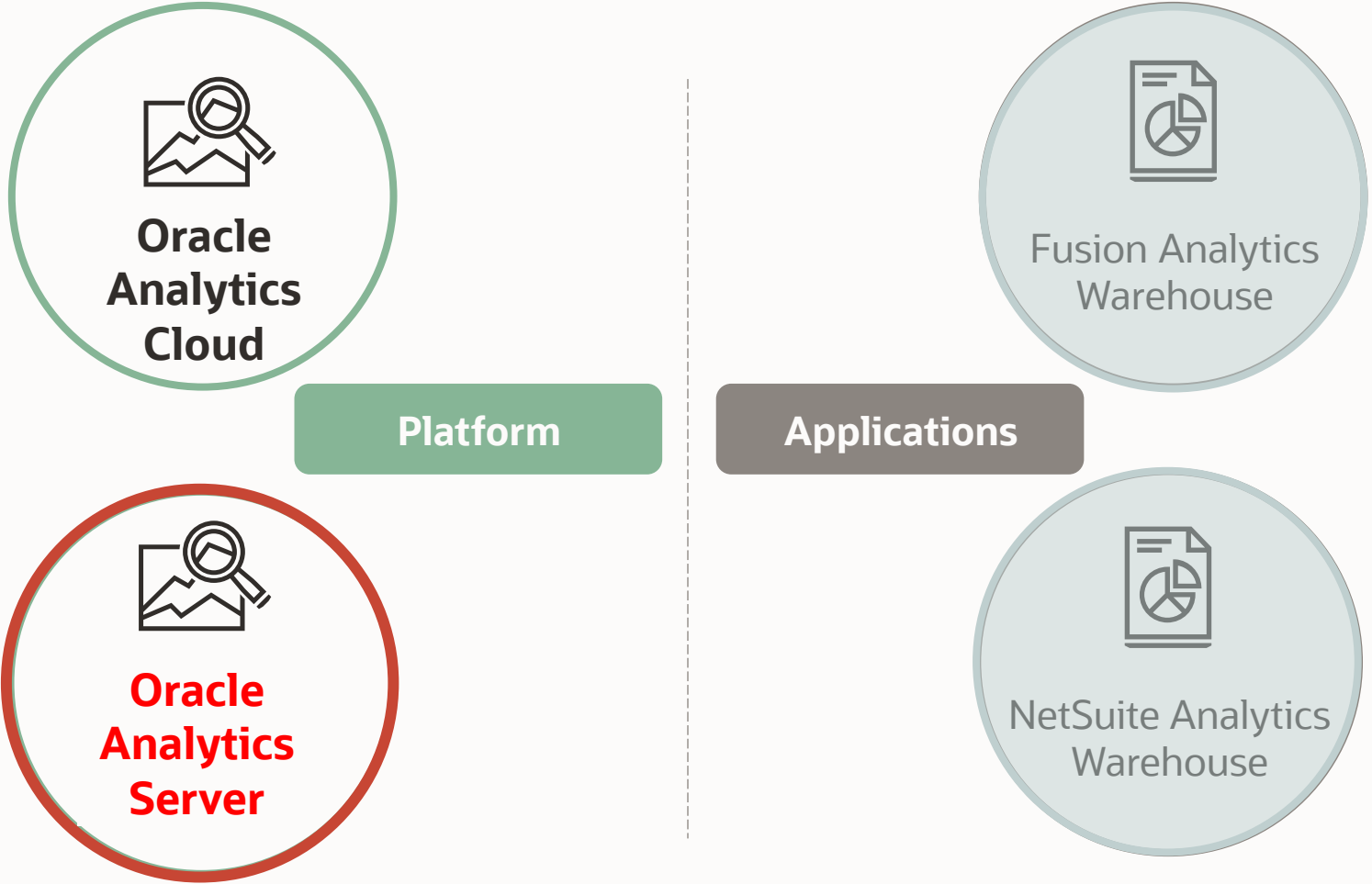


Közös rendelkezésre állás, teljesítmény, biztonság, párhuzamosság, üzemeltetés



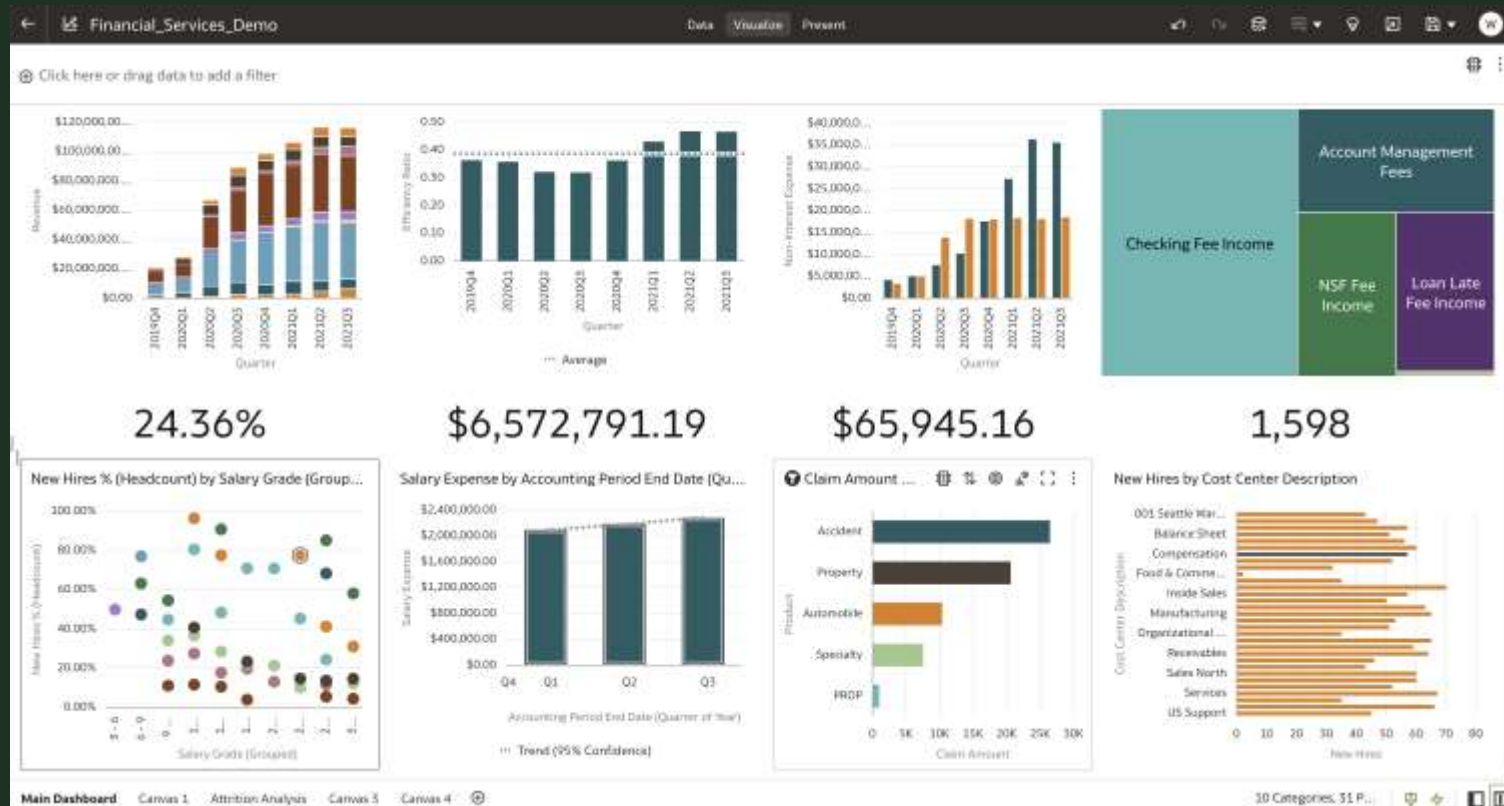
Oracle Analytics

Driving business transformation by accelerating the journey from data driven to analytics mastery



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Oracle Analytics Server 2022 6.4



- Augmented Analytics
- Az önkiszolgáló adatvizualizációtól az elemzésekig, riportokig, riasztásokig és a dashboardokig, beépített Machine Learning
- Szemantikai réteg: egységes igazság mindenkinek



Oracle Analytics Server 2022 (OAS)

Customer Managed Deployment Options for Oracle Analytics

- Comprehensive analytics platform with **data preparation, data visualization, natural language processing, and data quality insights**
- **New features include:** Multi-table datasets, auto insights, new mapping features, new data sources, hierarchy support, graph and text analysis, custom data enrichment knowledge, etc.
- **Machine Learning embedded**
- FREE to licensed OBIEE Customers on active support
- Oracle provides choice – deploy **on-premises or on Oracle Cloud Infrastructure** via Marketplace



Why is delivering analytics becoming more demanding?

- Meeting analytics expectations in ever shrinking decision timeframes is challenging
- More demand to rapidly mashup and connect new data streams
- Downloading data creates chaos
- **Centralized data modeling** became a bottleneck while **decentralized models** created more chaos



Everyone strives to be data-driven

Data-driven

is making informed decisions using trusted historical data



For many organizations, the use of reports or dashboards held promise of making them data-driven but **looking at past facts is not enough.**

Data Driven is not enough... Become transformational through analytics

Data-driven

is making informed decisions using **trusted historical data**



Analytics-driven

is making strategic decisions with all relevant data and unbiased predictions w **modern immersive techs.**




Analytics-mastery

is using **trusted data** pervasively and **enriching analytics** with services that drive **innovation**



Oracle Analytics Platform

Delivers at every stage of the analytics journey

| Connect | Model | Prepare | Explore | Experience | Collaborate |
|--|---|--------------------------|--------------------------------------|-----------------------------|-------------|
|  | Interactive data transformation and cleansing | Semantic models | Interactive data visualization | Dashboards | Web |
| | Smart data profiling | Self-Service Data Sets | Natural language query and narration | Reports | Mobile |
| | Data enrichment with ML models | Analytics catalog | Auto-ML and AI insights | Role based security | Embedded |
| | Scheduled data flows | Metadata and data search | One-click Advanced Analytics | Enterprise scale deployment | Chatbot |

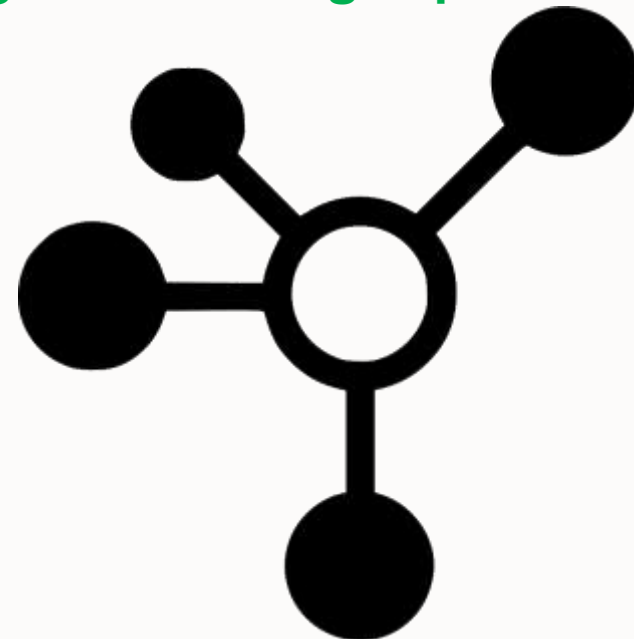


Empower anyone and free data engineers

without compromising governance or security



- **Separate tools: organization-wide challenges**
- **Need a single analytics platform that is flexible enough to suit each group**
- Balance demands of all business users
- Data engineers gain freedom from repetitive, last minute business requests
- Analytics Server includes **Common Information model** – logical abstraction used by thousands of customers
- Business users enabled with last-mile data **preparation and enrichment** without the need to resort to third party desktop tools or spreadsheets



Empower anyone and free data engineers

without compromising governance or security



- Analytics content creators and consumers gain **autonomy** to tell **analytics-driven stories** w trusted numbers
- Data engineers retain **governance and compliance** in a secure platform
- Leverage **built-in ML, AI and natural language** for faster access to more accurate results



Open Connectivity

- Dozens of built-in connectors
 - Relational, NoSQL, Big Data, SaaS, 3rd cloud, on-premises
- **Secure access** to Cloud Sources, On-Premises, SaaS Applications, and more
- **Blend any data** regardless of source or type

The screenshot displays the Oracle Analytics web interface. At the top, there is a navigation bar with the Oracle Analytics logo, a 'Create' button, and a user profile icon. Below the navigation bar is a search bar labeled 'Search Everything'. Underneath the search bar are several filter buttons: 'Projects and Reports', 'Data', 'Recent Data Sets', 'Favorite Projects', and 'Machine Learning'. The main content area is divided into three sections: 'Favorites', 'Projects', and 'Dashboards and Reports'. Each section contains a grid of data visualizations and reports. The 'Favorites' section includes 'DB DV DataUX Styled copy', 'COVID-19 Infographics', 'World Food Programme India', and 'Stock History'. The 'Projects' section includes 'Whiskey', 'SubNet Graph', 'OAC End to End Report Purpl...', and 'Bikes Heat Map v2'. The 'Dashboards and Reports' section includes 'QA JDBC Report', 'W2 2010', 'SFO Passenger Count R...', 'Salary Report', 'Salary Report - No Para...', 'Revenue Budget Actual...', 'Product Analysis - DCA...', 'Employees by Departm...', 'Balance Letter Report', 'Invoice Batch Report', 'Invoice with BFWD-CFWD', and 'Invoice Listing Report'. Each visualization and report is represented by a small thumbnail with a title and a 'View all' link.

Integrated Data Preparation

- **Visual data transformation** for Business Analysts
 - Reduce 'Export to Excel'
 - Improve governance and quality on self-service data preparation
- Vast array of transformation capabilities
 - Join, Branch, Bin, Group, Filter, Aggregate, Custom calculations, and more
- Direct integration with Database Advanced Analytics and OCI Services

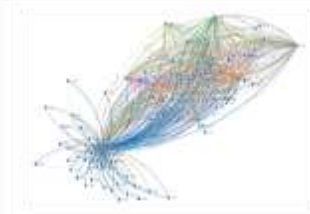
Machine Learning



Text Analytics



Graph Analytics



Sales Data Flow

Show labels 100%

Sample Order Lines

Add Data - Sample Order Lines

Date Set: Sample Order Lines

Select...

Description: Uploaded from Sample Order Lines.xlsx

When Run: Prompt to select Data Set

Columns: All (27) Selections (27)

| Order Line ID | # of Order Lines | Order ID | # of Orders | Order Priority | Customer ID | # of Custor |
|---------------|------------------|----------|-------------|----------------|-------------|-------------|
| 6023 | 6023 | 88028 | 88028 | Not Specified | 2211 | 2211 |
| 179 | 179 | 87946 | 87946 | Low | 67 | 67 |
| 3049 | 3049 | 90853 | 90853 | Critical | 1155 | 1155 |
| 3048 | 3048 | 90853 | 90853 | Critical | 1155 | 1155 |
| 186 | 186 | 37537 | 37537 | Low | 68 | 68 |
| 2463 | 2463 | 9285 | 9285 | Critical | 949 | 949 |
| 184 | 184 | 37537 | 37537 | Low | 68 | 68 |
| 2474 | 2474 | 89085 | 89085 | Critical | 950 | 950 |
| 185 | 185 | 37537 | 37537 | Low | 68 | 68 |
| 443 | 443 | 87463 | 87463 | Low | 169 | 169 |
| 445 | 445 | 87463 | 87463 | Low | 169 | 169 |
| 307 | 307 | 89583 | 89583 | High | 114 | 114 |
| 307 | 307 | 89583 | 89583 | High | 114 | 114 |

Data Quality and Governance

- Patented **deep data profiling** identifies the specific role of each column
- Interactive **data quality insights** alert the users about data issues
- ML based recommendations based on **custom knowledge base**
 - Fixing formatting, Transformations, Remove sensitive information, Enrichments

The screenshot shows a data table with the following columns: Receipt ID, ssn, Zip Code, First Name, and Last Name. The data is as follows:

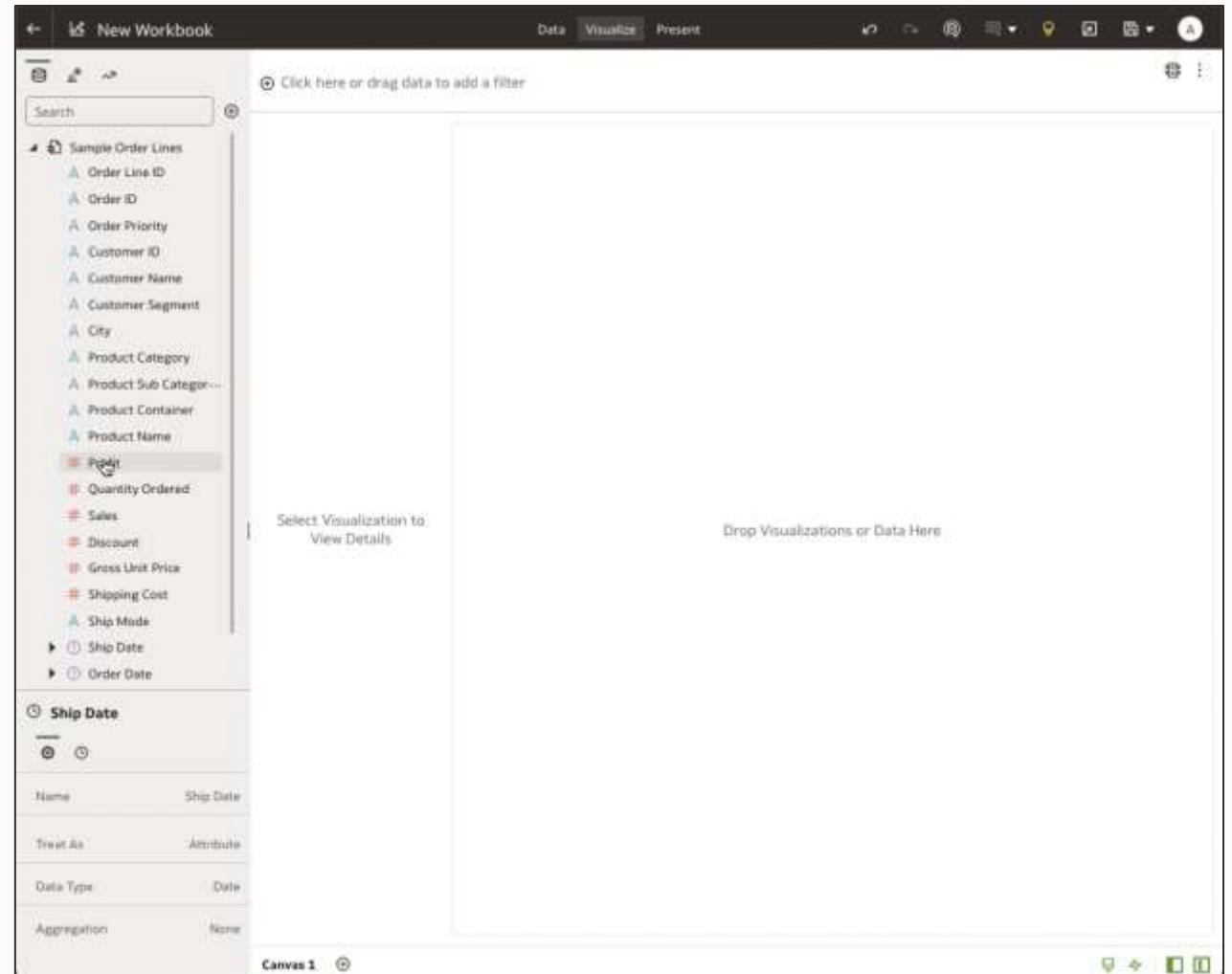
| Receipt ID | ssn | Zip Code | First Name | Last Name |
|------------|-------------|----------|------------|-----------|
| 1304 | 098-56-0043 | 60193 | Joy | Daniels |
| 6773 | 478-05-0055 | 42121 | Sherry | Hurley |
| 5090 | 277-11-9478 | 74868 | Aaron | Dillon |
| 2965 | 612-51-7598 | 48218 | Chad | Cousins |
| 6287 | 579-60-9966 | 35645 | Emma | Harvey |
| 928 | 765-64-4937 | 82210 | Molly | Webster |
| 6892 | 612-51-7575 | 89045 | Cindy | Hinton |
| 9292 | 765-64-4564 | 83101 | Ricky | Garner |
| 6571 | 275-18-0550 | 58362 | Lorraine | Houston |
| 6195 | 136-42-1722 | 97282 | Claudia | Bergmann |
| 9425 | 146-92-9876 | 29058 | Juanita | Ballard |
| 4940 | 767-03-7595 | 71043 | Pam | Francis |
| 1452 | 765-64-4940 | 78061 | Patrick | Lowry |
| 7230 | 765-64-4658 | 76127 | Tracey | Gross |
| 9174 | 333-08-4918 | 37354 | Gregory | Crane |
| 1591 | 763-01-6606 | 24086 | Kyle | Pritchard |
| 1874 | 763-01-6474 | 52362 | Dave | Brooks |
| 870 | 456-54-0609 | 85353 | Jordan | Marsh |
| 1380 | 765-64-4988 | 67066 | Dawn | Larson |
| 3335 | 136-42-1559 | 51463 | Ryan | Foster |
| 1609 | 456-54-0264 | 61278 | Michael | Granlund |
| 9265 | 555-47-9490 | 71416 | Bruce | H |
| 5235 | 612-51-7945 | 58220 | Dianne | Gibbons |

The 'Recommendations (23)' panel on the right includes the following actions:

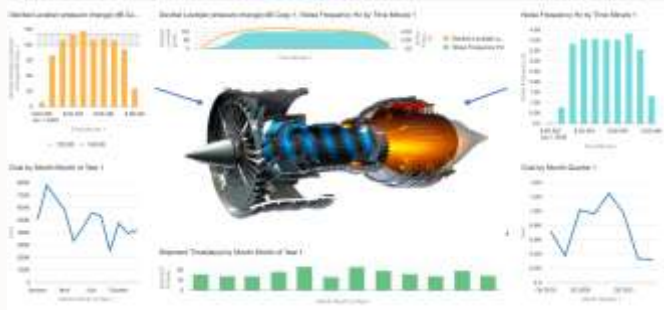
- Enrich Zip Code with City
- Enrich Zip Code with Lat
- Enrich Zip Code with Lon
- Enrich Zip Code with State
- Enrich Zip Code with County
- Enrich Zip Code with Population_Largest_City
- Enrich Zip Code with Elevation_Meters
- Enrich Zip Code with Timezone
- Enrich Zip Code with State_Code
- Obfuscate Digits of ssn
- Obfuscate First 5 Digits of ssn
- Delete ssn
- Extract Part_1 from ssn
- Extract Part_2 from ssn
- Extract Part_3 from ssn

Intuitive and Interactive Analytics

- Engaging analytics experiences, from dashboards to infographics to data stories
- **>50 built-in visualizations**, dozens of plug-ins
 - “Beyond the basics” out-of-the-box visualization (Sankey, Network, Pictogram, etc.)
- Built in **geospatial analytics**, NLG, diagnostics and predictive analytics



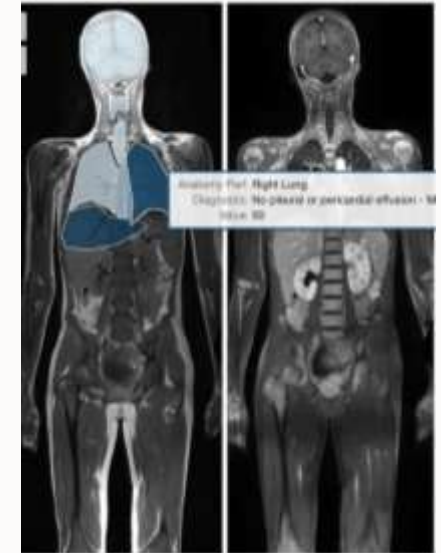
Intuitive and Interactive Analytics



Wine Year in Review

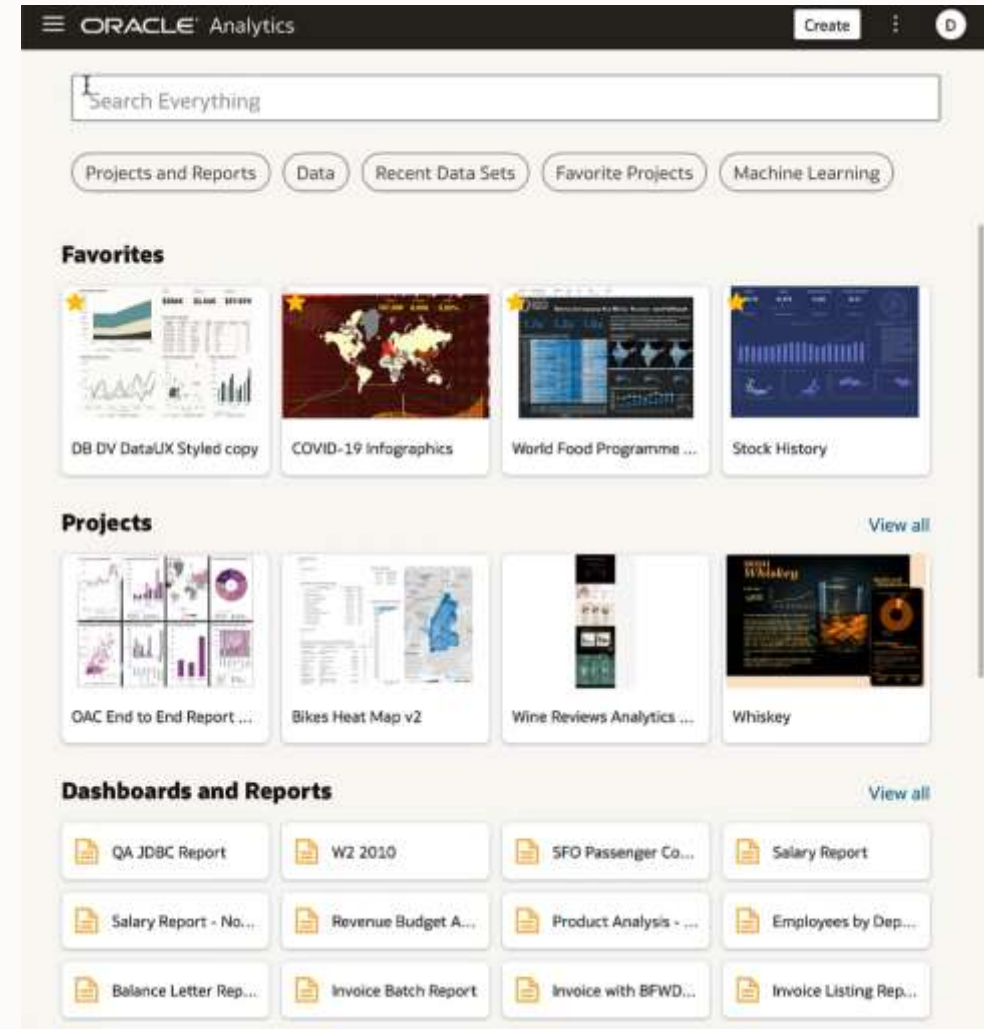
It's been a big year, but many of the issues arising for wine lovers are hardy perennials. Looking at the Achaia-Zupa province across the wide variety of wines and wineries, we are seeing clear positive trends this year. Let's explore some of these insights.

Five wine bottles with red caps are arranged in a row against a dark background.



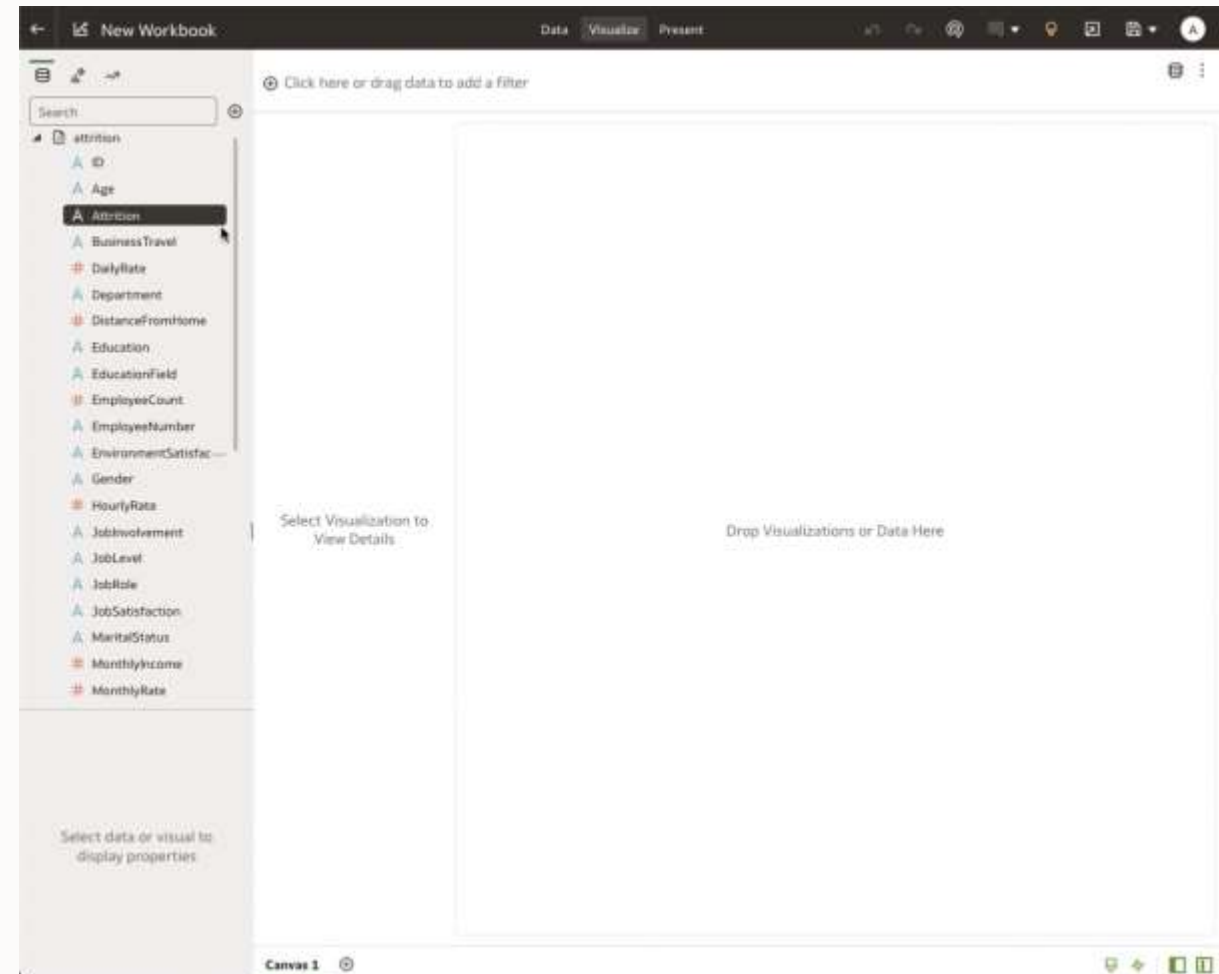
Data Discovery and Exploration Using **Natural Language**

- **Find the right data – fast!**
 - Customers report spending **20-40%** of their time looking for the right data
- Ask data questions in 28 different languages, scan the Analytics Catalog to identify the correct insights
 - Synonyms, abbreviations, auto-complete, dynamic filtering, dynamic calculation, time awareness, negation detection, and more



Self-Service ML to Uncover Hidden Insights

- Automated Machine Learning Insights
- Designed for users of any level
- Explain
 - Ask the system to analyze behavior of any attribute or measure
- Auto Insights
 - Auto ML capability to proactively identify interesting insights in any dataset as data changes



- Data**
- attrition
 - ID**
 - Age
 - Attrition
 - BusinessTravel
 - DailyRate
 - Department
 - DistanceFromHome
 - Education
 - EducationField
 - EmployeeCount
 - EmployeeNumber
 - EnvironmentSatisfa...
 - Gender
 - HourlyRate
 - JobInvolvement
 - JobLevel

| | |
|-------------|---------|
| ID | |
| Name | ID |
| Treat As | Measure |
| Data Type | Number |
| Aggregation | Sum |

+ Click here or drag data to add a filter

Select Visualization to View Details

Drop Visualizations or Data Here

Canvas 1

Collaborate and share

- Share content securely with your team, business group or the whole enterprise
- Add commentary and contextual notes to dashboards
- Share visualizations and findings from mobile devices
- Tell your story without the need for copy/paste to slides



New Innovations in Oracle Analytics

100+ features delivered in the past 12 months

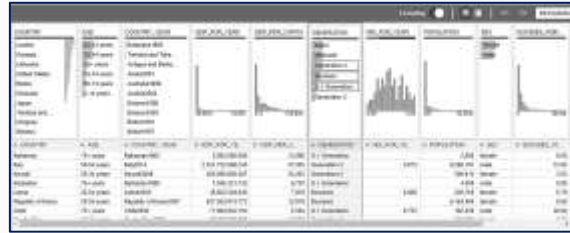
- Direct Connector to EPM Cloud and generation metadata
- Waterfall Enhancements
- Pivot – persistent height/width
- Pivot – word wrap
- Digitized Layers and map backgrounds
- SQL Server Azure Certification
- Safe Domains Enhancements
- Control visibility of viz filters
- Freeze map view (lock interactivity)
- EConsumer experience home page
- Navigation Actions to Dashboards & Reports
- Single step Data Set creation
- Increase Density
- Canvas Bar Usability
- Copy/Duplicate My Calculations
- Thumbnail quality improvements
- Register external ML models from OML and consume them directly from the OAS UI
- Function ship ML and Analytics execution to the database
- On-canvas filters
- Prep Enrichment on Live Data sets
- New Viz: Area Chart
- UX: Single Header
- Spatial functions in expression editor
- Improve ‘use as filter’ interaction
- Propagate shared folder permission to artifacts
- Legend properties for all charts
- Customized time zone in OAS
- Crypto agility improvements in various components
- Expose database analytics in Data Flows
- Reduce whitespace on the canvas
- Sparkcharts on performance tiles
- Waterfall Bridge chart
- Fine tune filter scope
- APIs to list canvas in a project
- OML integration: Show DB model full details in OAS inspectors
- Add a viz property to control the visibility of the Viz Filter
- Improve management of Live Data Set to ensure Live results
- Oracle Analytics Publisher (OAP) connectivity to Oracle Applications
- OAP REST API for APEX
- Support customization of OAP config
- Implement auto-purge in OAP
- Data Flows: Support for Database Text Tokenization
- Data Flows: Support for Database Frequent Itemset (Market Basket)
- New Viz: Area Chart
- Prep: single click trim
- Improved progress bar behavior
- Improve chrome density in the data panel
- Pass filters between filter bar & viz
- Impersonation for Kerberos connection
- Multi-column and no sort options
- Data Action: Support single/multi selection
- Data Action: Avoid passing duplicate filters
- Export: respect canvas aspect ratio
- Increase row limits on all exports
- Multi-Table, multi-sourced Datasets
- Prep: Custom Knowledge
- Prep: Quality Insights
- Scheduled Dataset Refresh
- On-Canvas Filters: Filter Types (top/bottom, Relative time, Range)
- On-Canvas Filters: Dates & Measures
- Support for SA, Essbase, EPM Hierarchies (Pivot/Table drill-ability)
- DB Analytics: Time series Forecast
- DB Analytics: Association Rules
- DB Analytics: Graph Analytics
- Visualization Title Tooltip property
- Custom sort dialog for charts
- Improved Home Page Search
- JDBC Data Sources
- Support for Big Query
- Disjointed datasets - map layers
- Average Aggregation in Waterfall Viz
- Canvas Auto-Refresh
- Feature Extraction OML Model
- Object Storage for OAP Delivery
- Storing OAP Scheduler Data in Object Storage
- OAP: Support OAS Multi table data sets in Publisher Data Model
- And more...

Oracle Analytics Server 2022 – OAS 6.4

Multi-Table Datasets



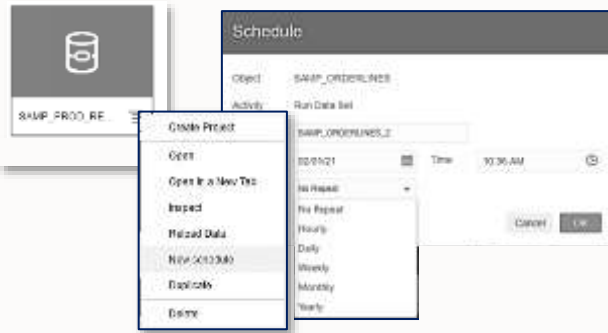
Data Quality Insights



Non-joined Map Layers



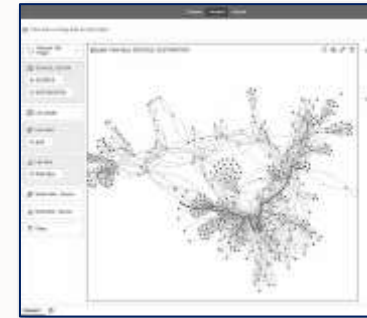
Dataset Reload



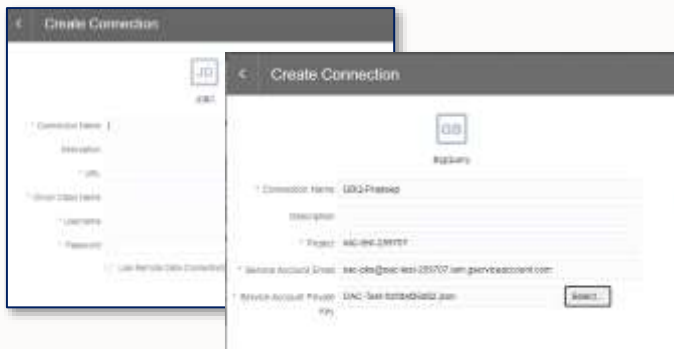
Conditional Formatting



Graph and Text Analytics



New Connectors



Hierarchy Support



Flexible Sort



One Analytic Platform for All Customer Needs

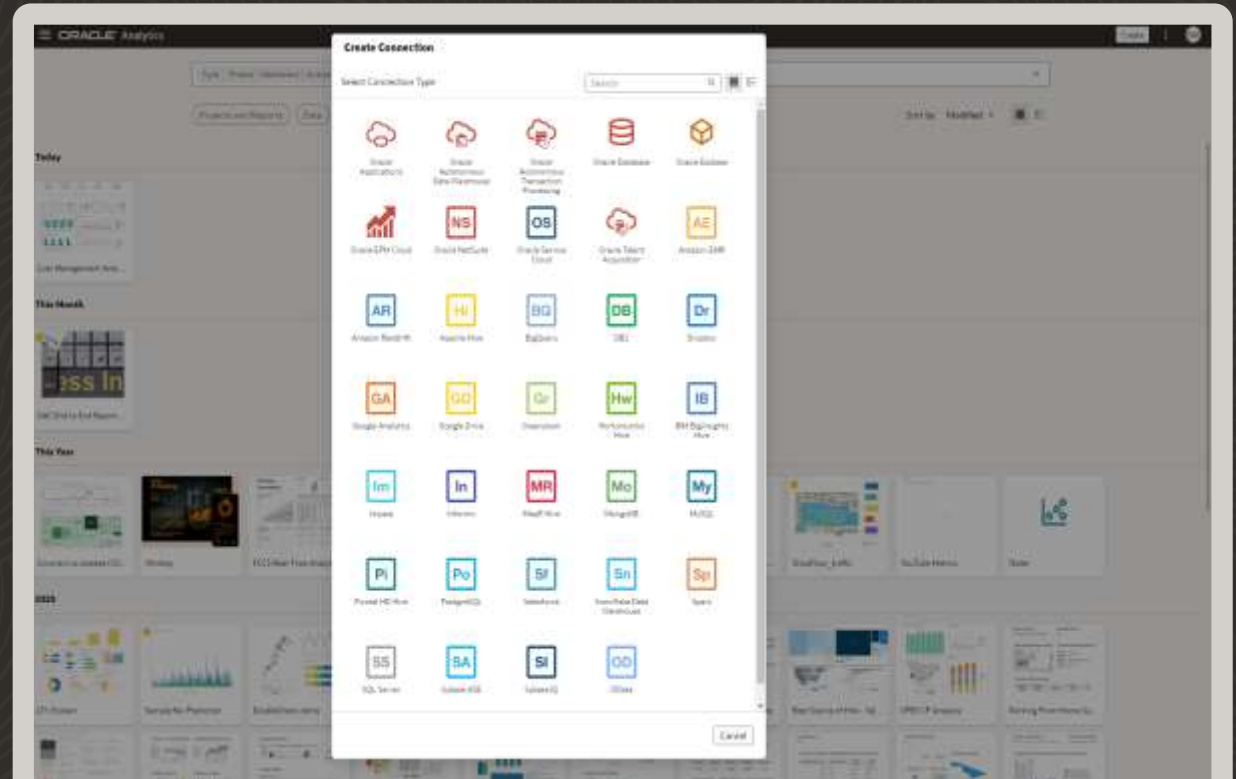
| Customer Group | Require | Best Fit Solution |
|---|--|---|
| For commercial and public sector customers in regulated industries who intend to keep their business applications on-premises.* | An on-prem platform that can be highly customized by IT. | Oracle Analytics Server |
| For customers who intend to manage their own software deployment, whilst taking advantage of Oracle Cloud Infrastructure. | A cloud platform that can be deployed, managed and customized by IT. | Oracle Analytics Server on Marketplace |
| For cloud-first customers with a combination of on-premises and non Oracle SaaS applications. | A fully managed public cloud platform. | Oracle Analytics Cloud |

*Support paying OBIEE customers can upgrade to OAS & use the new functionality at no cost



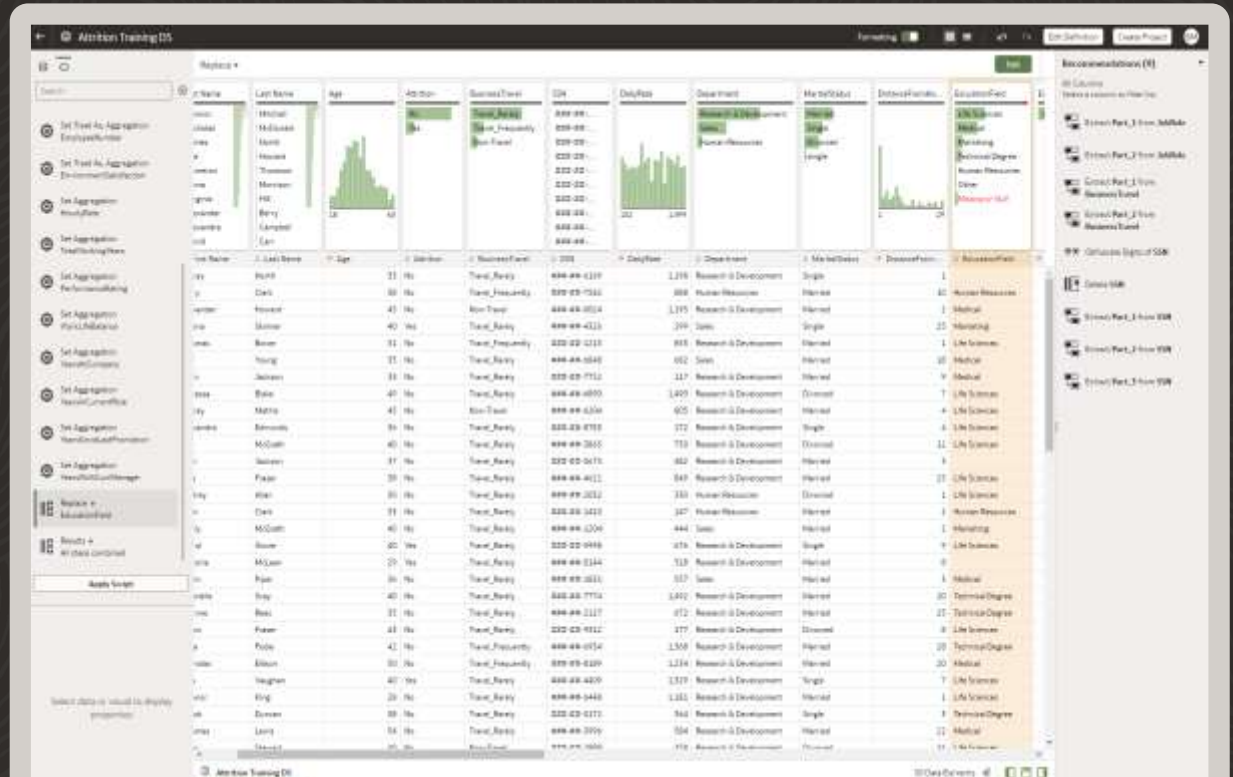
Connect

- Securely create, manage and share data source connections
- Choose from over 35 native connectors
- Use JDBC for other sources and legacy systems
- Include personal or desktop data files like XLS or CSV



Prepare

- Gain an immediate visual profile of the data with anomaly alerts
- Build connected, trackable and repeatable data transformations
- Remove the reliance on disconnected spreadsheets for last-mile data corrections and enrichment
- Enrich with intelligent recommendations



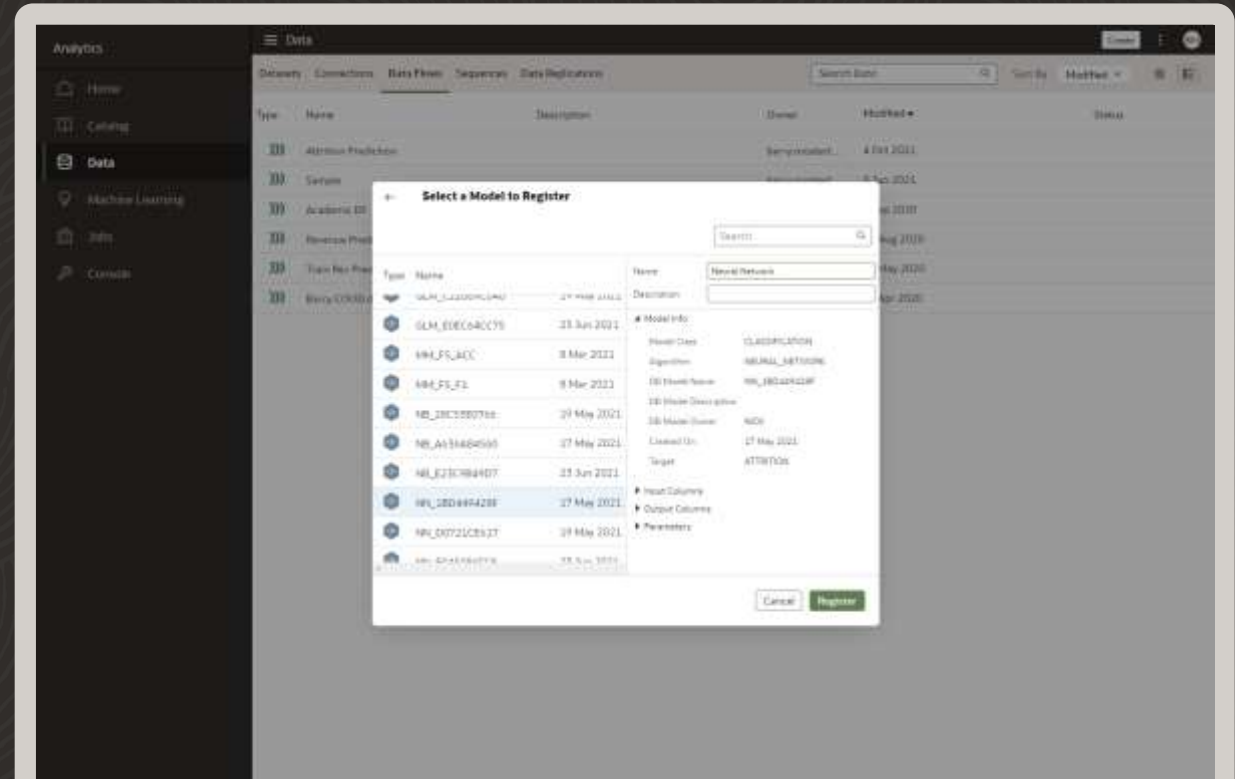
Explore

- Built-in AI and ML for all roles, from clickers to coders
- Quickly add trends, clustering and forecasting with 1-click
- Use natural language to query any data source
- Include automated textual narratives with natural language generation



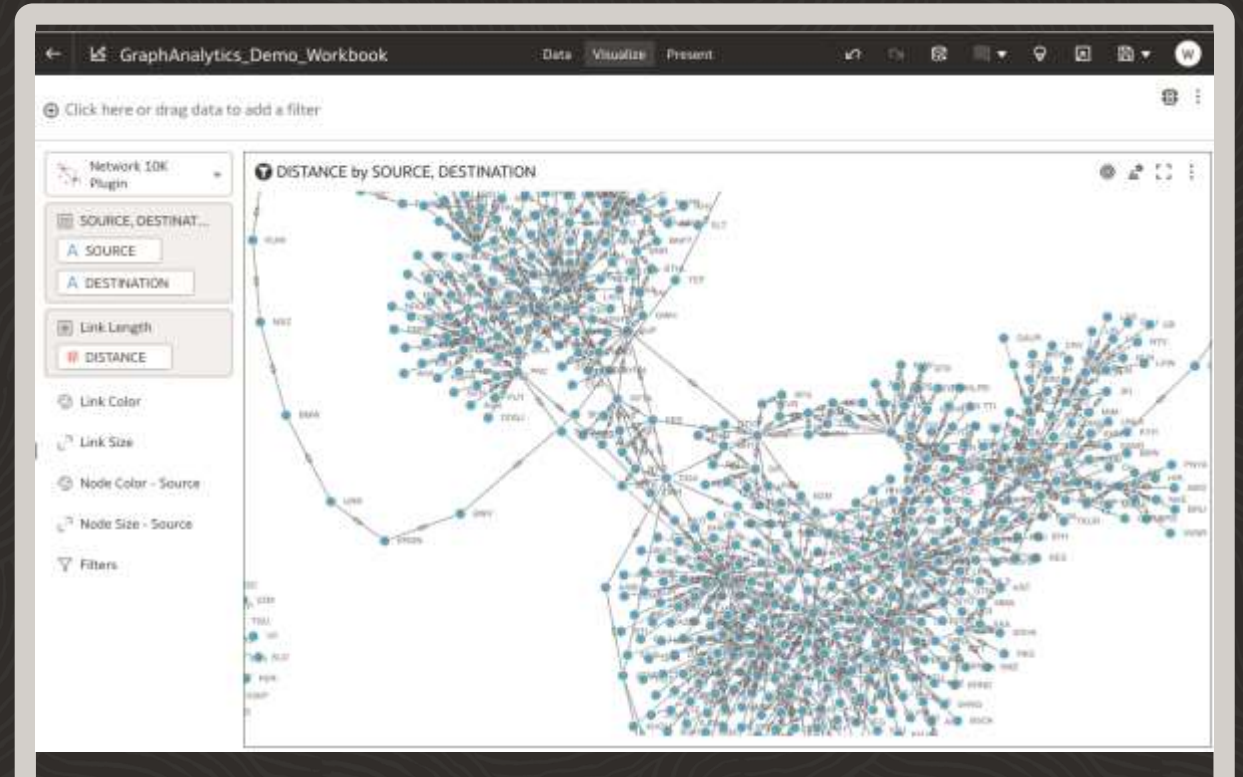
Machine learning for data scientists

- Extend with Oracle Machine Learning models
- Choose from an extensive list of ML algorithms
- Train, test and tune custom models
- Register certified models for broad use
- Execute models close to the source data



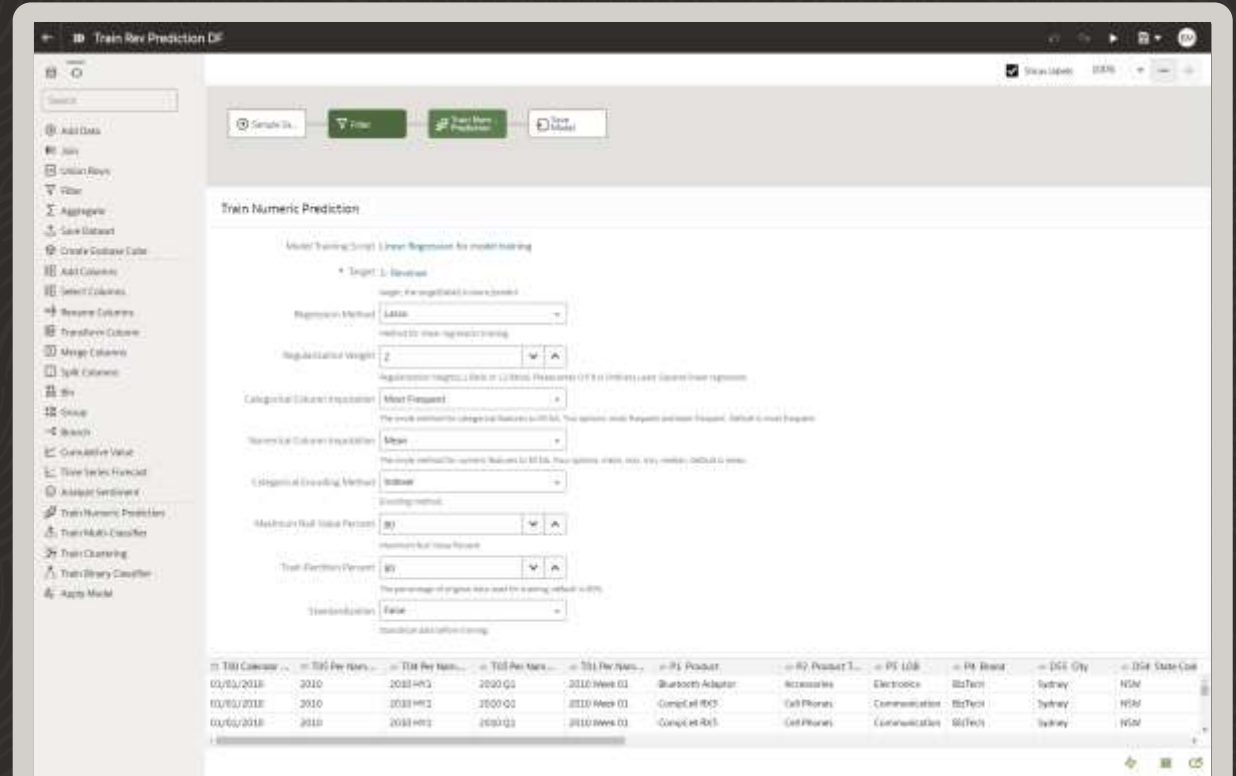
Spatial analytics

- Create interactive maps and perform spatial analysis on business data
- Oracle Analytics Spatial Studio for advanced mapping and **spatial visualization**



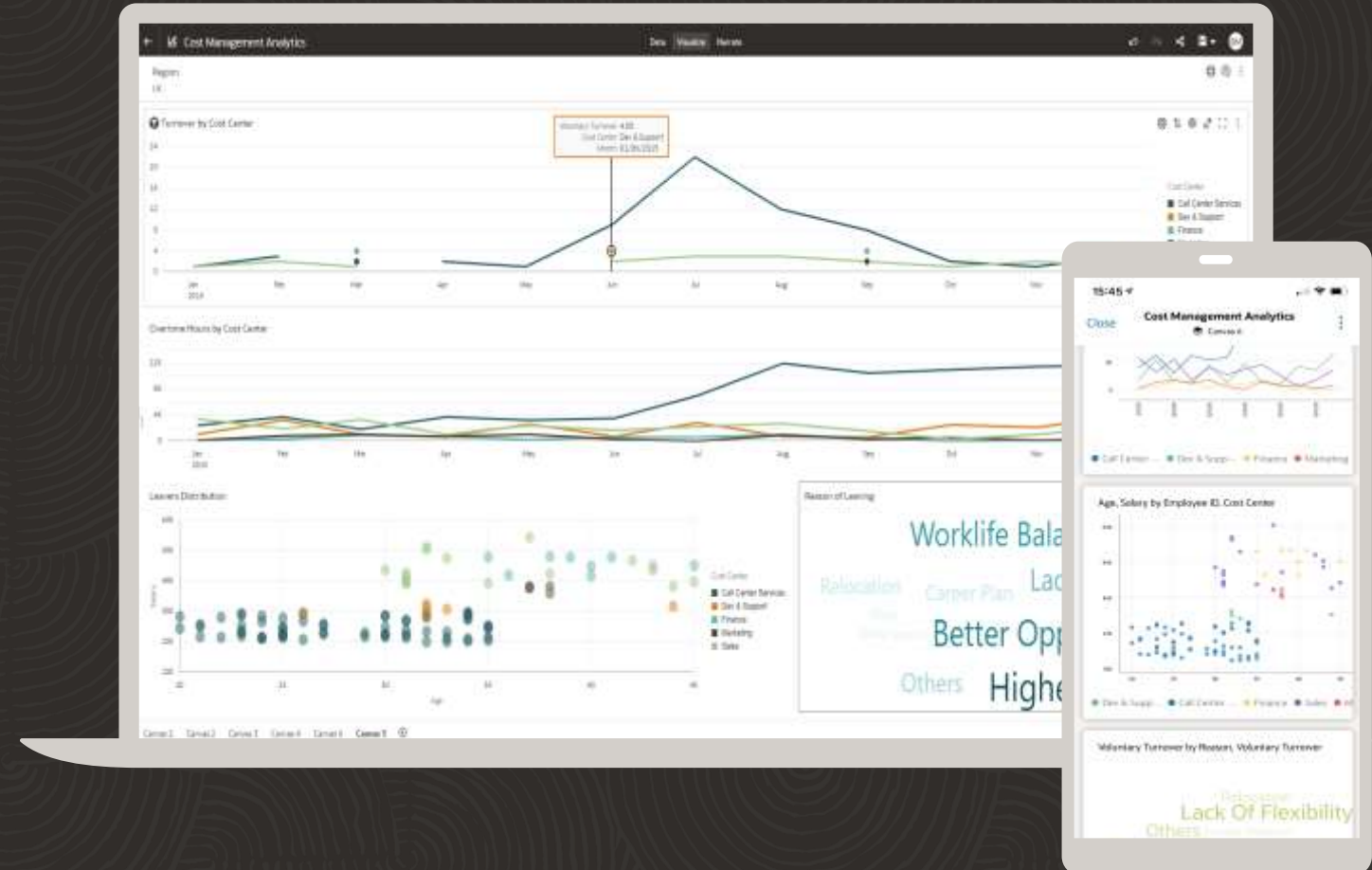
Embedded ML for citizen data scientists

- Use simple data flows with customizable ML algorithms
- Select from a range of built-in ML algorithms
- Customize models with no code
- Train, test and tune ML models specific to the business use case
- Publish certified models for wider business users



Experience

- Create and consume;
 - Highly stylized interactive dashboards
 - Parametrized dashboards
 - Pixel-perfect reports
 - Visualizations embedded into other apps
- Experience continuity across browser and mobile app



Collaborate

- Share content securely with your team, business group or the whole enterprise
- Add commentary and contextual notes to dashboards
- Share visualizations and findings from mobile devices
- Tell your story without the need for copy/paste to slides



Links and resources

Social links

1. [YouTube channel](#)
2. [LinkedIn showcase page](#)
3. [Twitter](#)

Oracle.com links

1. [Oracle Analytics Roadmap](#)
2. [Oracle Analytics Blogs](#)
3. [Competitive comparison chart](#)

Learn more (public links)

1. [What is data analytics?](#)
2. [What is analytics?](#)
3. [What is data visualization?](#)
4. [What is natural language processing and generation?](#)
5. [Oracle Analytics Mobile](#)
6. [Capabilities Explorer](#)

Public demo links

1. [Oracle Analytics Product Tours](#)
2. [Live public demo instances](#)
3. [Udemy Courses](#)

A unified analytics platform

- Reduce analytics complexity and meet expectations even with ever shrinking decision timeframes
- Meet demands to rapidly mashup and connect new data through governed self-service
- Gain repeatable and trackable data prep and enrichment and avoid insecure data exports
- Establish a flexible balance between centralized models and business self-service
- Lower and predictable total cost of ownership



Our mission is to help people
see data in new ways, discover
insights, unlock endless possibilities.



Q&A



ORACLE