

ORACLE



LODCoreMadrid



Comunidad
de Madrid

uc3m

Oracle Data Platform 23ai

Overview



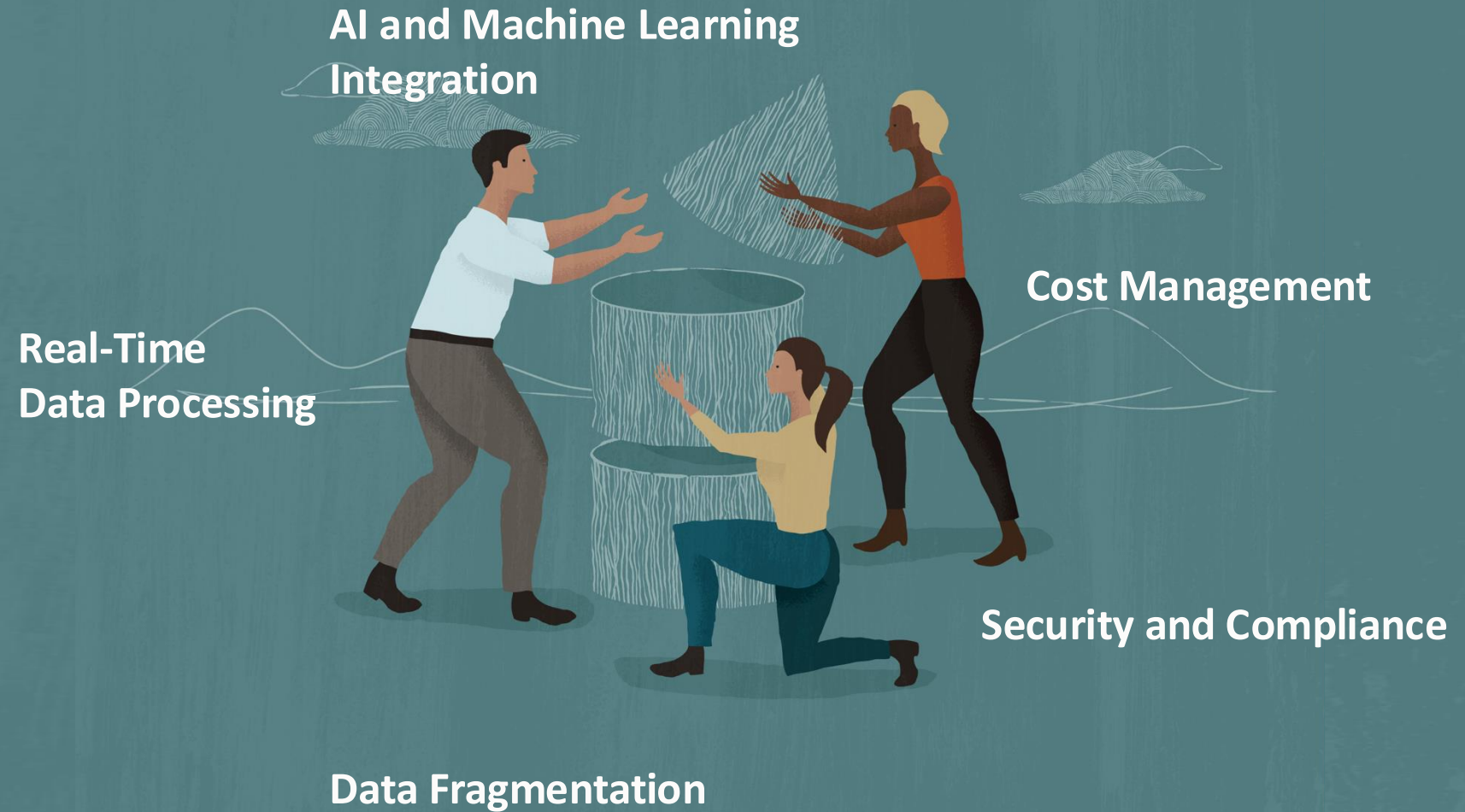
Guillermo Best

Account Cloud Engineering Snr Manager

Data Platform Oracle Iberia

Sep, 2025

Current data platforms challenges





**48+ years of helping
customers manage
the world's most
important data**

Discovering new pharmaceuticals

Processing insurance claims after disasters

Simulating crash performance for new cars

Keeping hotel customers safe during stays

Exchanging currencies for foreign trade

Ensuring the electric grid is reliable

Improving diagnosis and resolution of illness

Protecting critical communications networks

Reworking restaurant operations to adapt to change

Increasing the speed and lowering the costs of construction

Adapting to supply chain volatility to keep up with demand

Detecting money laundering and reducing business risk

Supporting citizens through crisis

Making purchases available at curbside



> 430.000
Enterprises
trust Oracle to help
run their businesses



Leading Organizations in Every Industry Rely on Oracle Data Platform

94% of the Fortune Global 100 run on Oracle Data Management Technologies

10 of top 10	Banking				
10 of top 10	Telecommunications				
10 of top 10	Food & Drug				
9 of top 10	Automotive				
9 of top 10	Healthcare				
9 of top 10	Retail				
7 of top 10	Technology				
7 of top 10	Energy				

* Ranking based on 2023 [Fortune Global 500](#)



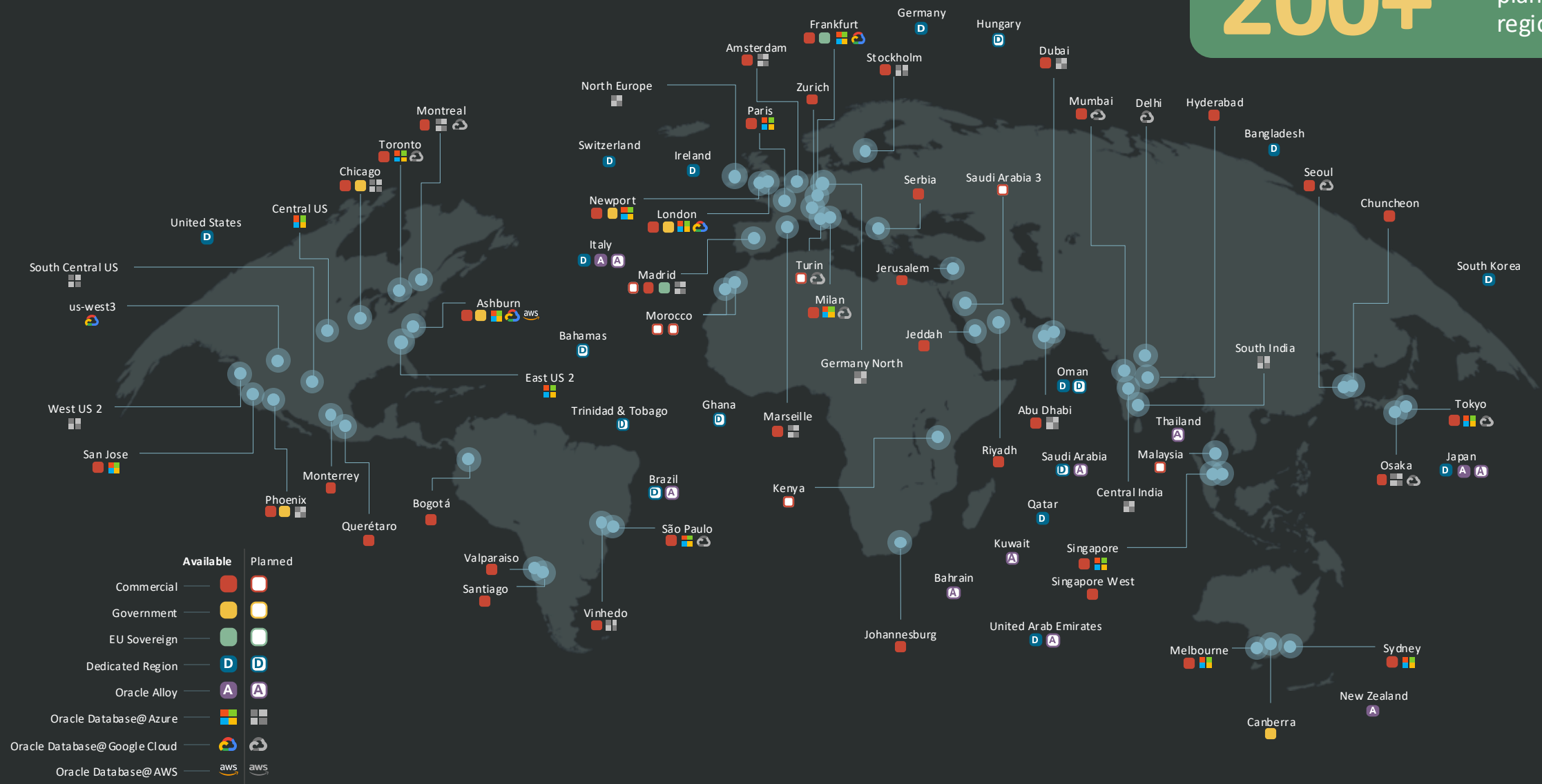


Full Technology Stack



Oracle Cloud Infrastructure

200+ live and planned regions¹



¹ Some regions have not been announced and are therefore not shown on the map



Oracle Database Vision

With Generative AI (LLM)

Make modern apps and analytics
easy to **generate** and run
for all use cases at any scale



How we deliver the Vision

Complete and Simple Platform for All Data Management Needs



Converged Database

Complete: all modern data types, workloads, and development styles

Simple: Add a SQL Statement, not a database to support any need of modern applications



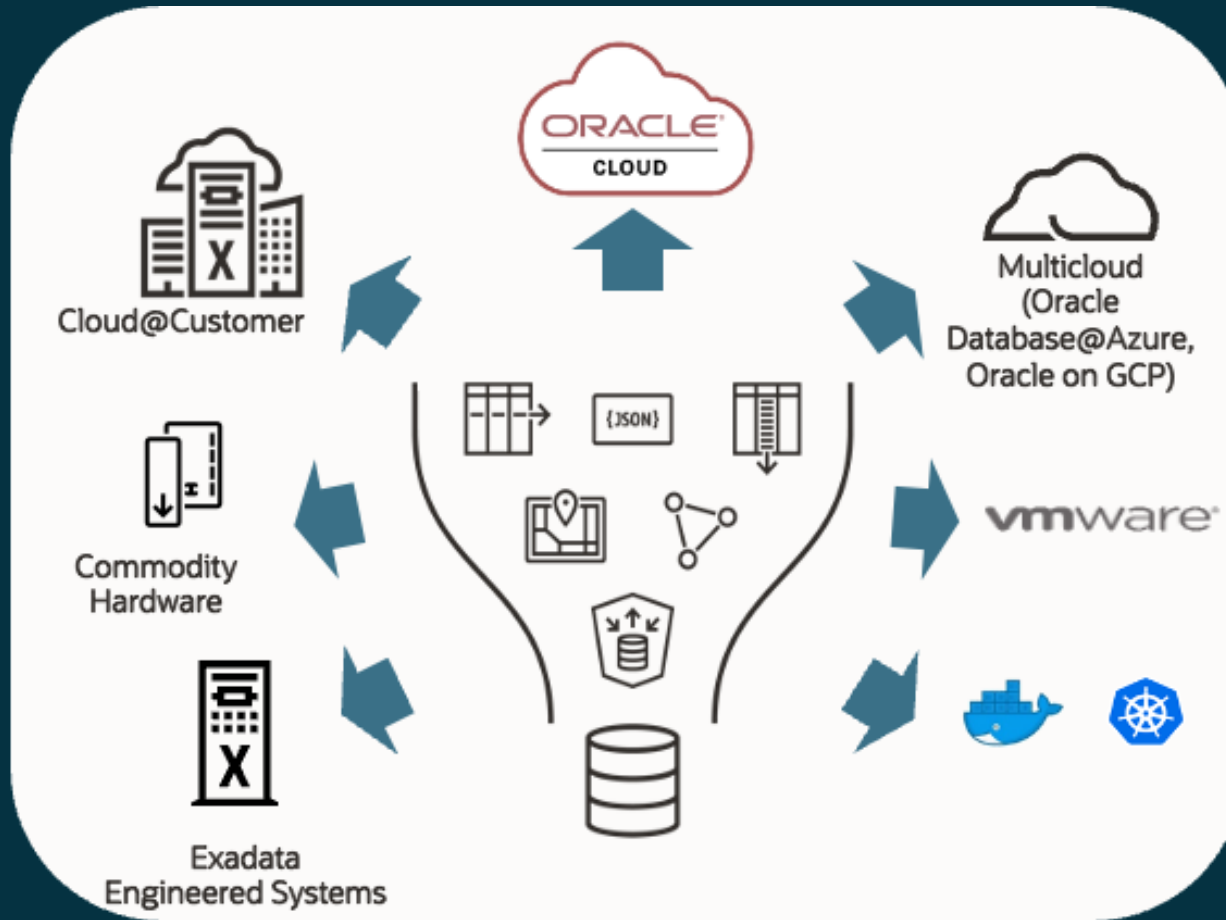
Running on Autonomous Database

Powerful: All the benefits of converged database running on Exadata

Simple: Fully-managed cloud service

Oracle Database Deployment Choices

Develop and deploy Oracle anywhere – extreme portability



**Same database,
same skills**

Approaches | Single-Purpose vs Converged

Cloud & Niche Database Vendors



Amazon
Aurora



Amazon
DocumentDB



Amazon
Redshift



Amazon
Quantum Ledger



Azure
Synapse
Analytics



MongoDB
Document Store



Snowflake
Data Warehouse



Google
Big Query

Run **single-purpose proprietary database** for each data type and workload

Oracle Database



Documents



Spatial



IoT



Blockchain



Text



Reporting



Data Science



Graph

Run **converged, open, SQL Database** for multiple data types and workloads

Multi-language Support

Oracle Converge Database as a Data Platform

Development Services

Node.js, Python, .NET, Java,
PHP, Ruby, PL/SQL, C, C++, Perl,
Go, EBR, Mongo,
REST Services,
Advanced Queuing,
APEX, SODA, Docker

Platform Services

Cloud to On-Premise, Clustering,
Microservices, Sharding, Security,
High Availability, Isolation,
Zero Data Loss, Administration



Analytical Services

SQL, Columnar In-Memory,
Machine Learning (Advanced
Analytics), R, AI

Data Support

Relational, JSON, XML,
Spatial, Graph, RDF,
Text, Binary. Object
Stores, HDFS, Kafka,
NoSQL Stores

With Oracle Database 23ai, one part of an app can treat the data as relational, while other parts treat the same data as a document, and others treat it as a graph



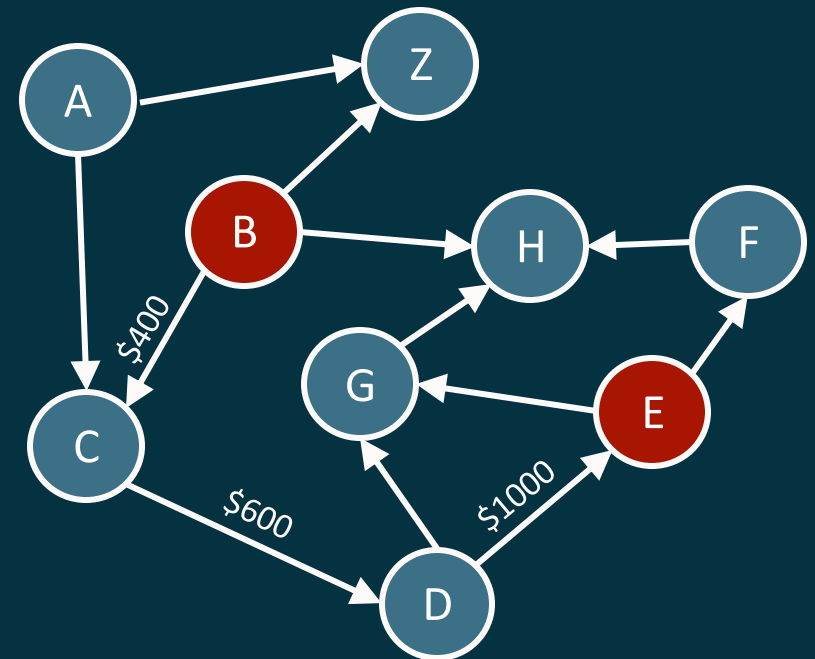
You get the best of all these worlds, at the same time
Another huge benefit for app dev

Property Graph Views in Oracle Database 23ai

Allow queries between connections and relationships in the data

For example, to discover indirect money movements from bank account 'B' to bank account 'E'

```
SELECT graph.path
FROM GRAPH_TABLE (
  bank_graph
  MATCH (v1)-[e is BANK_TRANSFERS]->{1,3} (v2)
  WHERE v1.id = 'B'
  AND v2.id = 'E'
  COLUMNS LISTAGG(e.to_acc, ',') AS path)
) graph
;
```



Native AI in Oracle Database



AI Vector Search



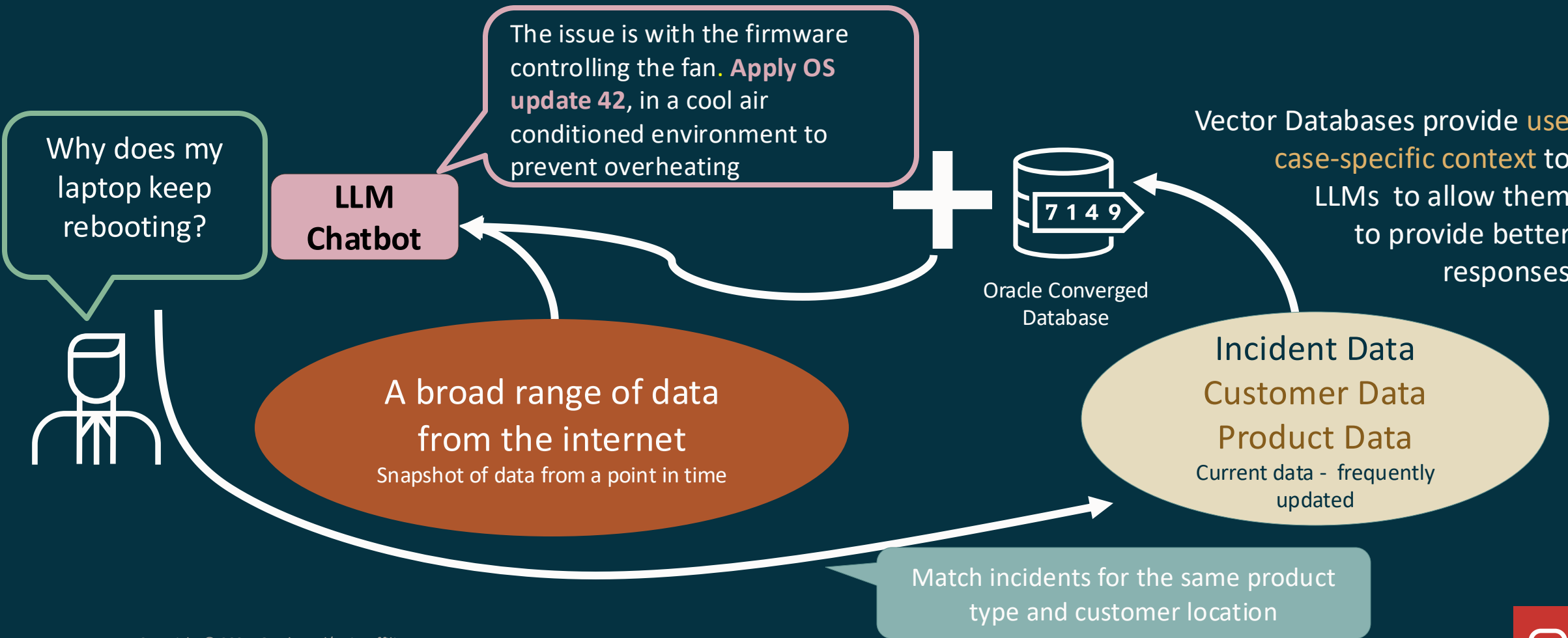
Generative AI



**In-database AI/ML
Predictive models**

Role of Converged Oracle Database in Generative AI

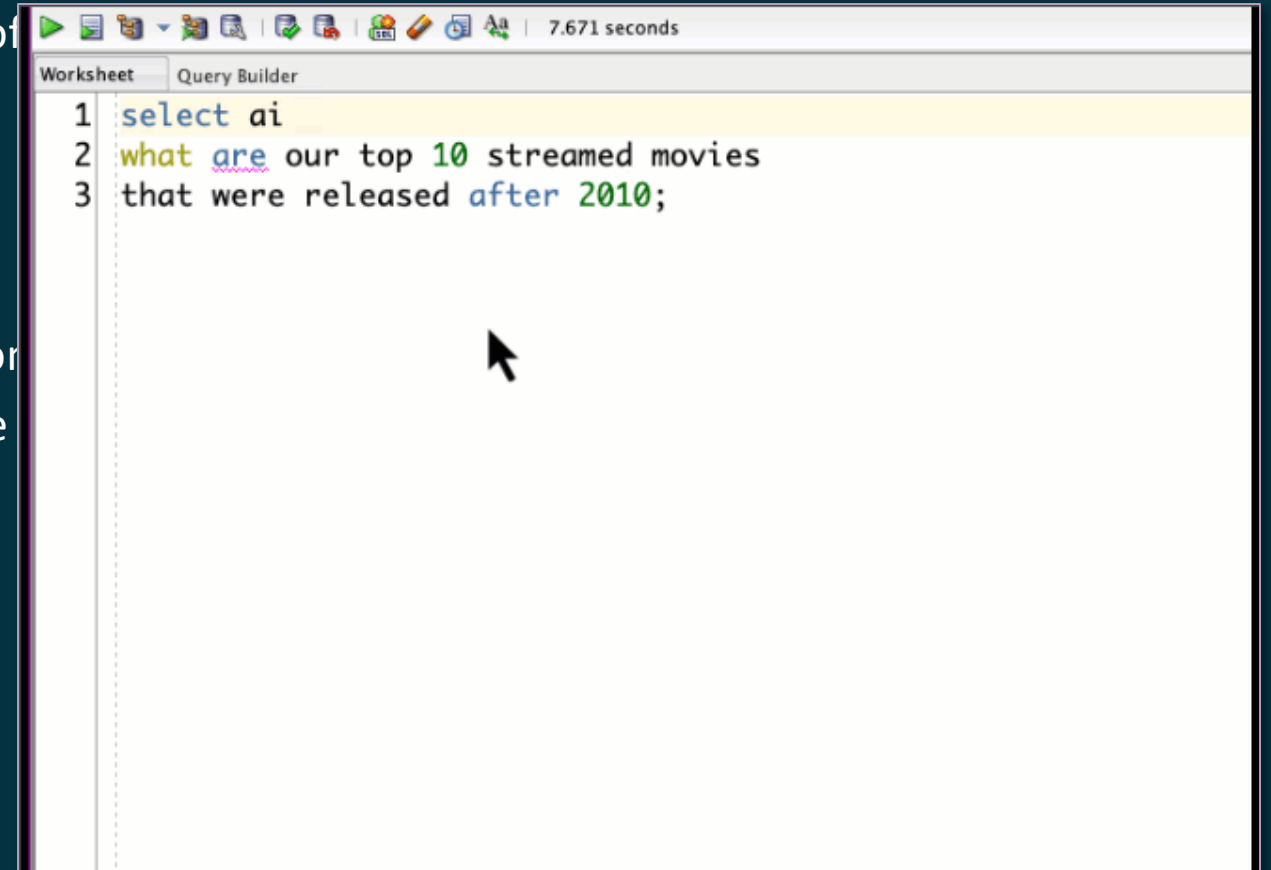
Converged Business Databases allow business rules, filters, security policies to be applied to RAG



New | SQL Generation with Select AI

Available today on Oracle Autonomous Database

- Use natural language to query data with the help of LLMs
- Increase application developer productivity
- Enable non-technical users to query information from their database
- Invoke from SQL command line and PL/SQL function
- Inherit security and authentication of the database



<https://blogs.oracle.com/machinelearning/post/introducing-natural-language-to-sql-generation-on-autonomous-database>

Oracle Database is a Machine Learning Engine

Oracle makes it simple to make data-driven predictions

- Use declarative SQL to build models and run Machine Learning directly on business data

Over 30 in-database parallel and scalable ML algorithms

- Eliminates costly, risky, and slow data movement to separate ML engine

Business Use Case	ML Technique	Oracle ML Algorithms
Customer Loyalty and Retention	Classification	SVM, GLM, Random Forest, XGBoost, et al.
Customer Segmentation	Clustering Classification	K-Means, Expectation Maximization Decision Tree
Demand Forecasting	Time Series Regression	Exponential Smooth SVM, GLM, Neural Networks, XGBoost
Cross-sell / Up-sell	Association Rules Classification	A priori SVM, GLM, Random Forest, XGBoost, et al.
Credit Risk	Regression Classification	SVM, GLM, Neural Networks, XGBoost SVM, GLM, Random Forest, XGBoost, et al.



Oracle Spatial

Comprehensive platform for geospatial data and maps

Spatial with FREE Dev Tools, Frameworks



APEX



Studio



ORDS



SQL Dev

Spatial with PaaS and SaaS



Oracle Analytics Cloud



Oracle IoT Cloud



Oracle Cloud Applications

Oracle FREE(*) Maps Cloud Service

Map Service

Geocoding Service

Routing Service

Spatial FREE developer APIs/libraries



Oracle Maps



sdoapi



Python
oracledb



Node
oracledb

Spatial JEE components

Mapping

Web Services (OGC)

Geocoding

Routing

Network Analysis

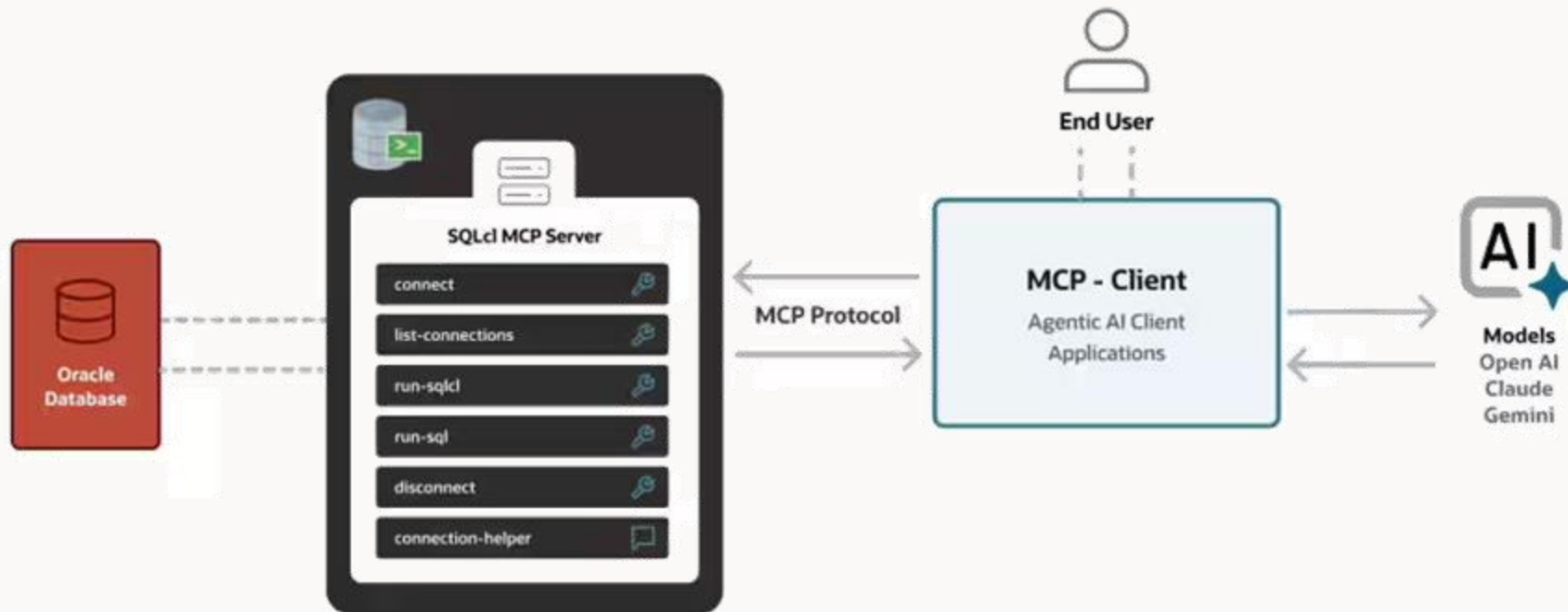


Spatial FREE features of Oracle Database/Autonomous Database

MCP Server for Oracle Database

<https://blogs.oracle.com/database/post/introducing-mcp-server-for-oracle-database>

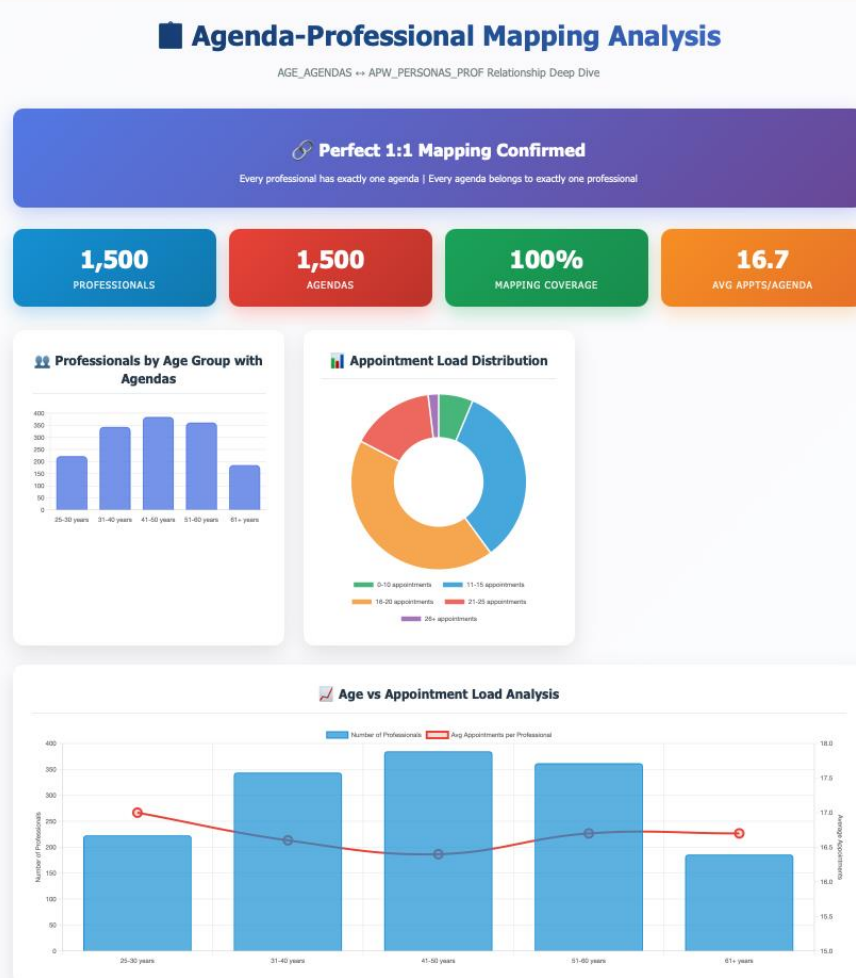
The MCP Server for Oracle Database enables secure, **AI-powered natural language interaction with Oracle databases**, transforming data access for business leaders and offering operational, competitive, and strategic advantages over traditional database interaction models.



MCP Server for Oracle Database



The MCP Server for Oracle Database is a breakthrough solution that harnesses AI to make real-time, secure, and intelligent data access possible for decision makers, removing technical barriers and positioning Oracle at the forefront of the AI-driven enterprise data ecosystem.



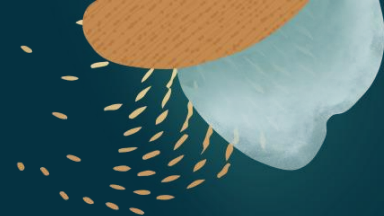
Oracle APEX: Low Code / Zero Code Development

- Generative AI Support
- Powerful Enterprise Components
- Next-Gen Data Platform
- New and Updated Components
- Developer Experience
- General Builder Improvements
- Additional Updates and Enhancements



apex.oracle.com

Create App from a Prompt



APEX Assistant

Let's create an app together. Describe the app you want to create, including the data or tables it will use.

Build an app on project tasks, project status, project milestones, project task todos, and projects, that includes pages for a smart filters, classic report, chart, and interactive report.

RT

Sure, I can create an application called **Project Management Suite** with the following pages:

- Smart Filters on Projects (Smart Filters on **EBA_PROJECTS**)
- Smart Filters on Project Milestones (Smart Filters on **EBA_PROJECT_MILESTONES**)
- Project Milestones Report (Classic Report on **EBA_PROJECT_MILESTONES**)
- Projects Status Chart (Chart on **EBA_PROJECTS**)
- Interactive Projects Report (Interactive Report on **EBA_PROJECTS**)

With the following features enabled: **Install Progressive Web App, Push Notifications.**
Would you like to create the application now? Or, if you have any changes, just let me know below!

Create Application

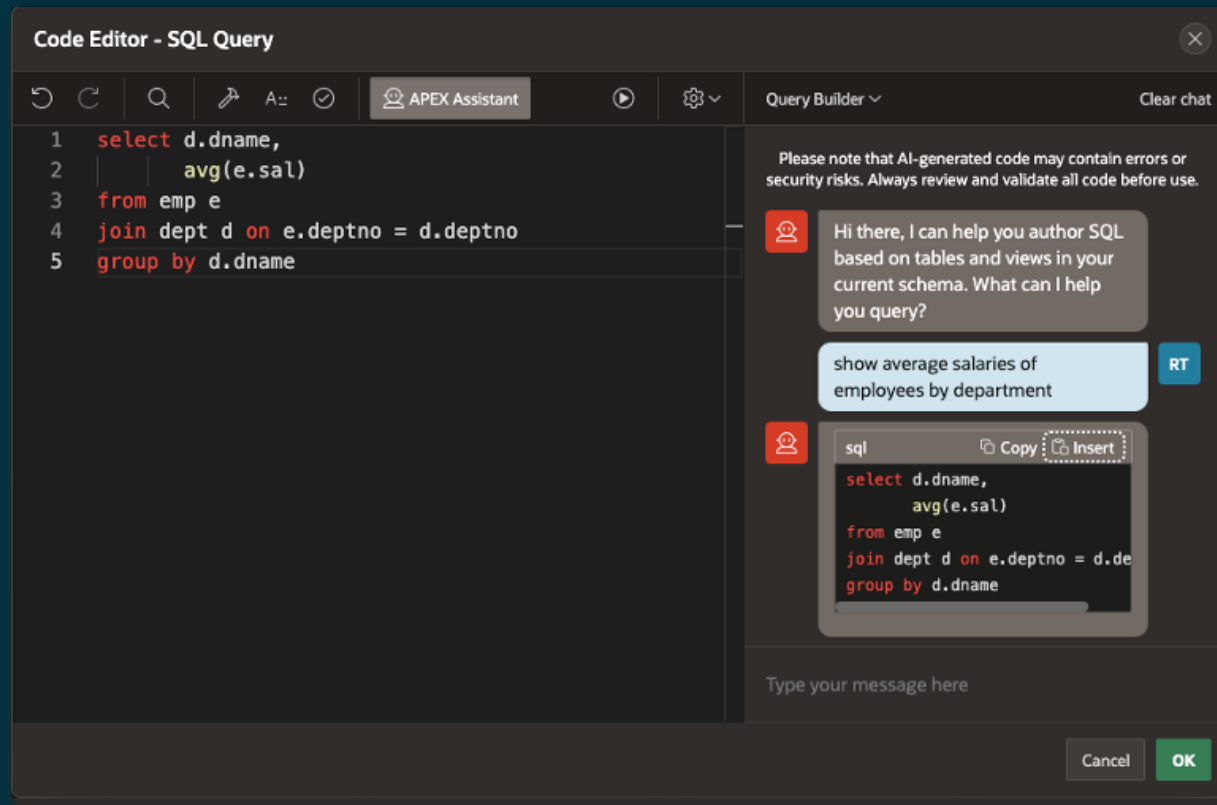
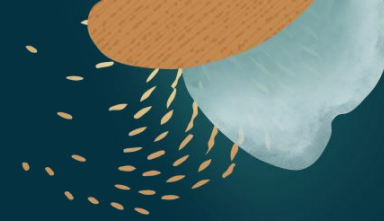
Type your message here

Generate **Application Blueprint** based on a Prompt

Leverages **APEX Dictionary Cache** to identify relevant tables

Further, **enhance the generated blueprint** with additional instructions

APEX Assistant in Code Editors



APEX Assistant in Code Editors leverage **Generative AI Services**

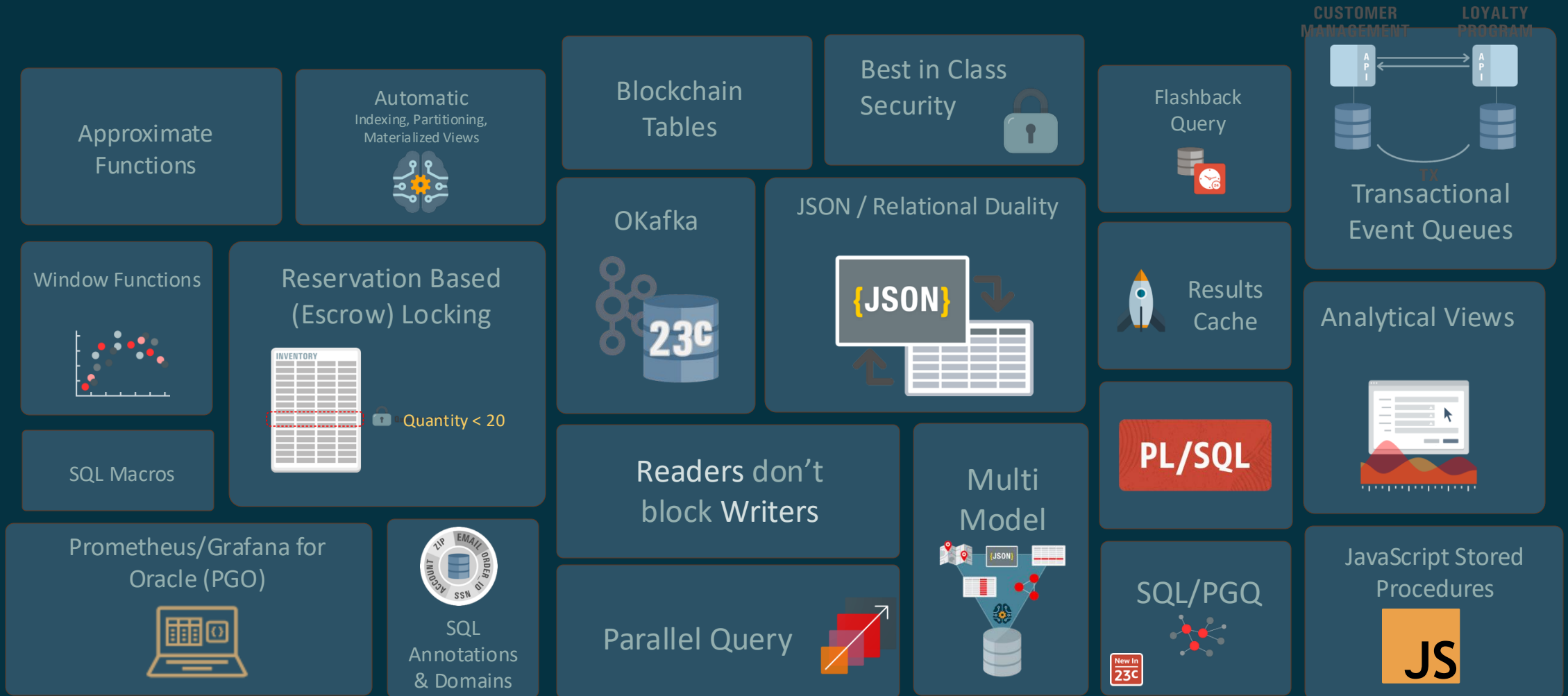
Leverages **APEX Dictionary Cache** to identify relevant tables

Generate SQL Queries for form and report regions using the Query Builder mode.

Generate PL/SQL, JavaScript, HTML, and CSS Code using the General Assistance mode.

Improve & Explain Quick Actions help improve and understand the selected code

Oracle Database 23ai – More Innovations to Support App Development



Plus Over 300 Additional New Features!

Strategy | Choose the Best Database Engine

Enterprise-class performance, scalability, reliability & security for all data-driven workloads

Specialized Any Data



Converged, open, SQL database for all data types and data models

Any Workload



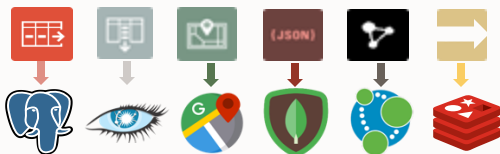
Transparent scale-up, scale-out, sharding, in-memory, parallel SQL

Which one is Most Productive?



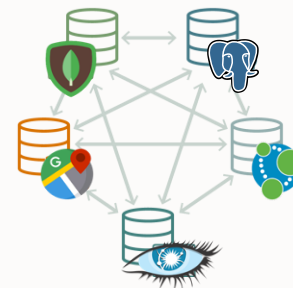
Developers & Architects, Data Analysts/Scientists and DBAs

Specialized Data



Overhead from integration complexity

Dedicated Workload



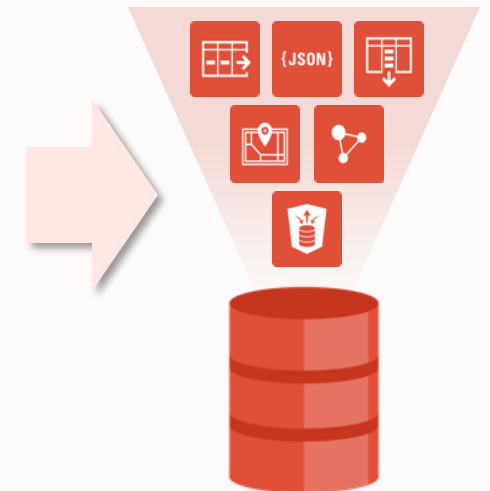
High effort exchanging and transforming different formats

Converging Data Enables **Cross Data Synergy**



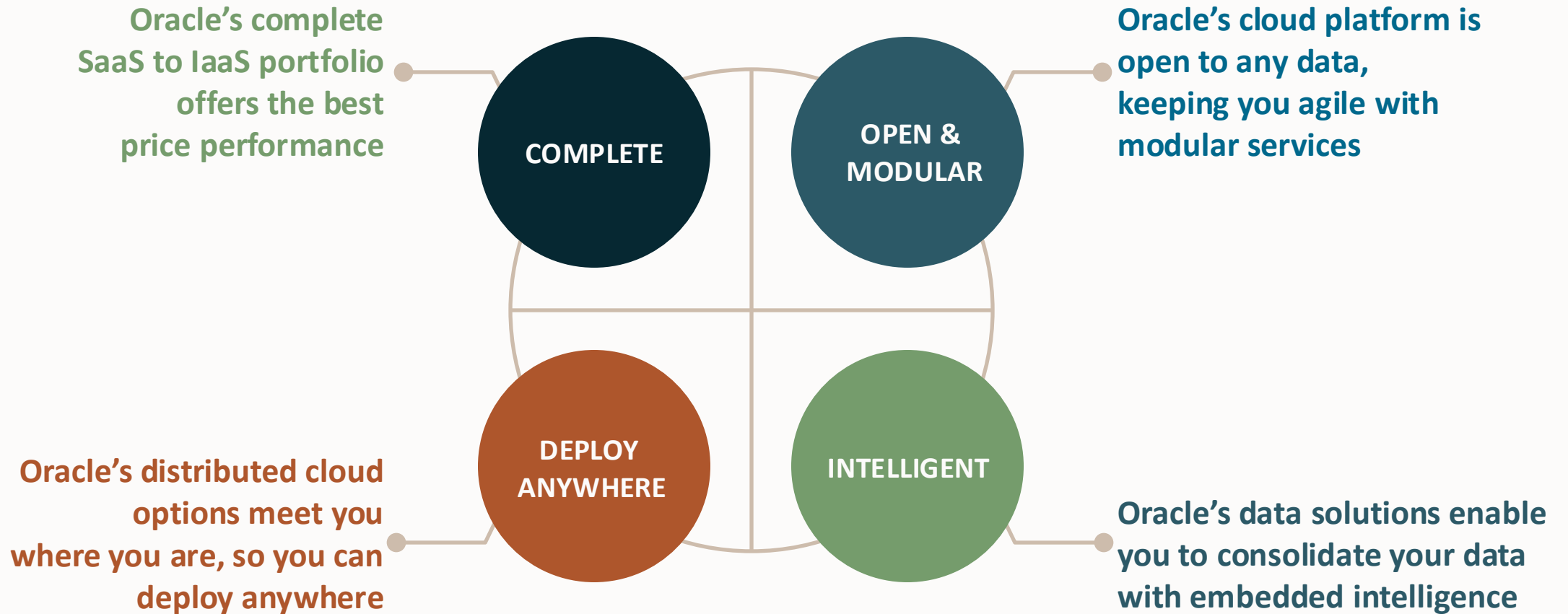
Converging internet, video, and photos enabled revolutionary **social networking**

Converging AI/ML, documents, social, vectors and location data enables revolutionary **personalization** and **LLM conversations** with your data

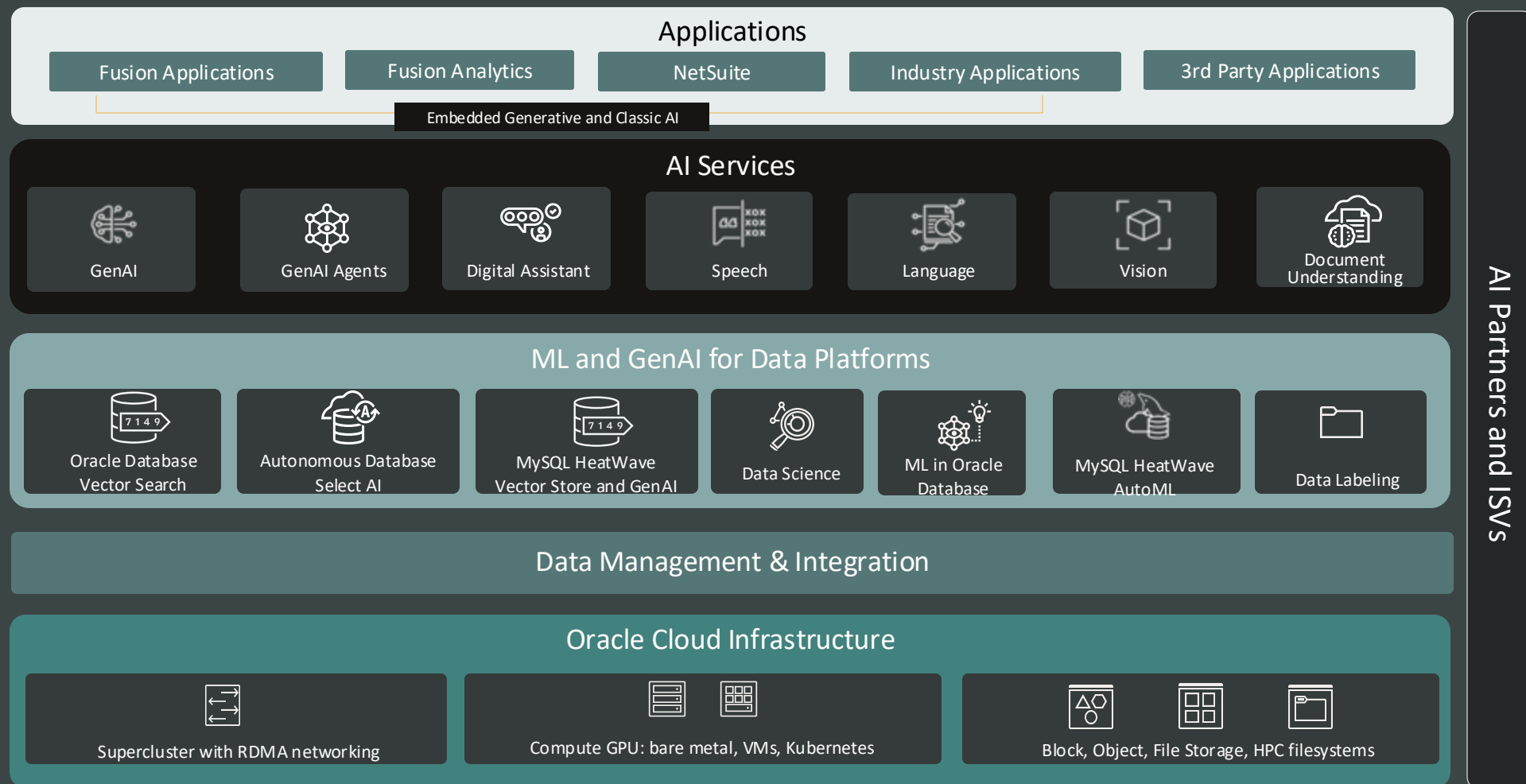


Converging Data Enables More Value

Why Oracle Modern Data Platform



A complete ecosystem with AI across all layers



> **Ready to Consume** for Business users

> **Ready to Work** for Developers, Data Scientists, ...

> **Ready to Build** for Data Engineering, Operations, ...

> Infrastructure for the **best price / performance**



Thanks for joining this session

For more information:

<http://oracle.com/database/23ai>



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

