ORACLE

Supercharge Your Business With Data

Managing Enterprise Data In Cloud, On-premises, Hybrid & Multi-Cloud

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Safe harbor statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, timing, and pricing of any features or functionality described for Oracle's products may change and remains at the sole discretion of Oracle Corporation.

"Oracle Database is the foundation on which most of our technology is built, including our cloud!"

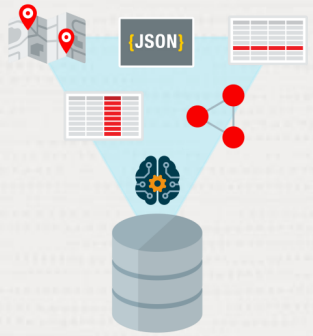
Larry Ellison, Oracle CTO
Financial Analyst Summit
Oracle CloudWorld, October 2022

Oracle Data Management Vision

Make it simple to develop and run modern operational and analytic apps for all use cases, at any scale

How We Deliver the Vision
Complete and Simple Platform for All Data Management Needs

Complete



Simple

Converged Database

Complete support for all modern data types, workloads, and development styles

Completely consistent, scalable, available, and secure

Autonomous Database

Converged DB delivered as a self-driving, self-securing, self-repairing Cloud Database

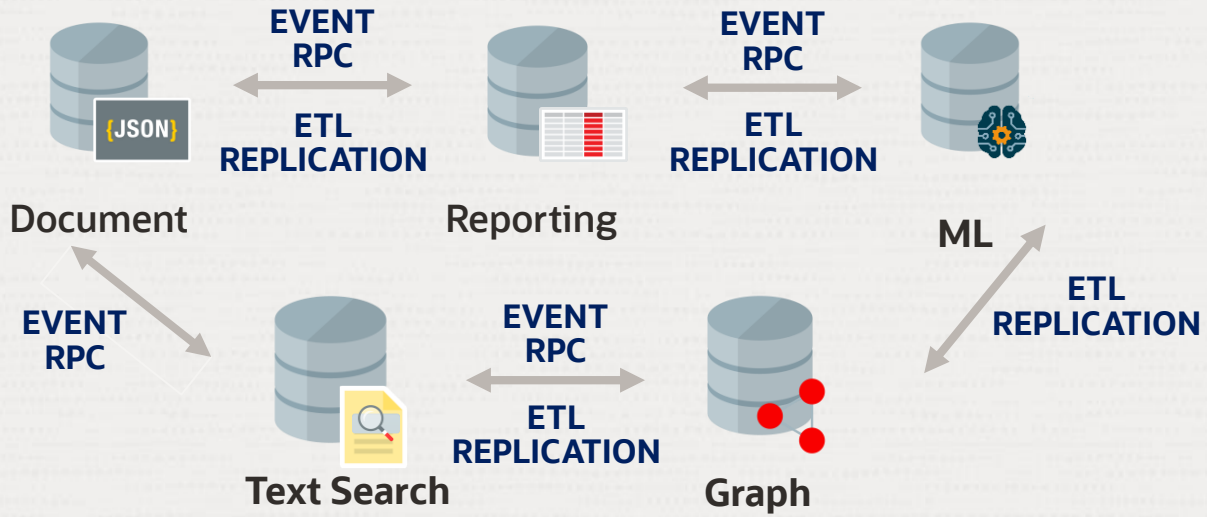
Simplest DB for developing and running **any** apps or analytics at **any** scale or criticality

Contrasting Developer Architectures

Heterogeneous Strategy

Developers Focused on Integration

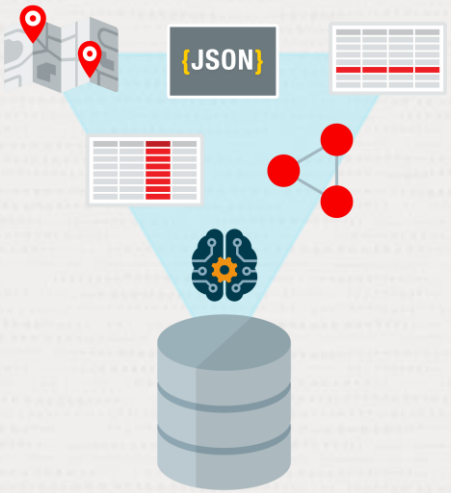
Every App Requires distributed-execution and data movement across multiple fragmented databases

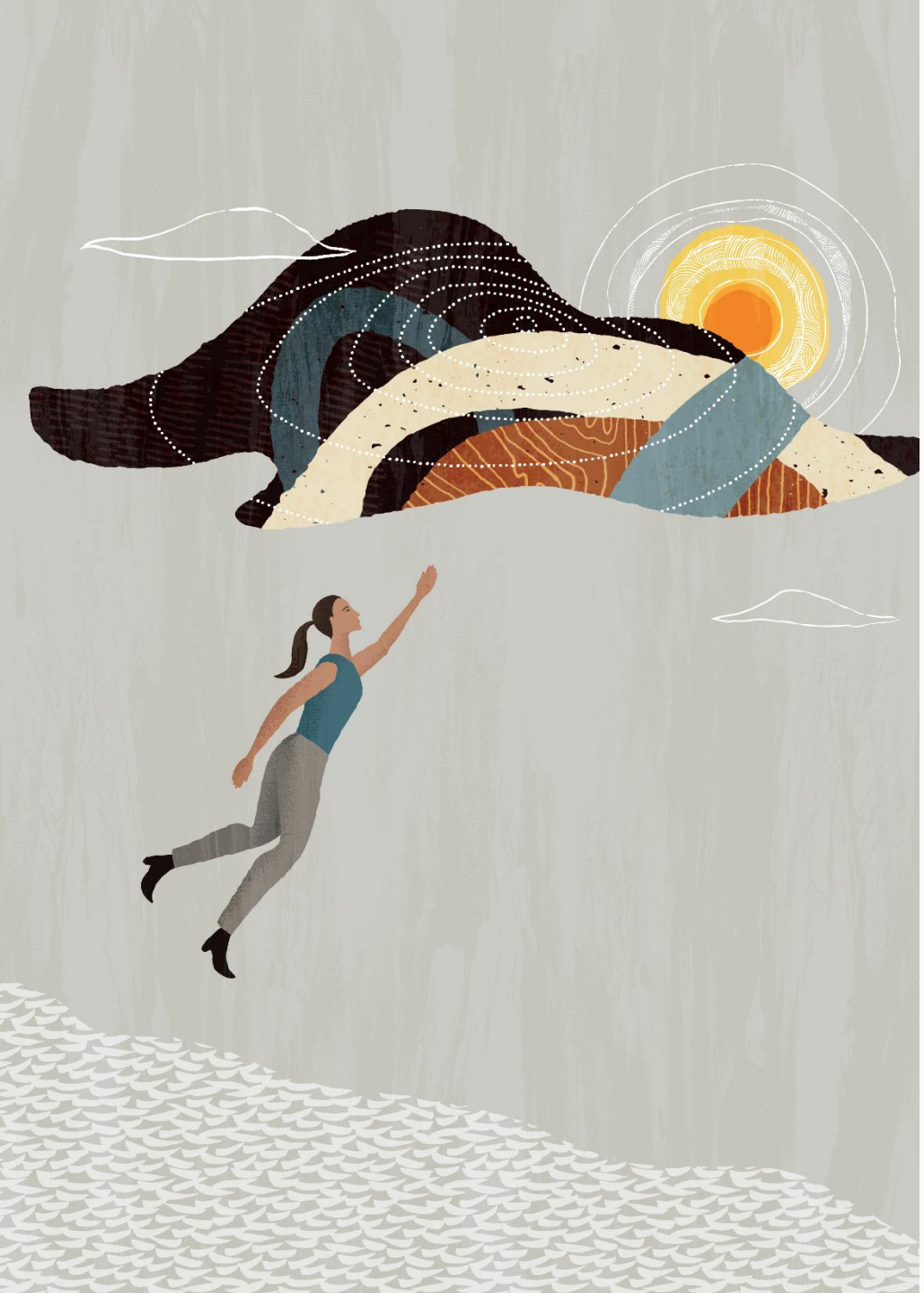


Oracle Strategy

Developers Focused on Innovation

Simply invoke SQL to run report, ML, graph, JSON, spatial, blockchain, IoT, etc. in a converged database





Database Innovation

23c

App Simple

Introducing:

The next long term support release of Oracle Database

Oracle Database 23c accelerates Oracle's mission to make it **simple** to develop and run all data-driven apps

BETA available now on-premises and in Oracle Cloud

https://tinyurl.com/OracleBeta

Oracle 23c is the sum of…

21c + 23c

All the features from Oracle 21c Innovation Release

300+ New Features and Enhancements

Key focus areas:
JSON, Graph, Microservices, Developer Productivity

A Better Document Database Than MongoDB

Blockchain
JSON
Tables

JSON Data
Guide

Oracle Database
23c
App Simple

In-Memory
Document
Analytics

SQL

Full SQL
Support

New In 23c

2X Faster
Operational
Workloads than
MongoDB

New In 23c
JSON
Schema

MongoDB API

New In 23c
JSON / Relational Duality

{JSON}

Native JSON
Datatype

Best in Class Security

New In 23c
JS
JS Stored
Procedures

New In 23c
Graph Analytics

New In 23c
10X faster
Analytics

A Better Operational Graph Database

High Speed Ingest

In-Memory Analytics

Graph Studio

New In 23c

SQL/PGQ

Oracle Database

23c

App Simple

50+ Graph Analysis Algorithms

New In 23c

JSON or Row based Graph Models

Flashback Queries

Comprehensive Enterprise Capabilities

Full SQL Support

New In 23c

Unrivaled High Availability

Average of 26X Faster

Low-Cost Secondary Indexes

Best in Class Security

Better SQL Than Anyone Else

Approximate Functions

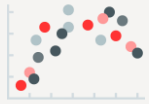
Automatic
Indexing, Partitioning, Materialized Views

Oracle Database
23c
App Simple

Flashback Query

SQL For JSON

Window Functions



Real Time Materialized Views

Results Cache

Polymorphic Tables

Readers don't block Writers

PL/SQL

Analytical Views

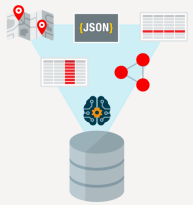
SQL Model Clause

SQL Pattern Matching

External Tables

Parallel Query

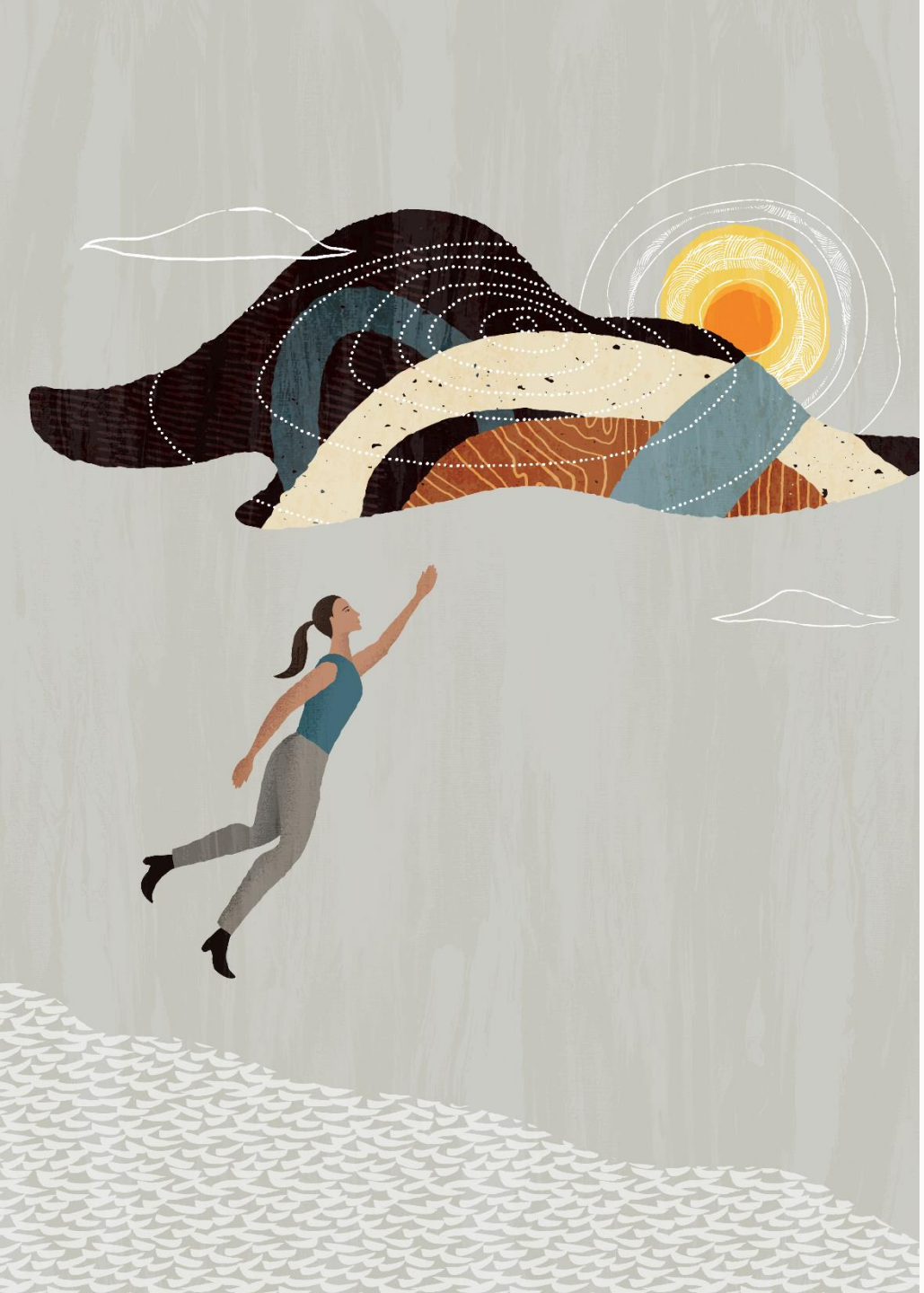
Multi Model



SQL/PGQ

New In 23c

SQL Macros



Database Cloud Innovation

Oracle Cloud Infrastructure Global Footprint

February 2023: 41 Regions, 8 planned; 12 Azure Interconnect Regions

100% renewable energy by 2025

Thousands of critical deployments, on-premises and cloud

76% of Fortune Global 100 run Exadata | **53%** run Exadata Cloud

Superior architecture for ALL workloads

- Petabyte warehouses
- Super critical systems
  - Financial trading
  - Process manufacturing
  - E-commerce
- Packaged applications
  - SAP, Oracle, Siebel, PSFT, …
- Database consolidation

Database Service Choice: all roads lead to Autonomous

Most value for spend as you move towards Autonomous

Enterprise Database Service
Standard Database Service

ExaDB on Dedicated Infrastructure

ExaDB on Cloud@Customer

ADB on Shared Exadata Infrastructure

ADB on Dedicated Exadata Infrastructure

ADB on Exadata Cloud@Customer

Base Database Service

Exadata Database Service

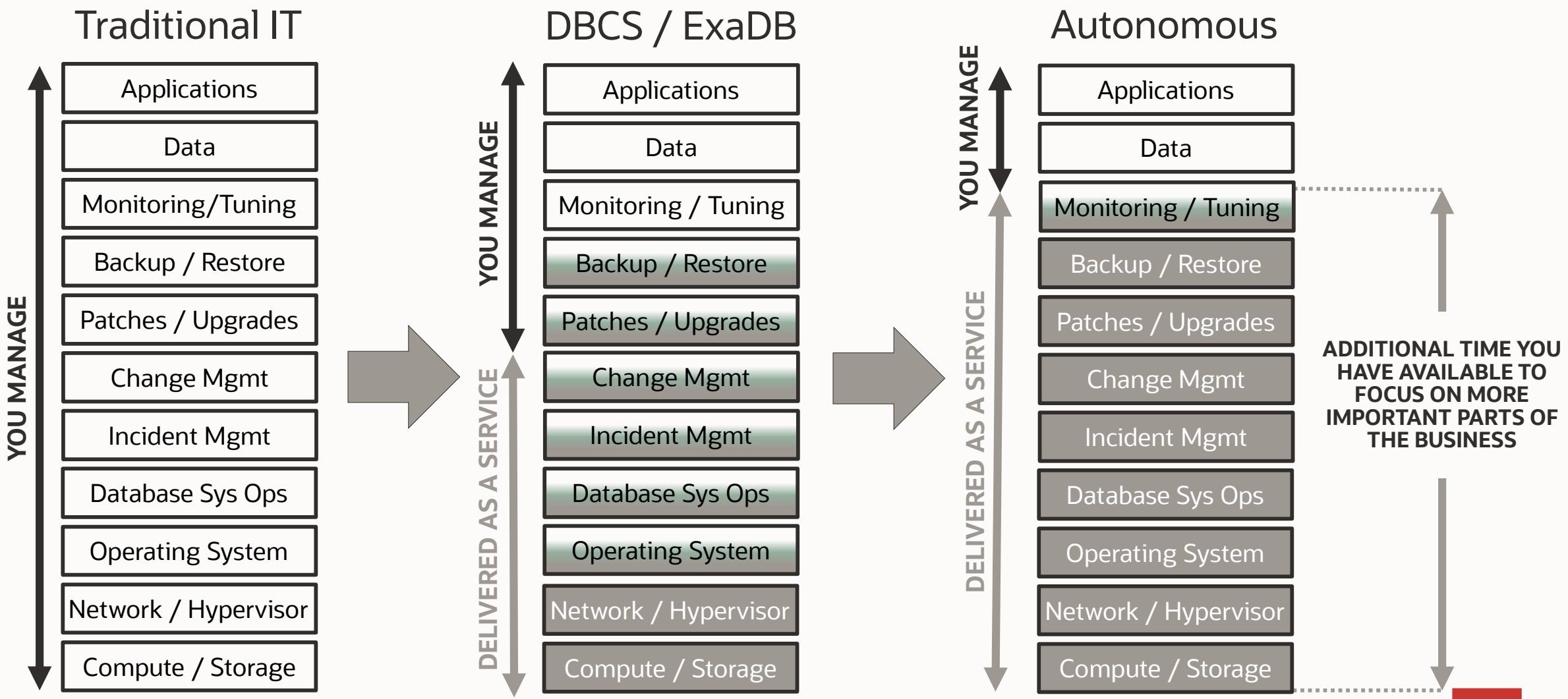
Autonomous Database

Automation, improved pay-per-use, easier to use, lowest TCO

Base Database Service	Exadata Database Service	Autonomous Database
Singular/smaller workloads	Highest performance for all workloads, scale, and consolidation	
Oracle-managed infrastructure with customer-managed databases		Fully-managed by Oracle
Oracle Cloud Infrastructure	Customer Data Center	Oracle Cloud Infrastructure / Customer Data Center

Transfer more responsibility to the service while lowering costs

Same cost per OCPU, greater value with Autonomous



Diagnostic Events, Health Monitoring, Incident Logs and Trace Files

Opt-In For Better Monitoring and Support

Diagnostic Events

- Enables customers to be notified regarding state changes to resources including Oracle Database, Data Guard association, Guest VM, and DB System.

Health Monitoring

- Allows Oracle to collect health metrics/events such as Oracle Database up/down, disk space usage, and CPU utilization.
- Gives Cloud Operations visibility into the health of the Guest VM.

Incident Logs and Trace Files

- Provides Oracle Support permission to collect log and trace files from the Guest VM alleviating the customer's burden when they open SRs.

Moving to cloud should enhance organizational agility and user experience, not merely move your workload.

OCI Events and Notifications features enhance observability factors, which can be an important part of this.

https://docs.oracle.com/en/engineered-systems/exadata-cloud-service/ecscm/ecs-events.html

Multiple VM Autonomous Database - Dedicated

Eliminates the either/or choice and improves consolidation economics for cloud

Autonomous Database Service

and

Exadata Database Service

run concurrently

on the same infrastructure

Ideal Database Consolidation Capability

Exadata Cloud@Customer

Simplest transition to Autonomous Database

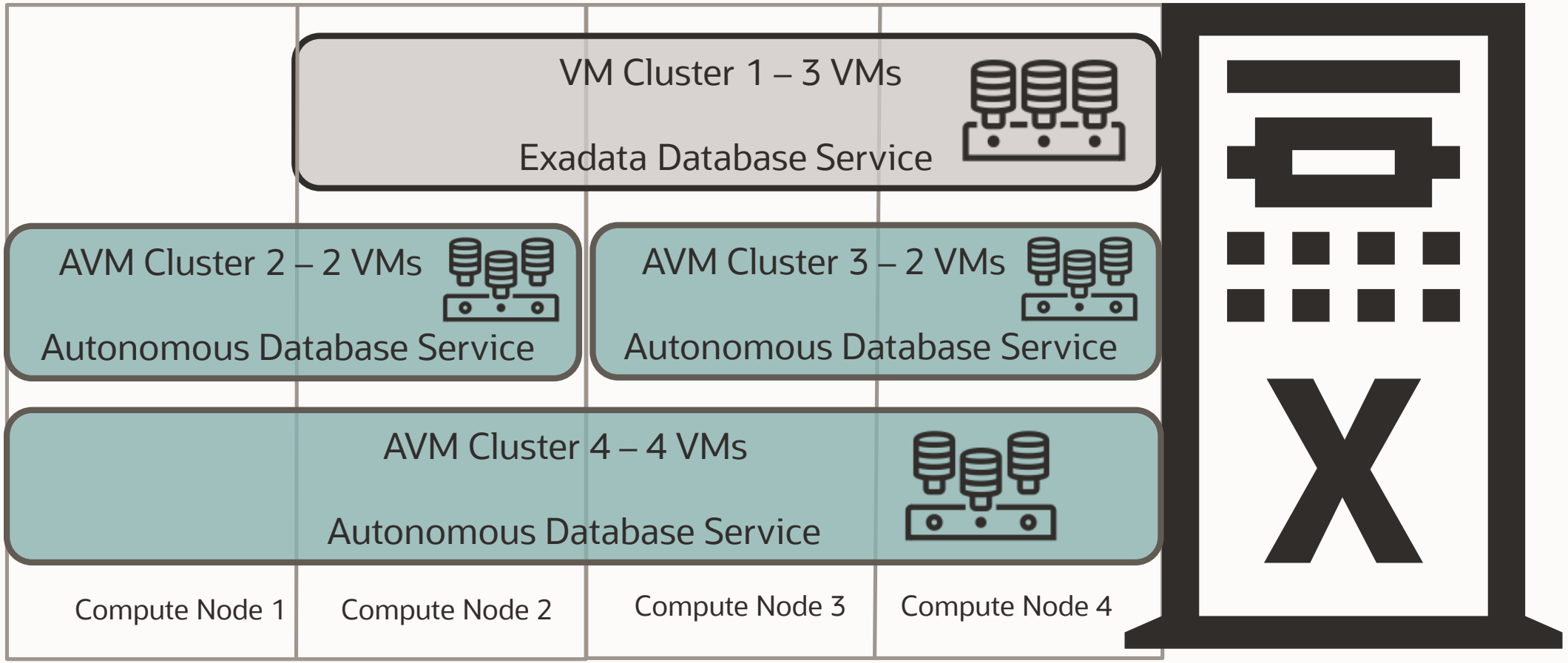
Exadata Database and Autonomous Database

Cloud Services

Run both services on a single Infrastructure

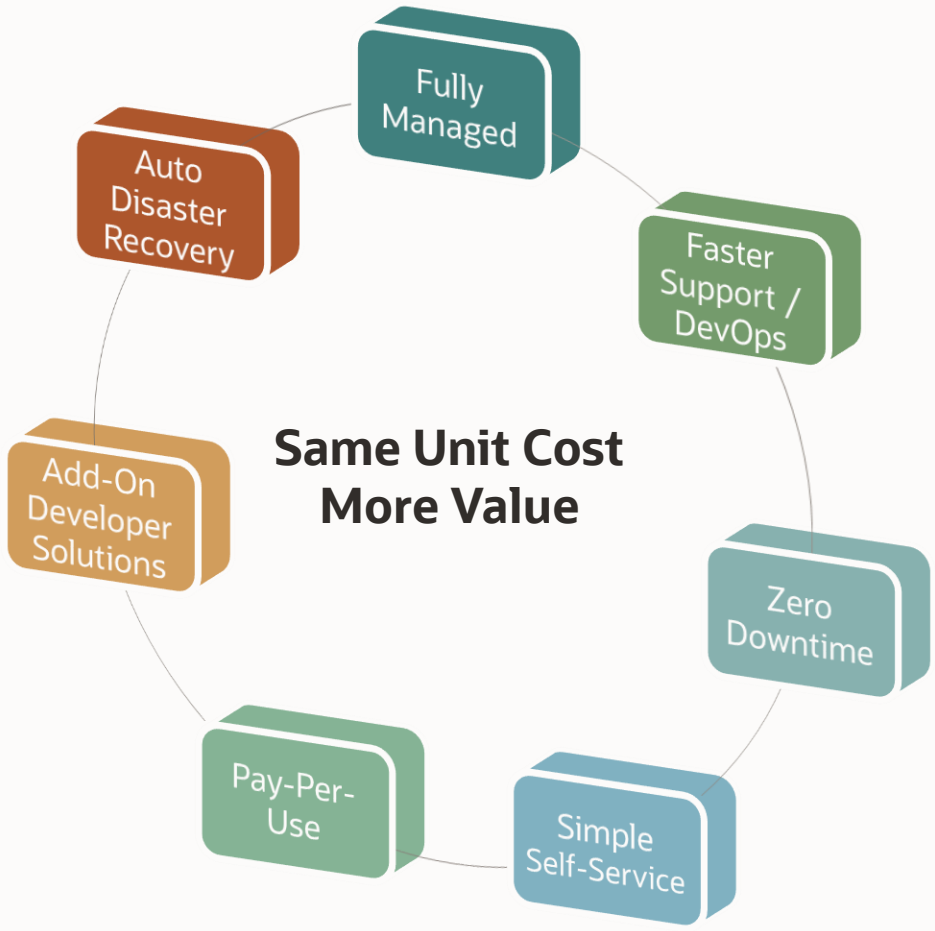
- Transition to cloud without compromising **regulatory requirements** or adding migration risks
- **Easily move** all databases to Autonomous, validated ready for movement using CPAT tool
- Run Exadata Database for applications with features **unsupported by Autonomous**
- Provide developers **self-service** access to Autonomous Database for all new database applications

Multiple VM Autonomous Database and AVM Cluster Node Subsetting



Autonomous Database Dedicated – Primary Benefits

Lower total cost of ownership thru more automation and operational delegation to Oracle



Operational Delegation

- **Fully Managed** Database Operations: backup, update, upgrade, OS maintenance, incident management, health monitoring
- **Faster support**, less customer involvement via DevOps incident response and monitoring of health metrics and logs
- Built-in Application Continuity for **zero downtime** via application aware, workload specific and prioritized connection services

Improved Automation

- Zero upfront cost for simple database **self-service** setups, with auto workload configuration and capacity management
- Auto-scaling with **pay-per-use** billing, not on allocation
- Managed **developer add-on's**: APEX, ORDS, DB Actions
- MAA disaster recovery setup with FSFO **automated failover**

NEW Oracle Database Service for Azure

Apps on Azure and databases on OCI

- Suitable for nearly any app
- < 2 ms latency private interconnect

No egress or ingress fees for data

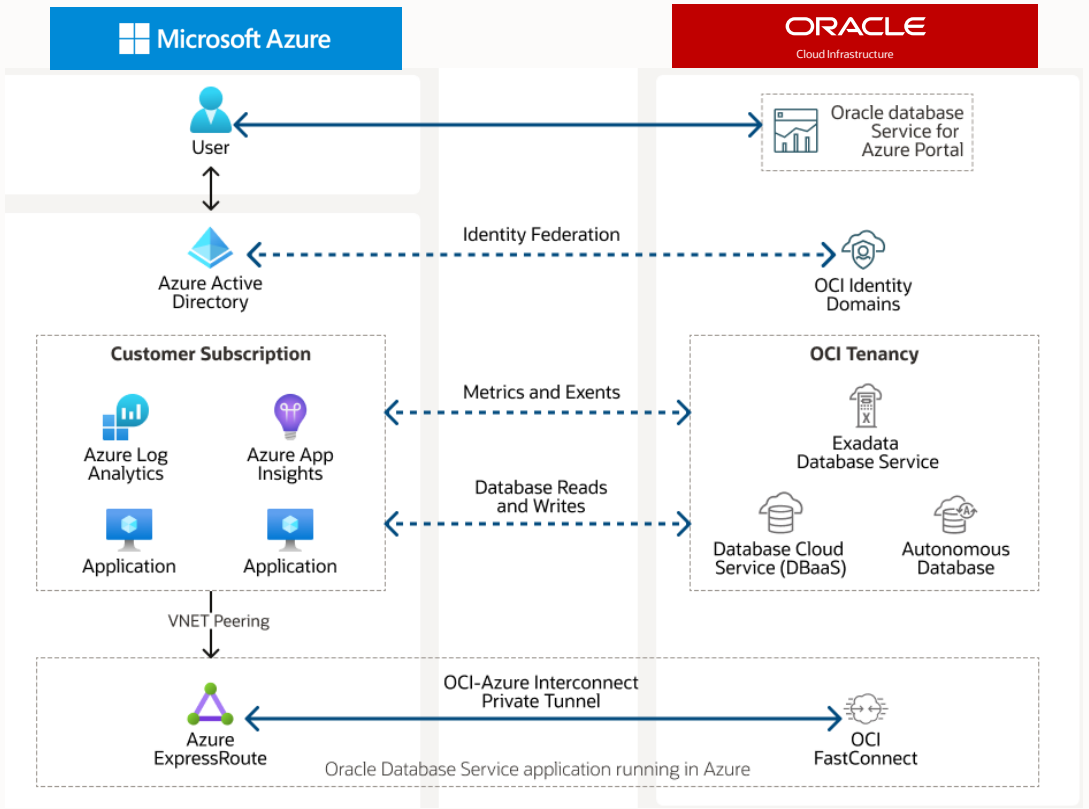
- Up to 31PB data warehouses
- 10 million+ SQL IOPs

Familiar Azure-native user experience

- Integrated identity, networking, and monitoring

Collaborative Support

- Customer calls either vendor to engage both in service request identity



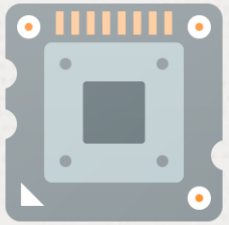
Other Announcements

APEX 22.2

Golden Gate Free

ORACLE | GoldenGate

Arm Support



MongoDB Compatible API

mongoDB®

Summary – Oracle Database Directions

Converged Oracle Database

- Supports all modern data types, workloads, and development styles
- Simplifies development of analytics and machine learning
- Completely consistent, scalable, available, and secure platform

Oracle Autonomous Database

- All the benefits of converged Oracle Database, plus best customer experience
- Best cloud database for running any app at any scale or criticality
- Deploy in the cloud, on-premises and hybrid/multicloud configurations

Oracle Database 23c

- Next long-term release for on-premises and cloud deployments

Thank you

ORACLE