The Future Is Autonomous

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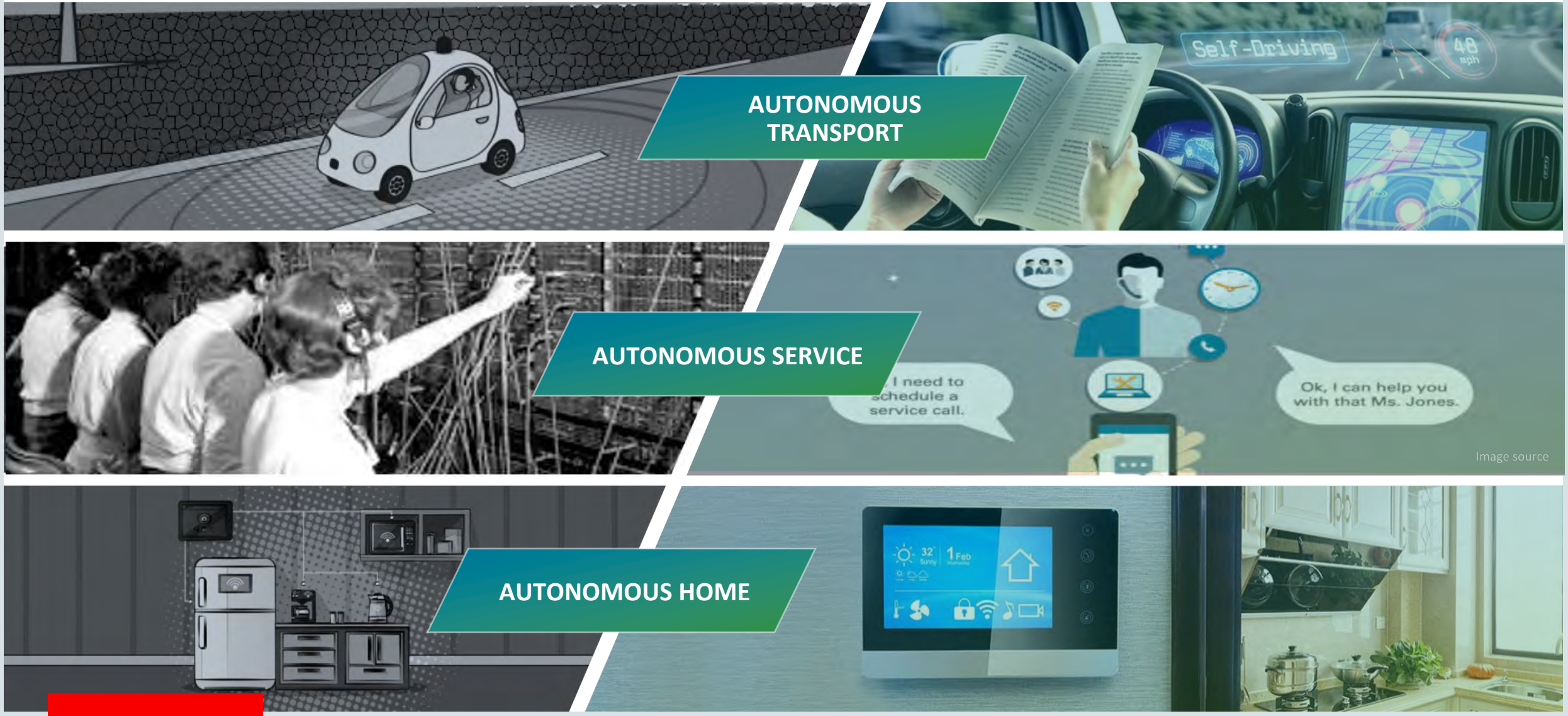
WHAT'S BEHIND **AUTONOMOUS** INNOVATION?



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DATA – The World's Most Valuable Resource

> "Computing hardware used to be a capital asset, while data wasn't thought of as an asset in the same way. Now, hardware is becoming a service people buy in real time and the lasting asset is the data."
>
> – Erik Brynjolfsson, Director, MIT Initiative on the Digital Economy

MIT INITIATIVE ON THE DIGITAL ECONOMY

*The Economist

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Companies who harness data can drive business growth…

75%
of time spent in analytics by 2020 vs 25% in 2015
– Accenture

FINANCE

Cut costs, improve security and better insights

375%
increase in analytics spending by marketers by 2020 vs 2017
– CMO survey

MARKETING

Improved customer acquisition, retention, and loyalty

4x
faster quota attainment by sales teams that use analytics
– Forbes

SALES

In-depth customer knowledge and personalization

70%
in the midst of major data projects for decision making
– Deloitte

HR

Improved recruiting, career development and success

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…but need to find a way to address core IT issues…

20 year

old systems and apps are still prevalent in most data centers
– Computerworld

CIO's need to…
Implement emerging technologies to help the business innovate

39%

of DBAs manage 50 or more databases

– Oracle Survey

CIO's need to…
Ensure performance SLAs, security, regulatory compliance & availability

85%

of exploits had a patch available for more than one year
– Verizon

CIO's need to…
Safeguard data so its secure, trustworthy and accessible

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How Can You Solve the Equation? Enter AI & ML

61% of organizations most frequently picked Machine Learning / Artificial Intelligence as their company's **most significant data initiative**

IDC forecasts that spending on AI & ML will grow from $12B in 2017 to **$57.6B by 2021**

Data science and machine learning amongst the **fastest growing jobs** categories

AI & ML lead to an autonomous future….

Sources: https://www.forbes.com/sites/louiscolumbus/2018/02/18/roundup-of-machine-learning-forecasts-and-market-estimates-2018/#60fd267a2225; https://www.infoworld.com/article/3259891/data-science/why-data-science-and-machine-learning-are-the-fastest-growing-jobs-in-the-us.html

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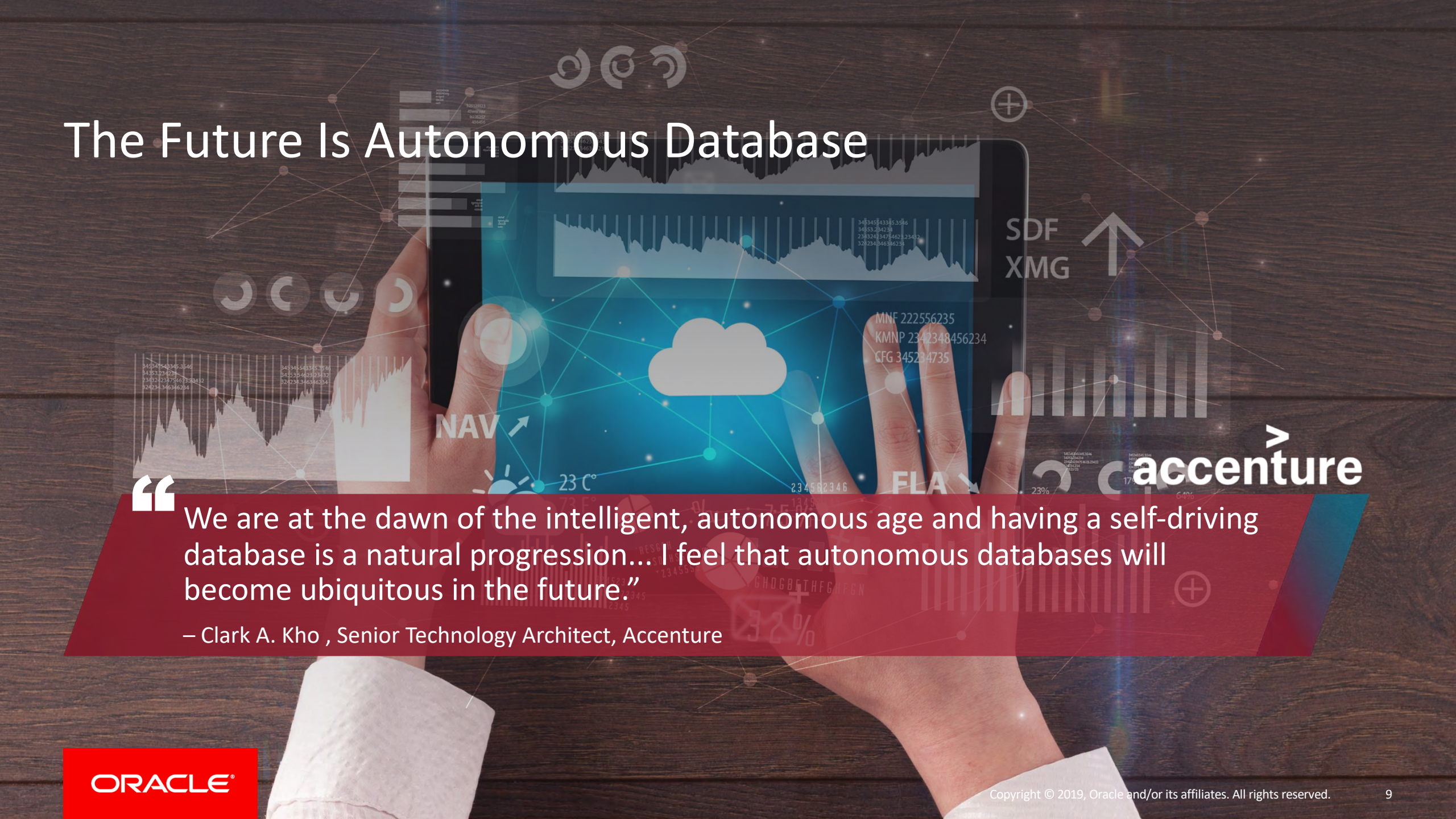
The Future Is Autonomous Database



> We are at the dawn of the intelligent, autonomous age and having a self-driving database is a natural progression... I feel that autonomous databases will become ubiquitous in the future."
>
> – Clark A. Kho , Senior Technology Architect, Accenture

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The Future Is Autonomous Database

Self-Driving

Self-Securing

Self-Repairing

Move from operations to innovation

Giving you an advantage

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The Future Is Autonomous Database : AI & ML in practice

WORKLOAD OPTIMIZATIONS → Automatically Adapts fundamental database functions such as indexing, partitioning or scale up/down to Changing Workloads

SECURITY → Protects Against internal or external unusual behaviour to reduce risk of Malicious Attacks

MONITORING & DIAGNOSTICS → Detects Anomalies in data or data management platform, resolves and and Fixes Known Issues

> “The big ticket item for 2018 & 2019 is the use of ML and AI in the DBMS allowing the DBMS to maintain itself – the DBMS becomes Self-Driving. The job of the DBA evolves to use their skills for tasks with greater business value.”
>
> – Donald Feinberg, Distinguished Analyst, Gartner

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Solutions for All Data Management Workload Needs

ORACLE AUTONOMOUS DATABASE CLOUD

AUTONOMOUS DATA WAREHOUSE

All Analytic Workloads

- Data Warehouse, Data Mart
- Data Lake, Machine Learning

AUTONOMOUS TRANSACTION PROCESSING

Online TP & Mixed Workloads

- Transactions, Batch, Reporting, IoT
- Application Dev, Machine Learning

SELECT AN AUTONOMOUS DATABASE CLOUD SOLUTION THAT MEETS YOUR WORKLOAD NEEDS

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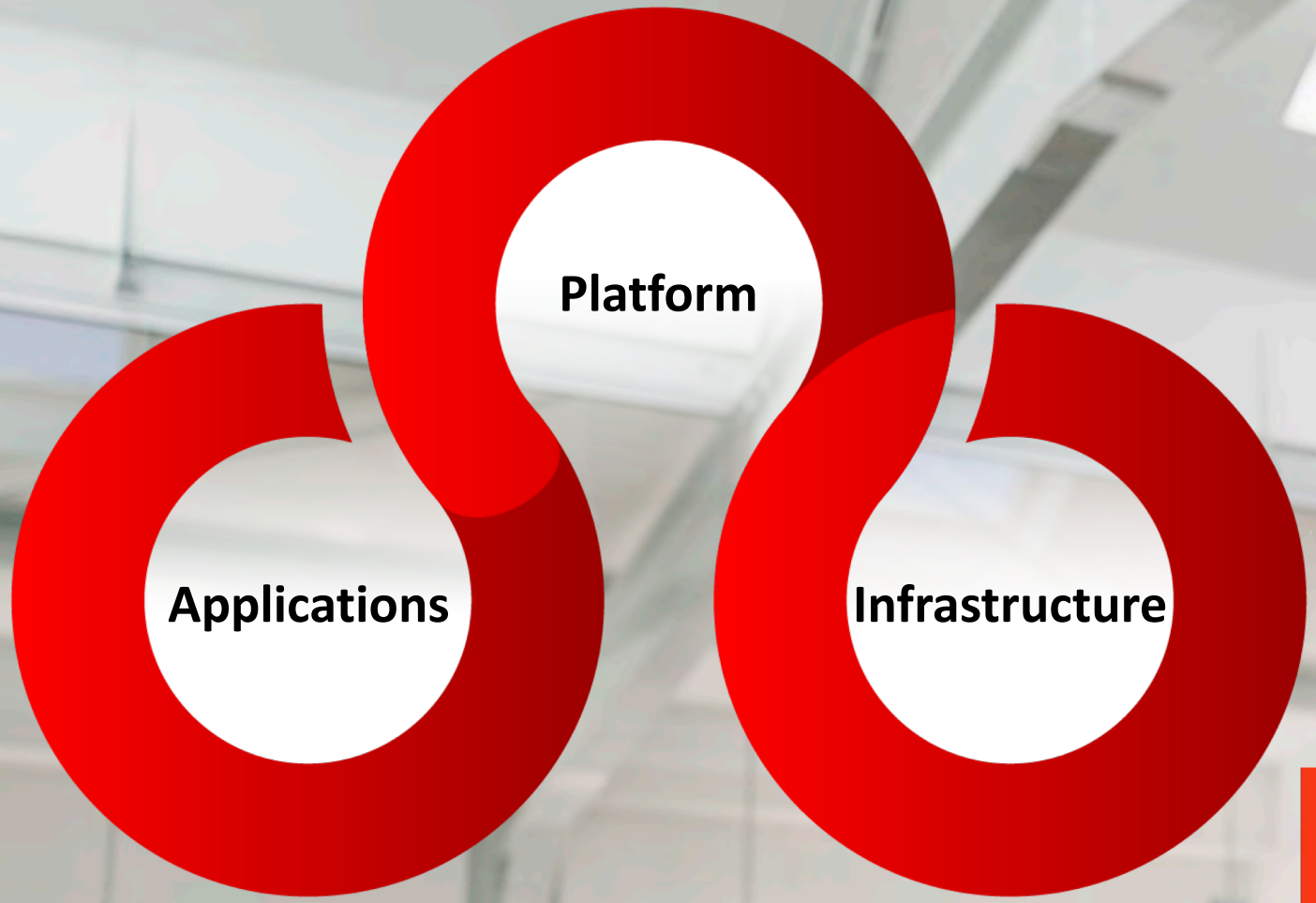

A complete, integrated platform with intelligent solutions at every layer—already connected and aware, so you don't build it

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The Future is Autonomous…

- Autonomous Database moves you from operations to persistent innovation
- Use your data to learn and drive better business outcomes, free up your resources from maintenance to drive value
- Run your organization smarter, more efficiently, and securely

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