



# Oracle OpenWorld 2019

SAN FRANCISCO

# Customer Panel

## Oracle Autonomous Data Warehouse

Session ID: PAN1043

### Reiner Zimmermann

Senior Director, Oracle Global Leaders Program  
DW & Big Data Product Management

September 19th, 2019

**OUTFRONT**

Sensa Analytics™



**SUMMIT**  
get value from data

# Worldwide Global Leaders Program

The three pillars



Meeting  
&  
Share



Educate  
&  
Support



Feedback  
&  
Roadmap

**ORACLE®**

Oracle Global Leaders Program



# Worldwide Global Leaders Meeting

## Upcoming Global Leaders Meeting



ORACLE®  
Oracle  
Global Leaders Program



Customer Meeting – EMEA  
December, 4/5, 2019  
Beirut, Lebanon

ORACLE®  
Oracle  
Global Leaders Program



Customer Meeting – Americas  
January, 22/23, 2020  
Miami, Florida

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Oracle  
Global Leaders Program



to be confirmed

Customer Meeting – JAPAC  
February, 2020  
Bali, Indonesia

# Autonomous Database Customers





**OUTFRONT/**

**Derek Hayden**  
VP - Data Strategy & Analytics

**Sensa Analytics™**

**Steven Chamberlin**  
CEO

 **CERN**  
**openlab**

**Manuel Martin Marquez**  
Senior Project Leader

**sumIT**  
get value from data

**Holger Friedrich**  
CTO





**OUTFRONT/**

Sensa Analytics

 CERN  
openlab

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get value from data

**Derek Hayden**  
VP - Data Strategy & Analytics

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CEO

**Manuel Martin Marquez**  
Senior Project Leader

**Holger Friedrich**  
CTO

# Thank You



**Reiner Zimmermann**

Senior Director, Oracle Global Leaders Program  
DW & Big Data Product Management





**OUTFRONT/**

# **MEDIA SPEND ANALYSIS**

## **AUTONOMOUS DATA WAREHOUSE**

**DEREK HAYDEN**  
VP, DATA STRATEGY & ANALYTICS  
OUTFRONT MEDIA

SESSION ID: PAN1043

SEPTEMBER 17, 2019 | SAN FRANCISCO, CA





**509k**

Total Displays

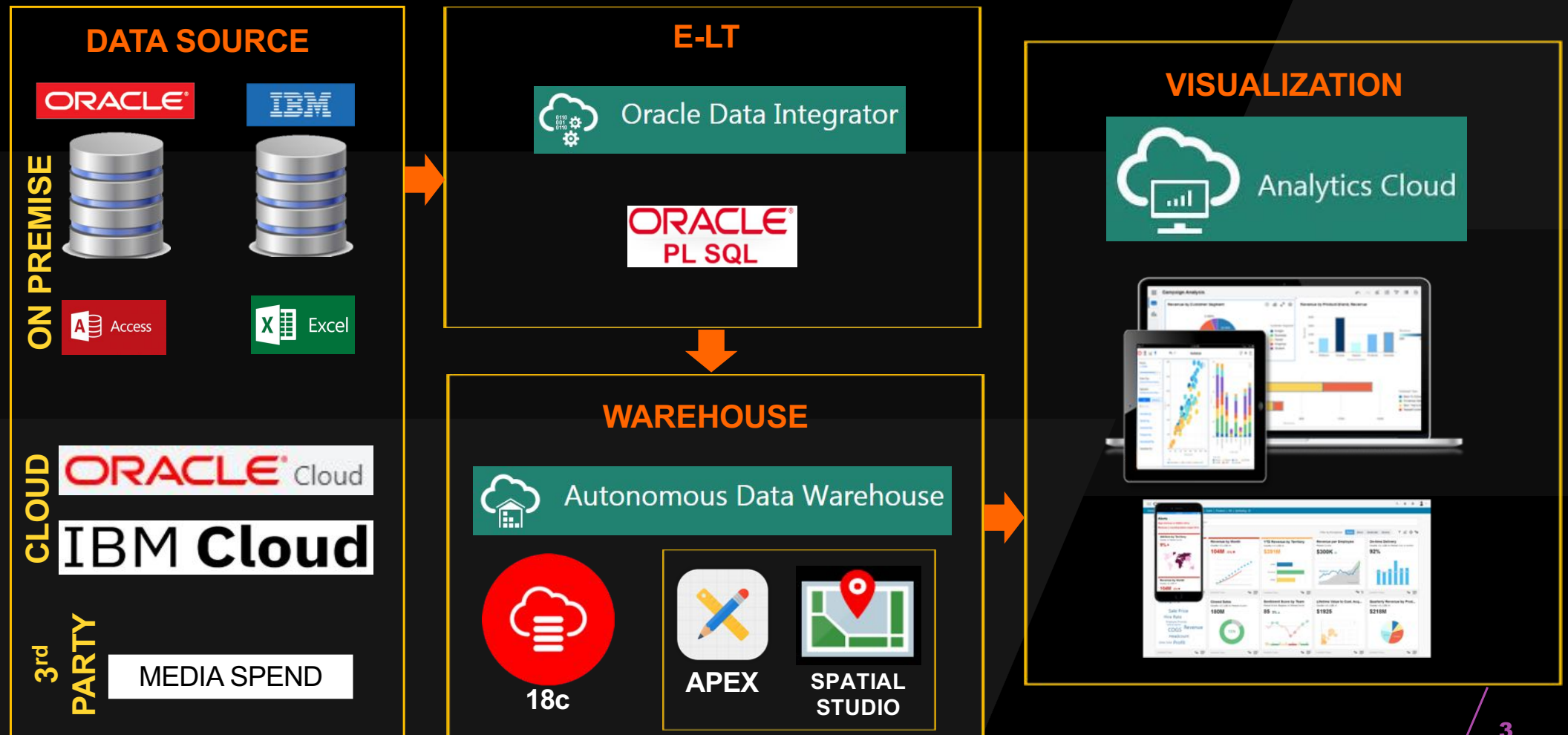
**\$1.6B**

2018 Revenues

**TLC**

Connect Brands  
with Audiences

# CLOUD ANALYTICS ARCHITECTURE

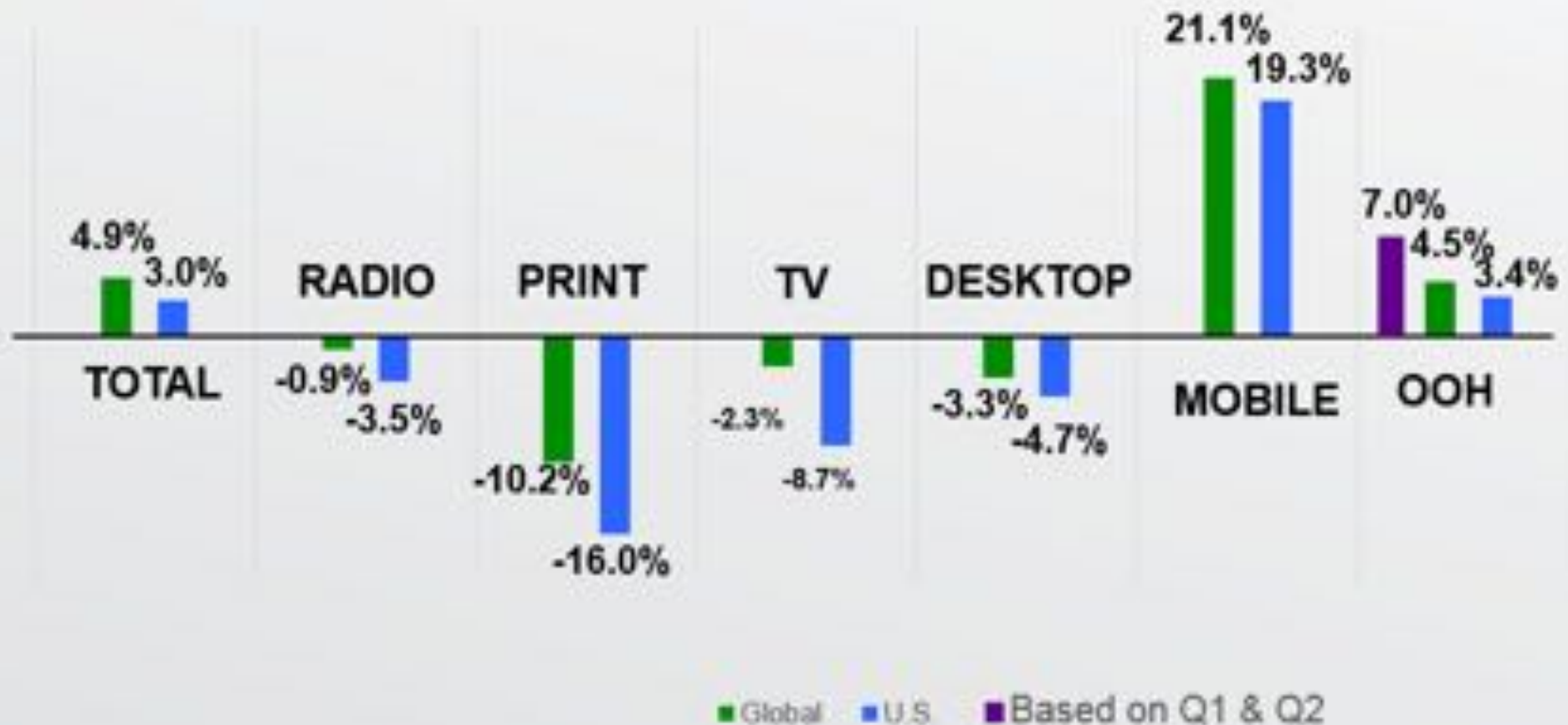


# MODERN MARKETING ANALYTICS NEED

- / CHANGING MEDIA LANDSCAPE
- / OUTFRONT AS A MEDIA PARTNER
- / TECHNOLOGY AND DATA INVESTMENT



# 2019 AD SPEND FORECASTS



MAGNA GLOBAL, 2019



# CHALLENGE

- / ANALYZE MEDIA SPEND DATA BY DMA
- / HIGHLY MANUAL EXERCISE
- / LIMITED BY EXCEL DATA LIMITS



# 2019 GOALS

- / ON DEMAND SEARCH FOR CATEGORIES, ADVERTISERS, AND MARKETS
- / IDENTIFY LOCAL AND REGIONAL ADVERTISER TARGETS
- / NATIONAL ADVERTISER SPEND PROFILES
- / MEDIA MIX MODELS
- / HELP SALES 'CALL PLAYS'



# RAPID DEPLOYMENT

- / UCC CONVERSION EFFECTIVE 1/1
- / ACTIVATE SERVICES 1/2 ~ 15 MIN
- / CREATE ADW AND OAC ENVIRONMENT  
~30 MIN





# RAPID DELIVERY

- / 1/7 – PROJECT KICKOFF
- / 1/8 – 20 MILLION+ ROWS DATA
- / 1/9 – FIRST PROTOTYPE IN OAC
- / 2/11 – V1 RELEASE



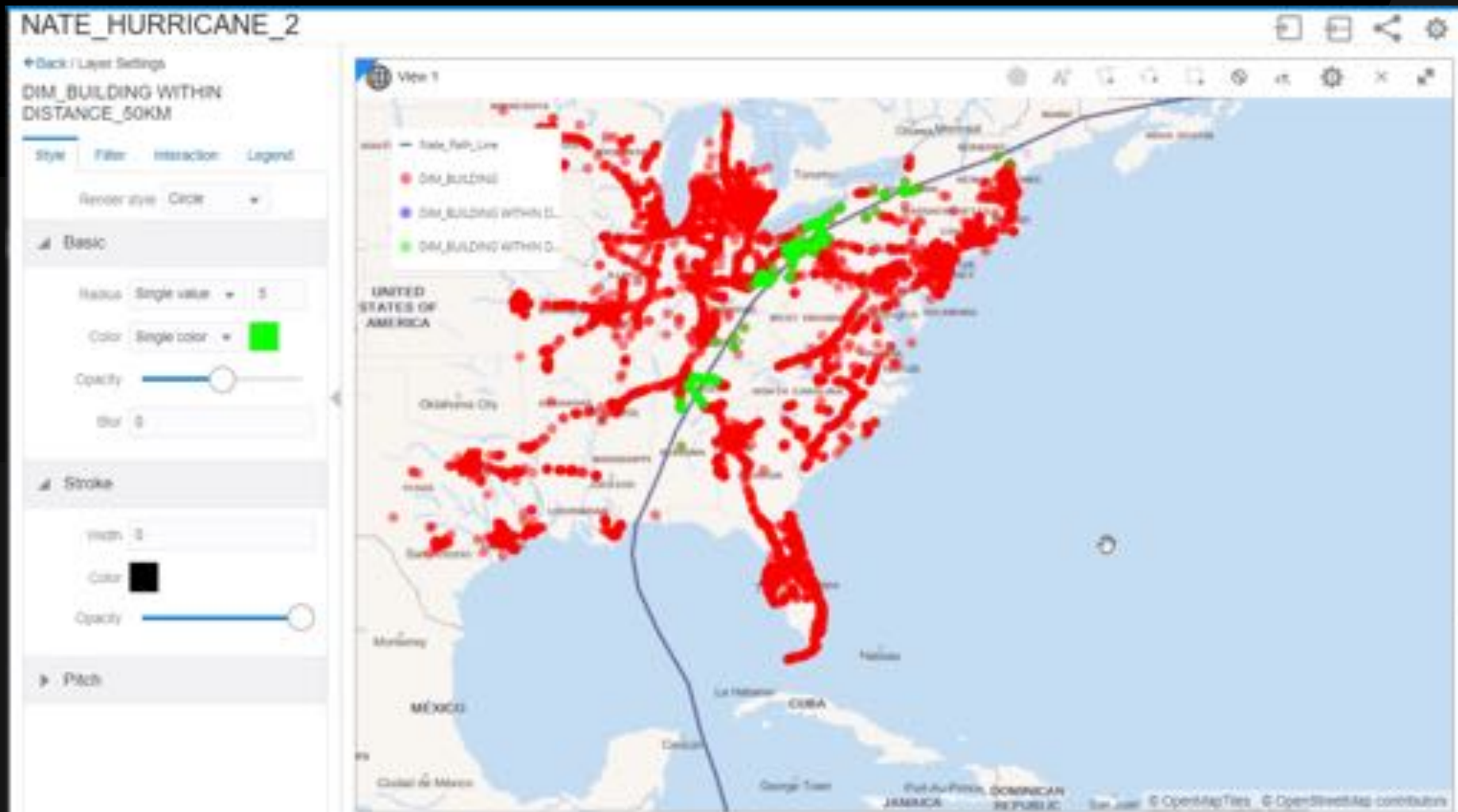
# FUTURE OPPORTUNITIES

- / INTRODUCE ADDITIONAL DATA SOURCES
- / MEDIA MIX COLLATERAL FOR CUSTOMERS FROM OAC
- / MACHINE LEARNING
- / PREDICTIVE ANALYTICS
- / SPATIAL STUDIO





# SPATIAL STUDIO





Faster Results.  
Piece of Mind.

# Faster Results. Sensa and Oracle Autonomous Technologies

*Steve Chamberlin*

## Steve Chamberlin CEO, Sensa Analytics

- Analytics journey began in 2001
- 17 years with Oracle systems
- OBIEE, BICS, OAC, DV, DBCS, ADWC
- Created Healthcare app
- Multiple OAC-ADW implementations across multiple industries
- Oracle Excellence Award, 2018



# About Sensa

- Founded 2015
- Oracle-focused consulting
- Out and about:
  - Oracle videos
  - Fortune article
  - Oracle Cloud Leadership
  - Gartner BI Conference
  - Becker's Spine Review
  - Profit Magazine



# Promise of ADW Delivered

## Our Experience

- 15+ customer environments
- Existing and new environments
- Multiple types, timings, of different data sources
- Advanced analytics

## Lessons Learned

- ADWC makes it possible to put more time in the places it counts
- Rather than upkeep and maintenance, time can be spent on finding ways use data to improve business
- Don't be afraid to experiment, new instances take minutes to create
- Thorough testing helps find the pain points ADW can alleviate

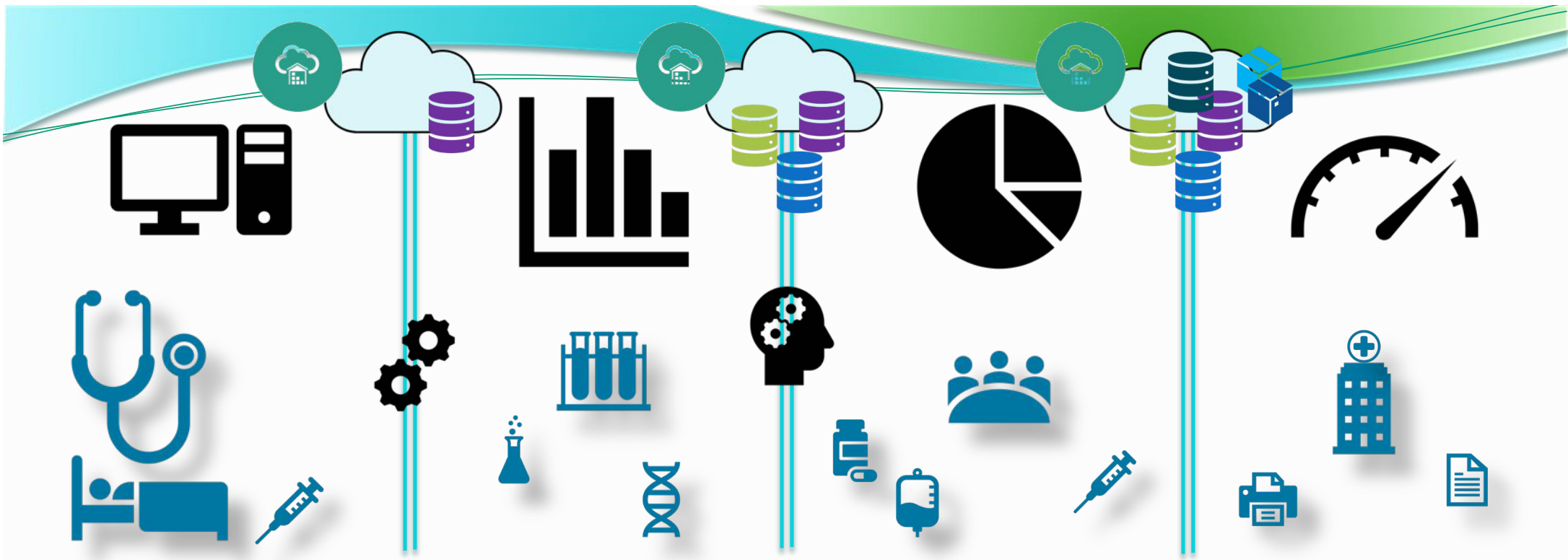


# ADWC Experience

- QMP First to Production!
  - Replicated existing environment
    - 6 TB
    - 1 data source – billing / claims
    - 36 tables
    - 321MM records
  - Redirected ETL towards new target
    - Initially = Data Sync
    - Converted to OIC
  - Adjusted analytics data sources
  - Ran most popular scripts and queries to allow system to learn

*“With Oracle’s comprehensive end-to-end processes and solid security procedures, it’s usually not even a fair comparison [to hosting providers]. Leveraging Oracle Autonomous Data Warehouse Cloud, we can offer them immediate value at about half the cost.”*





Office Visit

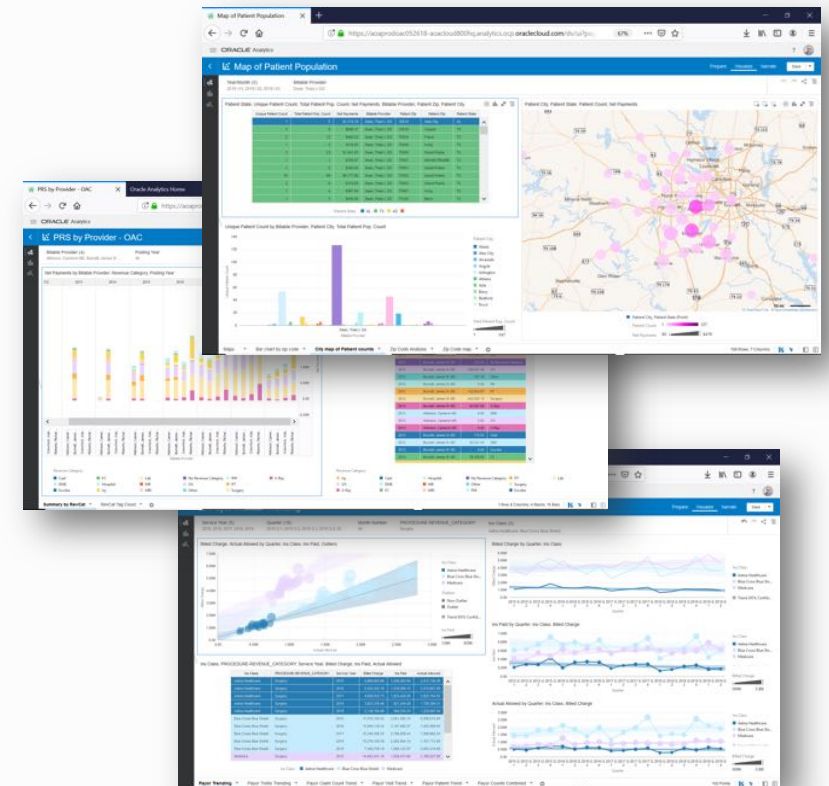
Lab Tests

Results

Billing

# Enhancing Health Services Value

- Fewer staff
- Real-time access to testing results
- Billing insight, increased collections
- Insurance Use Case: Billing table for procedure codes by insurance company
  - Initial dashboard would take 15-30 minutes to render
  - ADW results = less than 30 seconds





# ADWC and Beyond

- Advertising Analytics
  - Migrated existing environment
  - On-prem Oracle Database – Advertising spend / usage metrics
  - Faster and more responsive to developing market assessments
- Arlington Orthopedics
  - Migrated from BICS
  - Reduced DSO from 67 to 28, Productivity guidance, Increased 2 to 12 locations WITHOUT increasing staff
  - Advanced analytics: Geo-tracking of patient services and trending

**WHAT IS THE UNIVERSE MADE OF?**  
**HOW DID IT START?**  
**FUNDAMENTAL RESEARCH**



# CERN Aerial View



## World's largest scientific instrument

27km (16.8 miles) circumference, 6000+ superconducting magnets

## Fastest racetrack on Earth

Protons circulate 11245 times/s (99.9999991% the speed of light)

## Emptiest place in the solar system

High vacuum inside the magnets

## Hottest spot in the galaxy

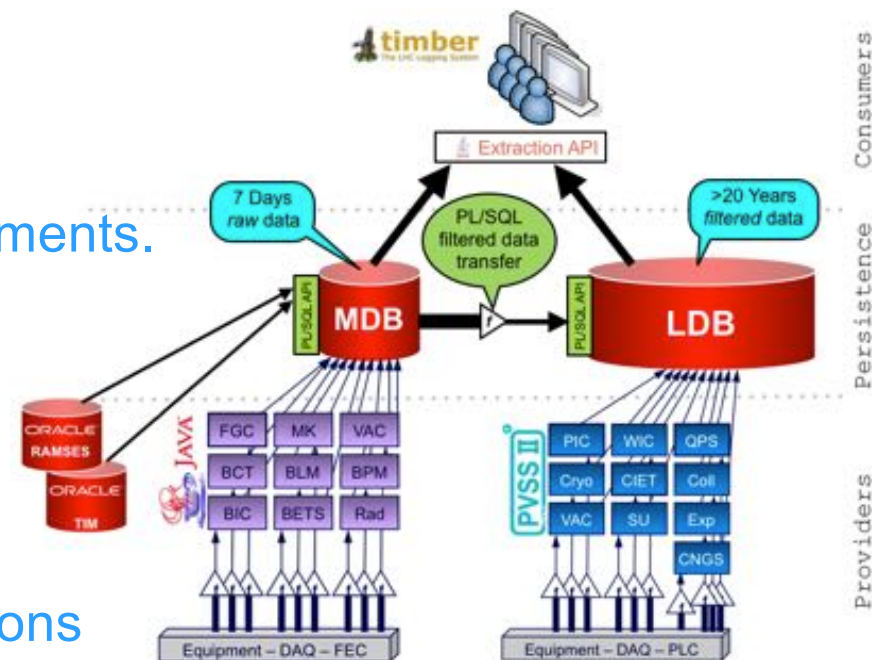
During Lead ion collisions create temperatures 100 000x hotter than the heart of the sun;

# SCADA SYSTEMS

- In addition of physics data, CERN's produces a lot of data for its SCADA (Supervisory Control And Data Acquisition) systems.
- SCADA scope is very wide:
  - **Accelerator systems:** cryogenics, vacuum, machine Protection, radiations...
  - **Detector Control System:** ATLAS, CMS, ALICE and LHCb
  - **Technical Infrastructure:** electrical network, cooling and ventilation systems

# CERN ACCELERATOR LOGGING SERVICE

- 2 057 960 signals
- 2.5TB data per day.
- From scalars to arrays of up-to 4 million elements.
- Data diverse in nature:
  - accelerator running modes,
  - equipment statuses,
  - magnet currents,
  - etc.
- +1000 individuals and +130 expert applications

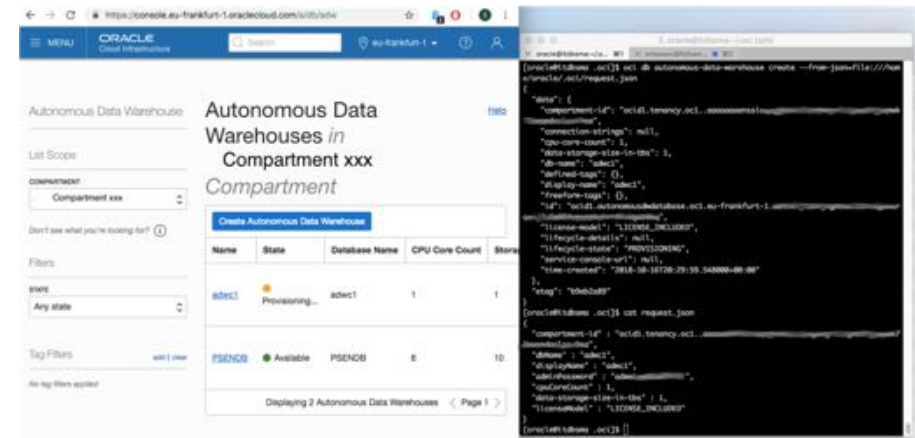


# IIoT AND AUTONOMOUS TECHNOLOGIES

- Control IIoT data at CERN is disperse into several data silos
- Improve the performance of the most challenging data retrieval/analytic scenarios
- Be able to fully exploit its potential we need to make all data available:
  - Find hidden correlations
  - Anomalies detection
  - Most-mortem analysis
  - Root cause analysis (RCA)
  - Intelligent Alarm systems
  - Etc

# IIoT – AUTONOMOUS DATA WAREHOUSE (ADW)

- Installing OCI
- Deployment of a new instance
- Creating object storage bucket
- Moving data
  - Data Pump Export
  - Uploading to object storage bucket
  - Data Pump Import
- Monitoring and Logs analysis
- Performance Analysis





# ADW – PERFORMANCE

DB time (s)	Delta LIO	Delta PIO	Test name	Env
41.6	29035	851.5	PSEN Datapoint value trends	PROD
43.1	162	859.3	PSEN PL/SQL call	PROD
46.7	52172	874.6	PSEN Event Screen GTT insert EVENTQUERYELEMENTS	PROD
47.3	1019	893.9	PSEN Event Screen GTT select from EVENTQUERYELEMENTS	PROD



DB time (s)	Delta LIO	Delta PIO	Test name	Env
.1	857	0	PSEN Datapoint value trends	INT
.8	754	44	PSEN PL/SQL call	INT
95.8	125349	23218	Event Screen with ELEMENT_NAME pattern	INT
40.2	50325	40434	PSEN Event Screen GTT insert EVENTQUERYELEMENTS	INT
9.7	1098	271	PSEN Event Screen GTT select from EVENTQUERYELEMENTS	INT
3.3	9268	6923	PSEN Event Screen GTT insert ER_EL_NAMES	INT
.4	29588	0	PSEN Event Screen GTT insert ER_EL_NAMES_IDS	INT
179.4	653633	651801	PSEN Event Screen GTT select from ER_EL_NAMES_IDS	INT
3.4	97107	1	PSEN Event Screen GTT select from EVENTHISTORY and ER_EL_NAMES_IDS	INT



DB time (s)	Delta LIO	Delta PIO	Test name	Env
0	75	0	PSEN Datapoint value trends	ADW
.1	84	0	PSEN PL/SQL call	ADW
.8	9524396	9522598	Event Screen with ELEMENT_NAME pattern	ADW
1.3	8378	0	PSEN Event Screen GTT insert EVENTQUERYELEMENTS	ADW
.5	9522868	9522598	PSEN Event Screen GTT select from EVENTQUERYELEMENTS	ADW
.3	2891	16	PSEN Event Screen GTT insert ER_EL_NAMES	ADW
.4	7136	8	PSEN Event Screen GTT insert ER_EL_NAMES_IDS	ADW
32.3	10874034	0	PSEN Event Screen GTT select from ER_EL_NAMES_IDS	ADW
1.4	9523246	9522598	PSEN Event Screen GTT select from EVENTHISTORY and ER_EL_NAMES_IDS	ADW



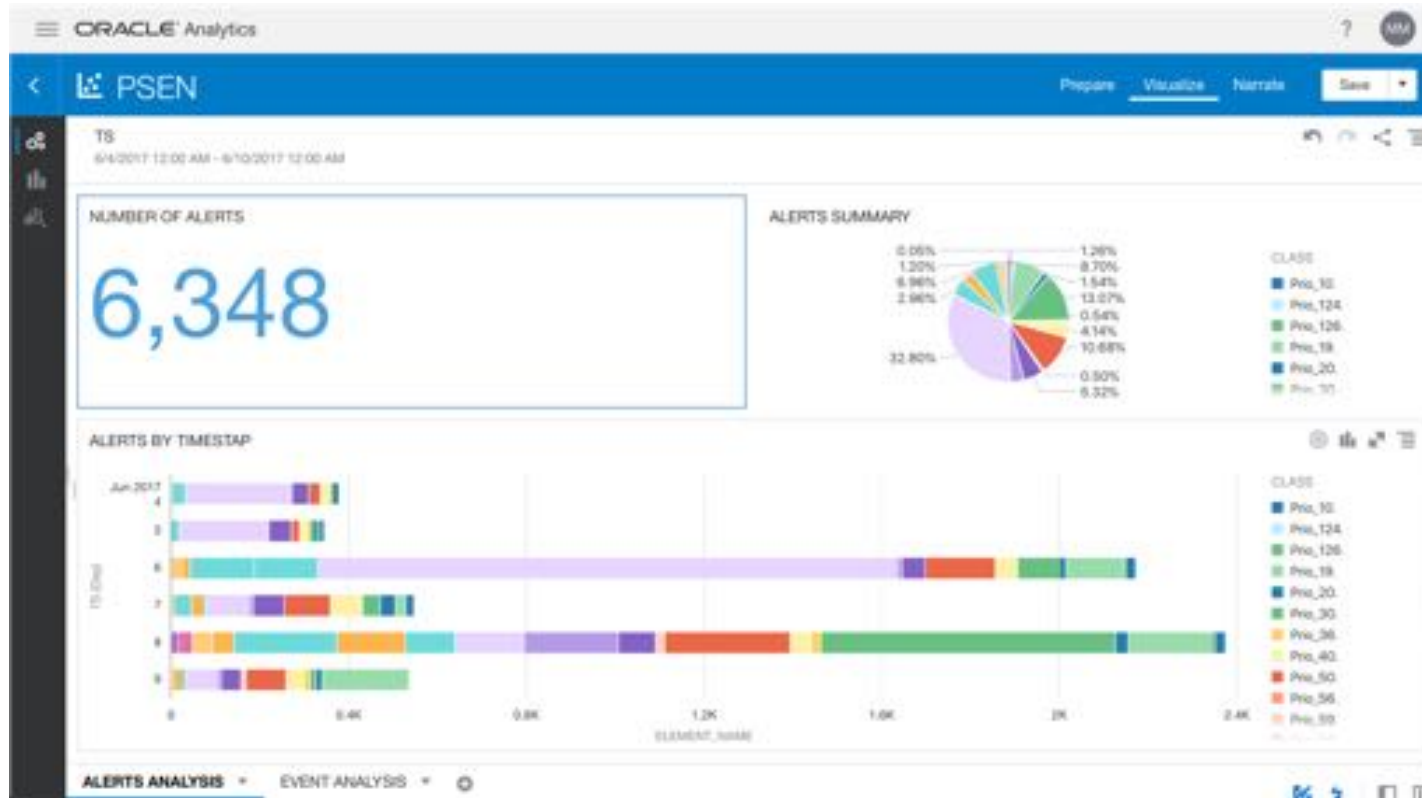
## ADW – CONCLUSIONS & LESSONs LEARNT

- Automatic access to Oracle optimization features.
- Transparent and automatic backups and patching.
- Transparent scale-up and scale-down to adapt to the needs.
- Brings Exadata features in a dedicated fully managed environment.
- Operations require little or no prior DBA expertise.
- Fully managed system allows to focus on analytics.

# ORACLE ANALYTICS CLOUD

- Oracle Autonomous Strategy
  - Automated creation of required resources, administration, patches, backups, etc.
- One click provisioning and scaling
- Self-service covering all analytics workflow
  - Loading and transforming/enriching data
  - Dashboards, basic and advance analytics
- Allows us to push data analytics responsibilities to equipment experts

# ORACLE ANALYTICS CLOUD



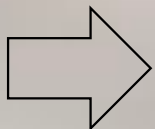
A large, snow-capped mountain peak, likely Mount Everest, rises majestically above a thick layer of white clouds. The sky is a soft, hazy blue, suggesting a clear day at high altitude. The mountain's peak is sharp and jagged, with patches of snow and ice visible on its slopes.

# TWINT & LARS on Autonomous Database — Enabling Agile Businesses & Applications



# TWINT - A Rapidly Growing, Agile Business

- Largest mobile payment platform in Switzerland
- Payment solution of almost all Swiss banks
- Open four-party platform with issuers & acquirers
- Regulated by banks guidelines & national regulator
- Customer growth of more than 50% last year
- Ecosystem & solution grow constantly & rapidly
- Member of European Mobile Payment Systems Association (EMPSA)
- Payments from parking meters to web shops



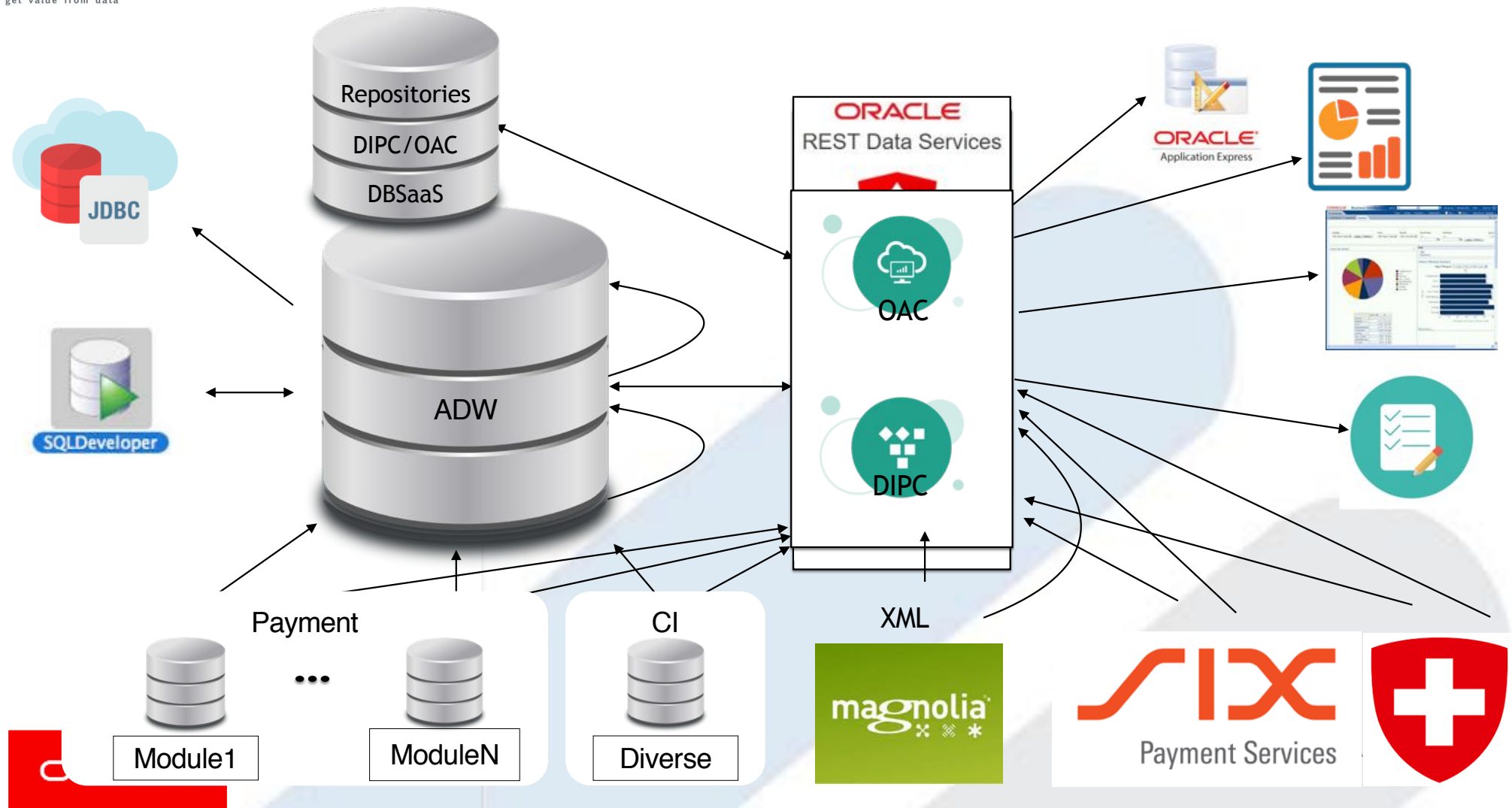
**Flexible, scalable & secure infrastructure  
are vital factors for TWINT's success!**



# Requirements

- Agility
- Availability
- Scalability
- Dependability
- Simplicity
- Control
- Low maintenance
- Experts for hire
- Performance
- Low effort & risk-free migration

# Migration Proved to be Easy





## Conclusions

- Data Quality guaranteed with active constraints
- Rapid web application development with APEX
- Full REST service availability of Data Warehouse
- Data security, sharing, and provisioning
  - Data Redaction
  - Data Masking
  - Virtual Private Database
- Realistic a-priori budgeting
- Dramatically improved performance
- Simple, low-risk migration path



**ADW is perfectly suited for growing businesses like TWINT's**



**ORACLE®**






# **LARS — Lotus Notes Application Replacement System**



Lotus Notes - DB Viewer

Bitte Applikation wählen ⓘ Über 👤 notefviewer ▾

Home



# Lotus Notes - DB Viewer

Generischer Lotus Notes Dokument Viewer

🔍 Applikation suchen...


Reset

Featured


Compact

MediaList


Report




**CSC Helpdesk**  
Dokumente: 25




**Expense**  
Dokumente: 4




**Fleetmanagement**  
Dokumente: 33



**Mailbox Zederpe**  
Dokumente: 161



**Release Managment**  
Dokumente: 24

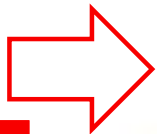


**TeamRoom**  
Dokumente: 12

Seite 1 - 6 of 6

## Painless Migration Off of Lotus Notes

- Migrate Lotus Notes data into the Oracle Cloud
- Access data of multiple Notes applications
  - everywhere
  - from a single entry point
  - on a multitude of devices
- Choose between
  - generic viewer based on Oracle Application Express
  - custom APEX application developed in agile fashion
- No more Notes licenses, Domino servers, admin cost
- Based on Oracle Autonomous Database
- Risk-free migration through iterative, agile approach



Contact us for more information/demo: [LARS@sumit.ch](mailto:LARS@sumit.ch)

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