

Oracle Analytics Customer Panel



Sridhar Vijayakumar
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Head of Enterprise
Architecture
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Rok Planinšec
CIO
UNIOR

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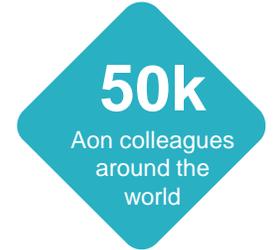
AON

Oracle Global
Leaders Event for
CEE



About Aon

To shape decisions for the better – to protect & enrich the lives of people around the world. Aon develops insights—*driven by data and delivered by experts*—that reduce the volatility our clients face and help them maximize their performance.



RISK

Aon provides risk advisory, commercial risk and reinsurance solutions to help clients better identify, quantify and manage their risk exposure



\$125B

risk premium placed annually

WEALTH

Aon provides actuarial, investment and bundled wealth solutions to help clients design and implement secure, equitable and sustainable retirement programs



\$3.5T

in assets under advisement¹

HEALTH

Aon provides consulting, global benefits and exchange solutions to help clients mitigate rising health care costs and improve employee health and well-being



\$180B

of healthcare premium directed annually

ENABLED BY DATA & ANALYTICS



Aon combines proprietary data, technology, and advisory services to develop insights that help clients reduce volatility and improve performance

Centralized Sales Reporting & Analytics Support

We support the majority of reporting and analytics for Internal audiences, **OTBI**, **BIP** and **Oracle Analytics Cloud** are the tools utilized.

Oracle Sales Cloud OTBI

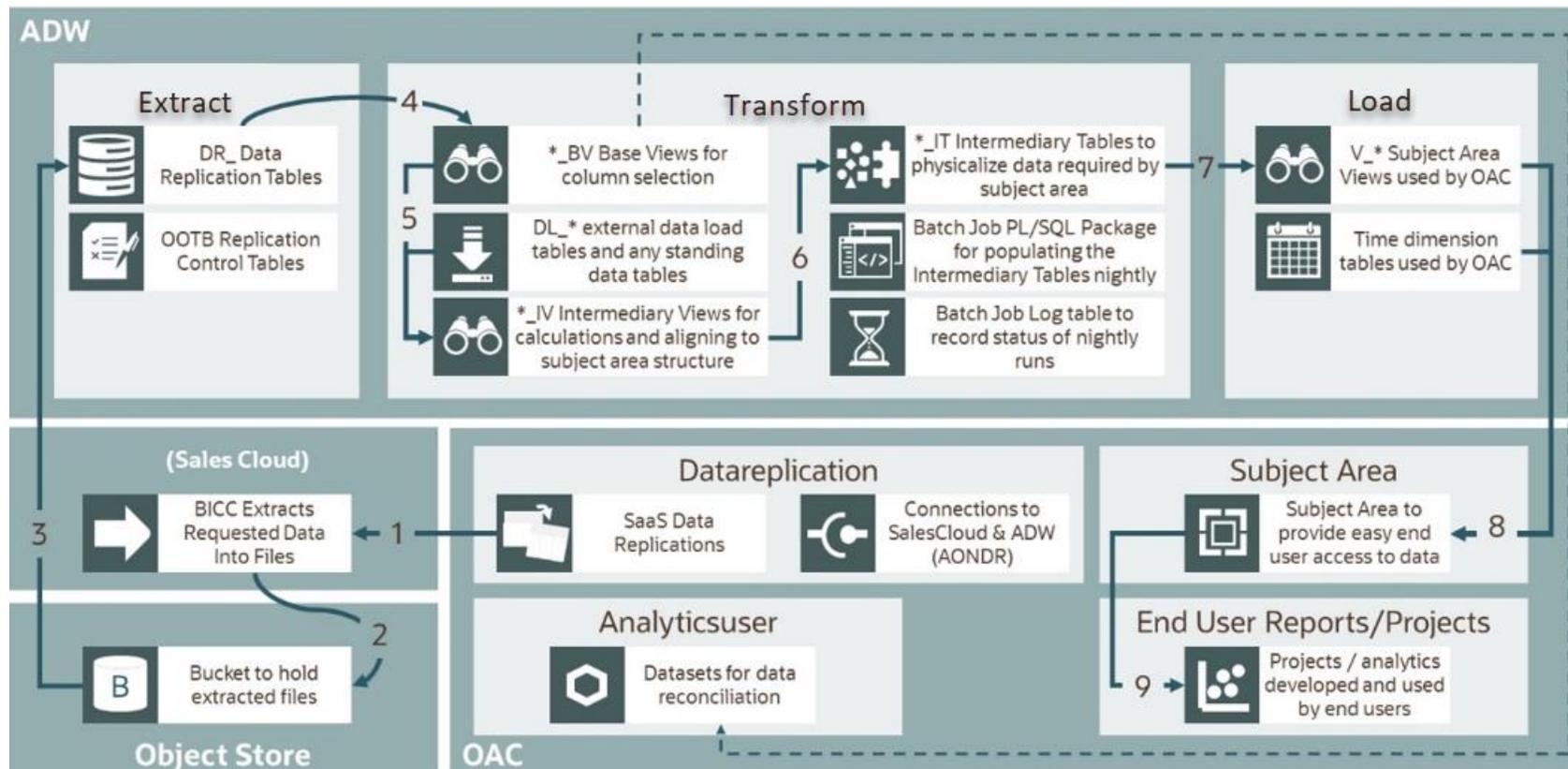
Situation before moving to the cloud / Motivation to move to the Cloud

- 11000 Users.
- Lack of visualization capabilities.
- OTBI security roles are complex to implement.
- Difficult for normal users/standard users and 'Export' button is the most used feature.
- No way to extract more than 25000 rows.
- Missing confidential deals in Pipeline.
- Multi-Currency.

Oracle Analytics Cloud and ADW

Benefits of the Oracle Cloud solution

- Ability to self-service; lower effort.
- Custom dashboard and reports (flexibility).
- Multi-source data/link with other data source. E.g. marketing data.
- Multi-currency,
- Confidential deals included (Masked!)
- Better performance
- Saving up hours per week compared to previous manual extract to on-premise business intelligence tools.



High level Architecture of the Cloud solution

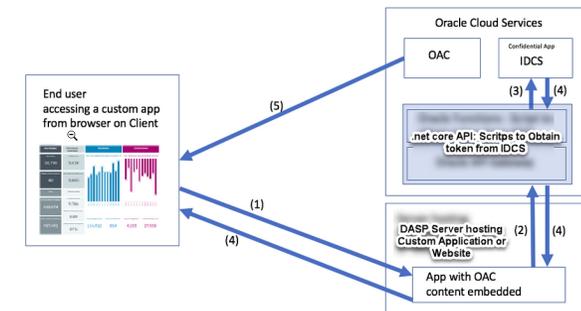
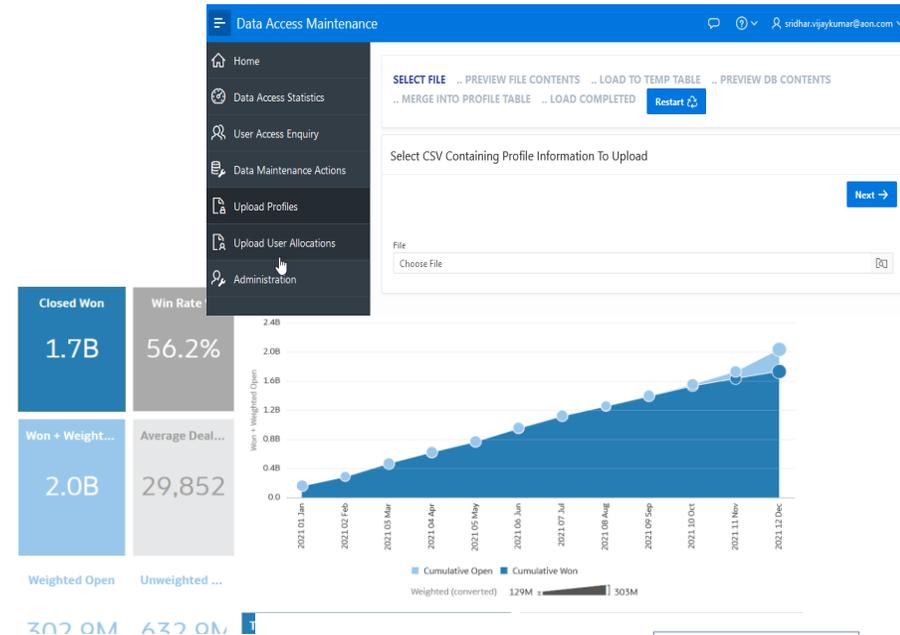
The solution is deployed within Oracle's Public Cloud utilizing two main cloud components;

- Oracle Autonomous Data Warehouse (ADW)
- Oracle Analytics Cloud (OAC)

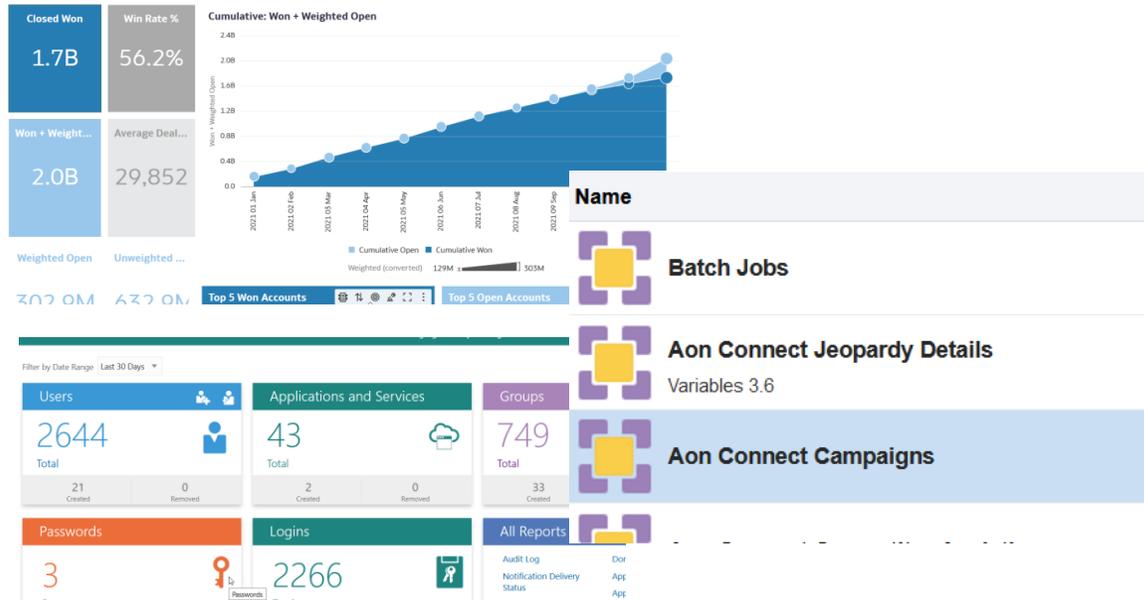
Cloud Migration Project and Experience

Below are some of the Cloud Use-Cases

- Oracle Analytics Cloud project experience
- OAC embedding
- User security Apex.



Oracle Analytics Cloud Projects



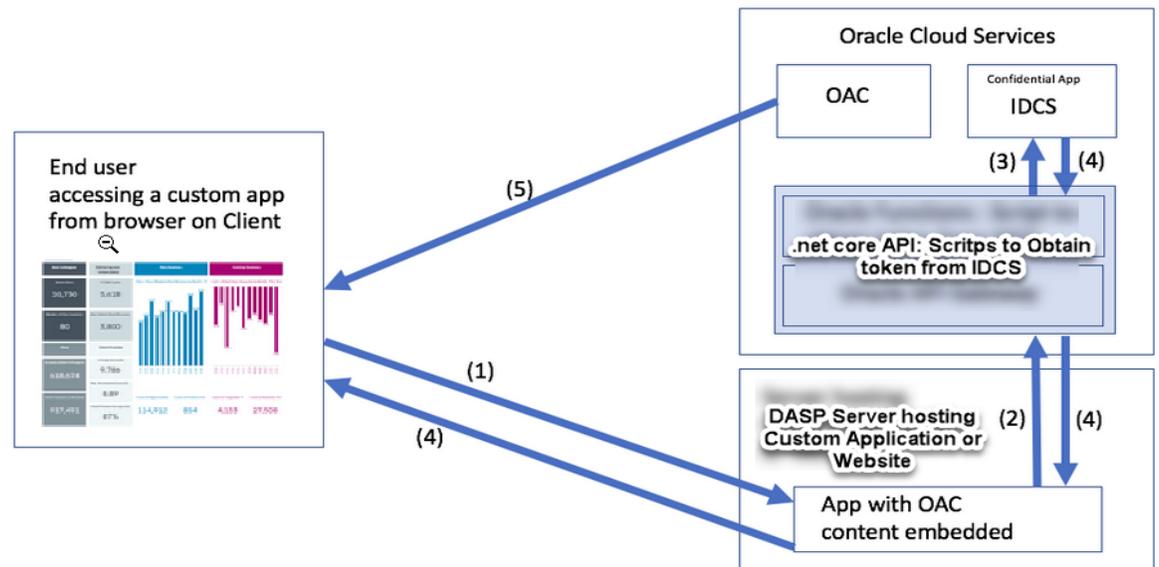
- Dashboard Published
- Active Users
- Security Groups
- Data Model



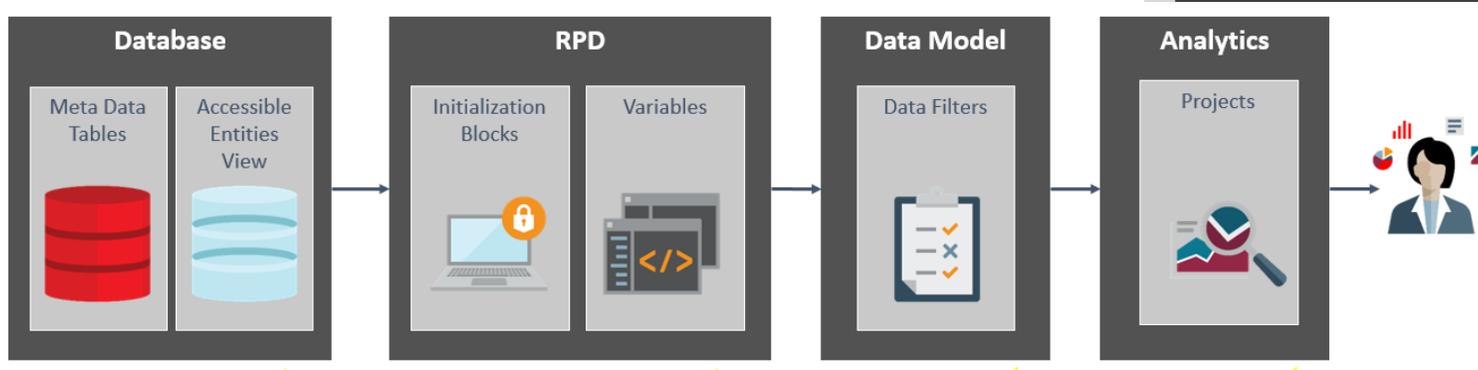
OAC Embedding

Oracle Analytics Cloud (OAC) Embedding— Public User Access

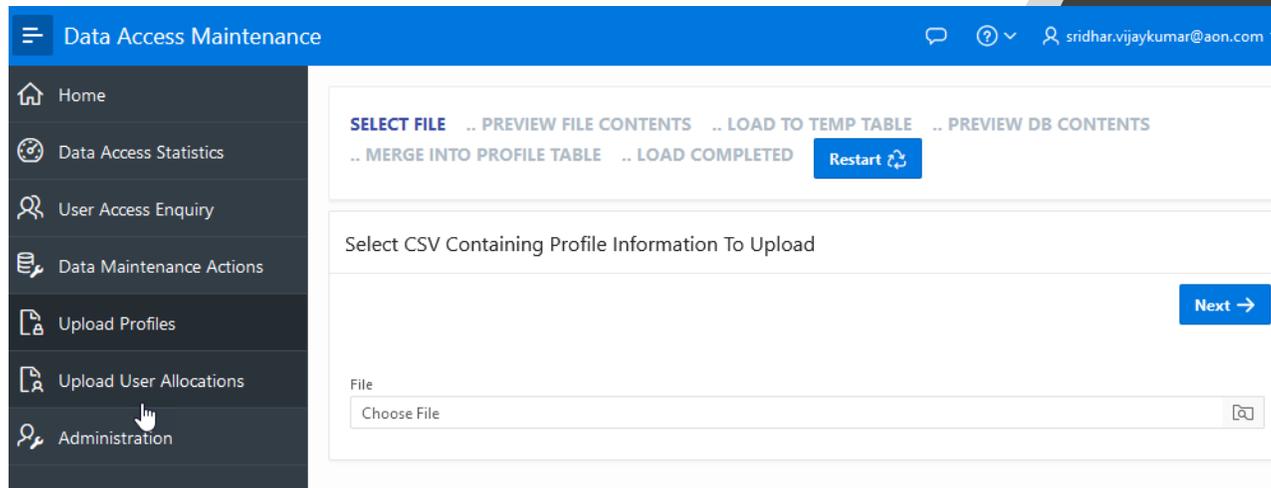
- A user can access the Aon Intranet web page that contains embedded Clive content.
- Then in the backend the web page calls an API for the authentication. that runs a script on the .net core API framework for the authentication token from IDCS.
- This scripts calls the IDCS token API using one of the methods supported by IDCS.
- The token is returned via the .net core framework API Gateway to the user.
- OAC content is shown in the users browser



Data Security -OAC/ADW/RPD



- Records who can see what and produces a list of the items that can be accessed (such as specific currencies)
- When a user logs into OAC the initialization blocks fire and populate variables (via SQL) which contain a list of items that can be accessed
- The data model references the variables in the data filters for the facts and dimensions
- The same project can be used by multiple users, each will only see the data they are allowed to





Oracle Analytics Customer Panel



Conny Björling
Head of Enterprise Architecture
Skanska

SKANSKA



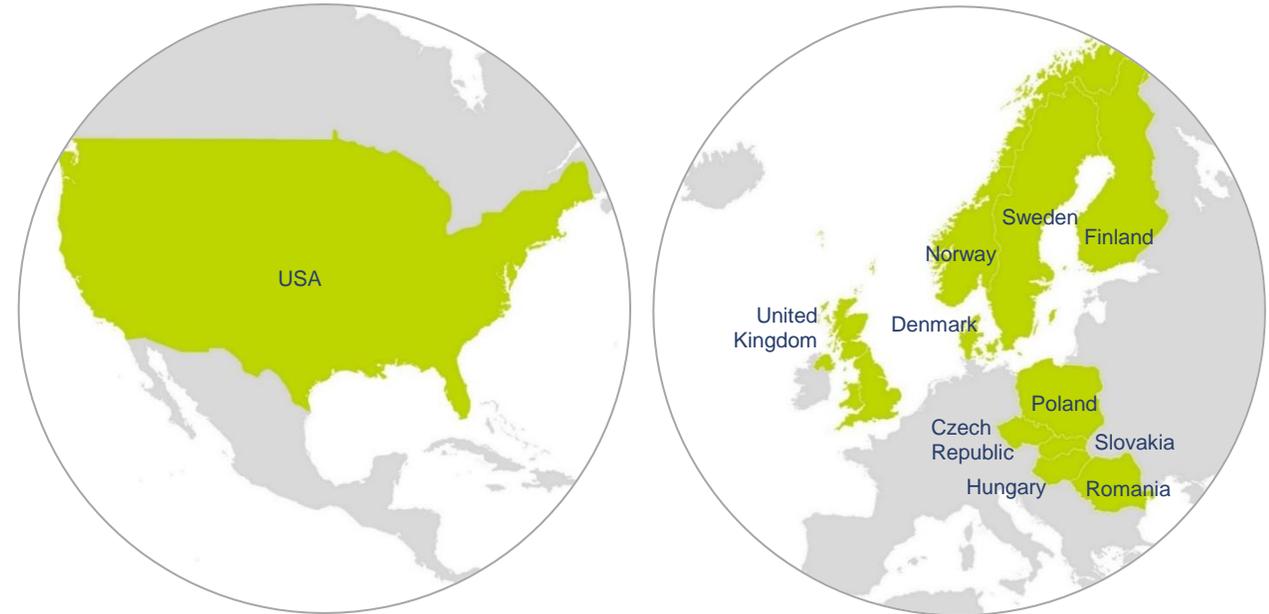
**We build
for a better
society.**

Conny Björling
Group Function IT
Skanska

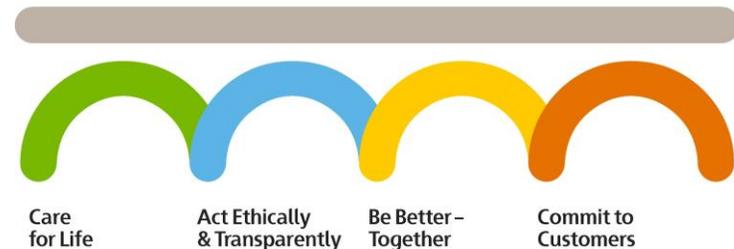
Skanska in brief

- Founded 1887 in Sweden
- International business since 1897
- Quoted on the Nasdaq Stockholm
- 2020 revenues SEK 159 billion
- 32,000 employees

We are active in selected home markets



Skanska Values

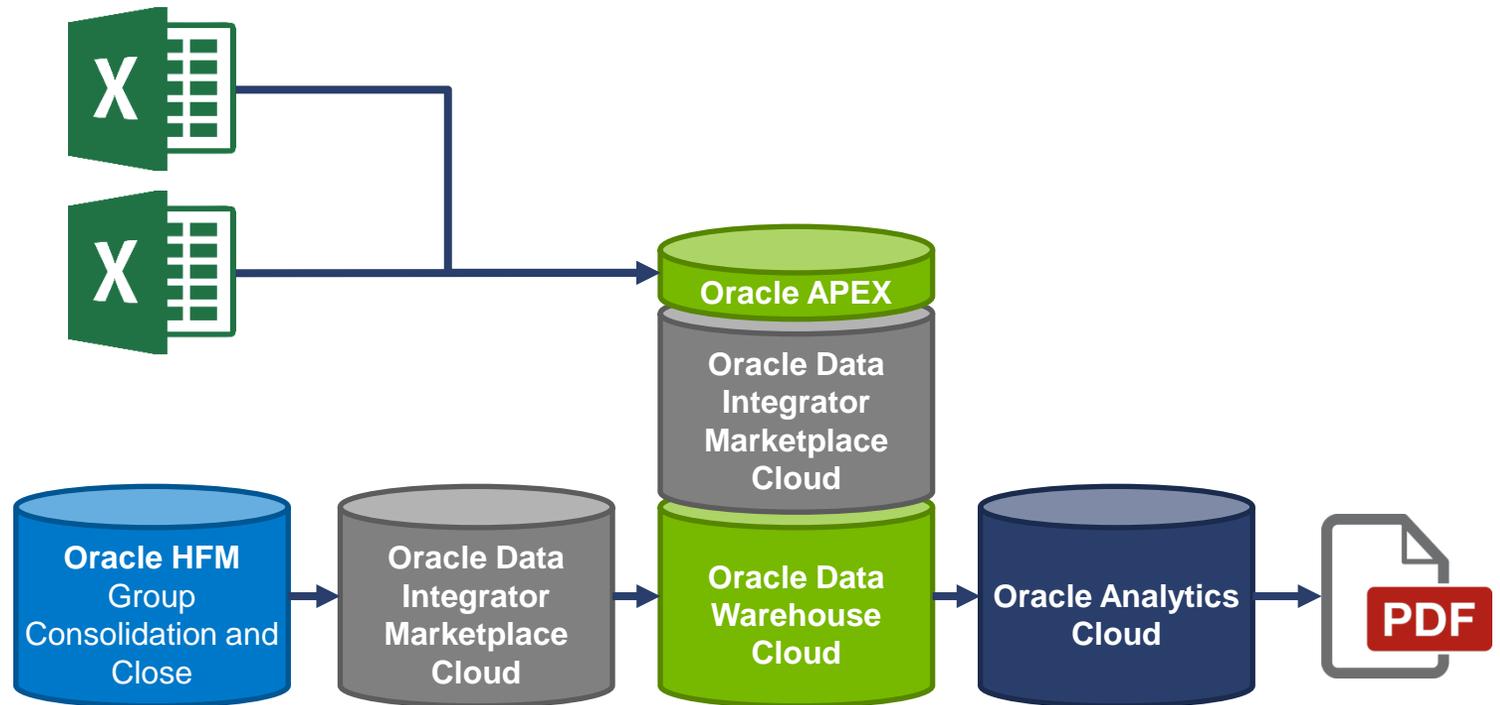


Skanska on Oracle Analytics Cloud

- First customer on Analytics Cloud (BICS), September 2014
- Multiple cloud data center migrations (“before classic” to classic, classic to OCI)
- On-premise and Cloud sources for OAC
- SSO with MSAD and Azure Active Directory
- Multiple OAC platforms in same cloud tenancy

Use Case 1: Quarterly Group Reporting

- **Global Leadership Team and Business Unit Presidents** review business unit each quarter
- **Report cover** all type of information areas
 - Financial
 - Project
 - Sustainability
 - HR
- **Process must** be simple and scalable
 - Flexibility in gathering data from business unit
 - Blending of data from Group Consolidation system with business unit operational data
 - Fast to deliver report during quarterly close
 - Report needs to be delivered as pixel perfect PDF



APEX and ODI

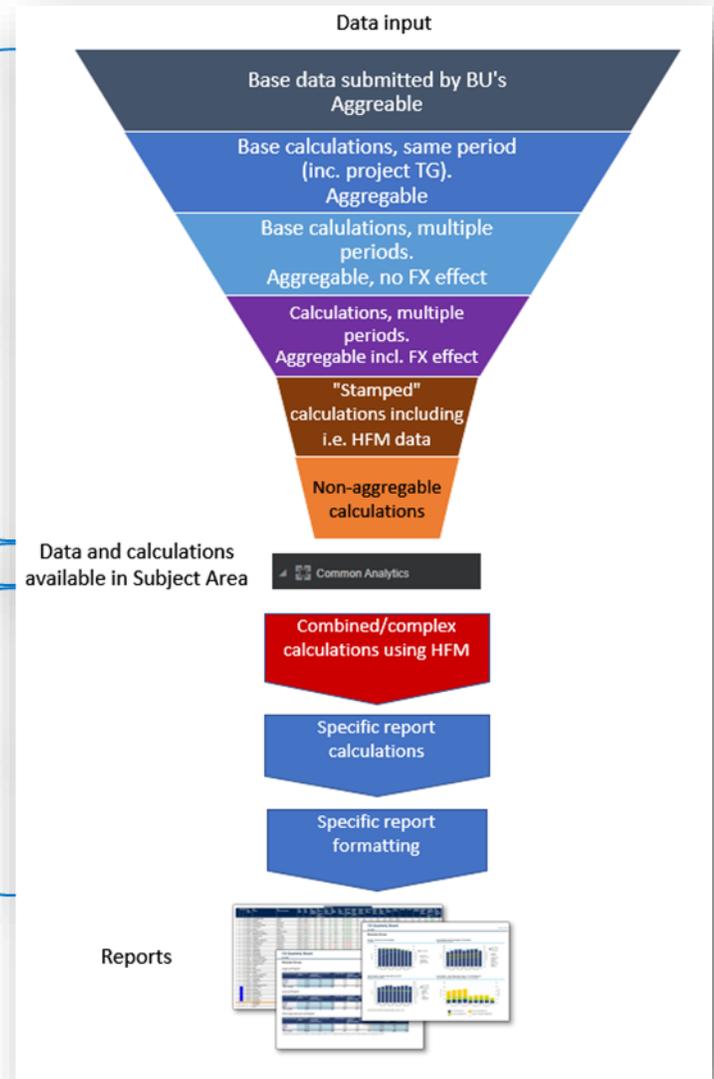
- One generic APEX application using the APEX_DATA_PARSER package to be able to load MS Excel files (*.XLSX)
- Different APEX profiles sets the validation rules for the Excel format
- ODI Load Plans handle both calculations and placement of data in DWH staging layer and DWH Warehouse layer

Calculations done with:

Oracle Data Integrator

OAC RPD

OAC



Validation error! Please correct errors in Excel file, click Back-button and try again.

ORGANISATION LABEL	ORGANISATION DESCRIPTION	SOURCE PROJECT ID	PROJECT NAME	PROJECT DESCRIPTION	PROJECT LONG DESCRIPTION (25)	PROJECT TYPE
			7677 - Building			Administrative, commercial, protective service facilities
			7832 - Road			Water transport facilities
			7944 - Building			Industrial facilities
			7921 - Road			Rail transport facilities
			7996 - Road			Rail transport facilities
			road			Road transport facilities
600008CTOT	CS Poland	PID-12427		8142 - Road		Road transport facilities
700008CTOT	CS Czech	PID-12447		highway		Road transport facilities

Profile: CS Project Registration

Select Business Unit for file: BU Central Europe

Select file: Choose file

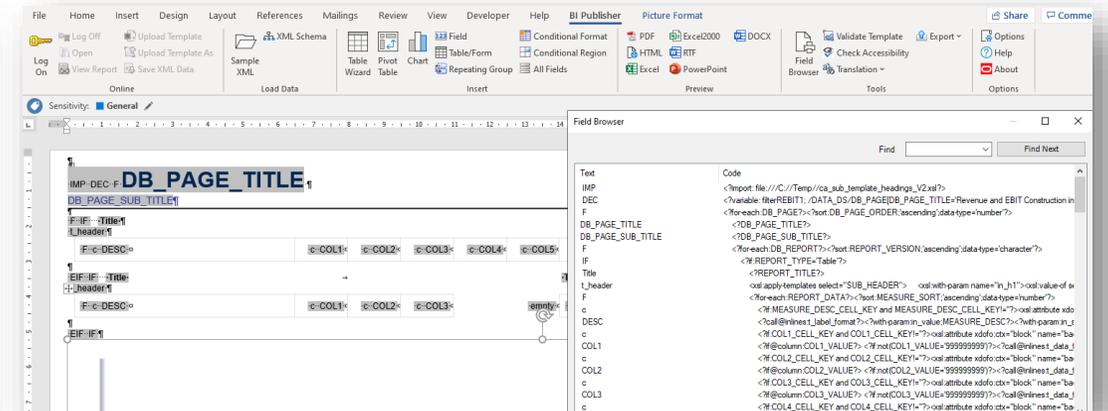
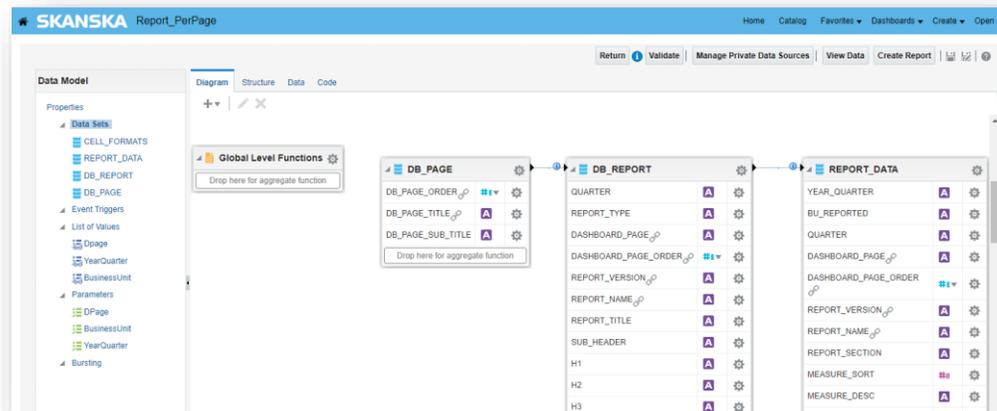
Loaded file: CA_CS_PS_BU_EXAMPLE.xlsx

Select Worksheet: Project Registration

Buttons: Load, Validate File, Clear all files, Clear Page

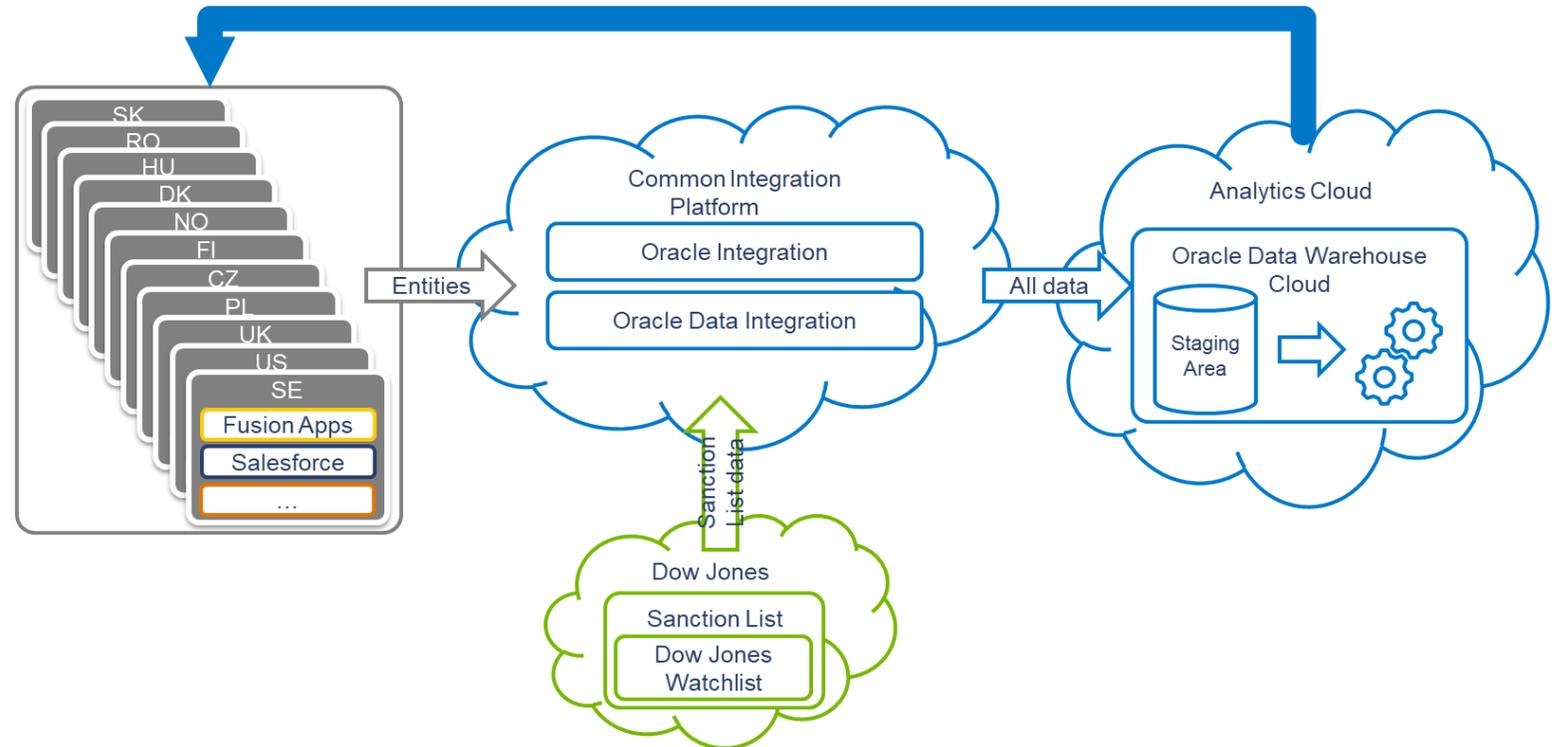
Analytics Cloud

- Subject Areas modelled in Analytics Cloud for Self-Service use
- Analytics Cloud Dataflows are used to create aggregated views for BI Publisher reporting package to shorten report creation time
- Quarterly Reporting package is created using BI Publisher as part of Analytics Cloud



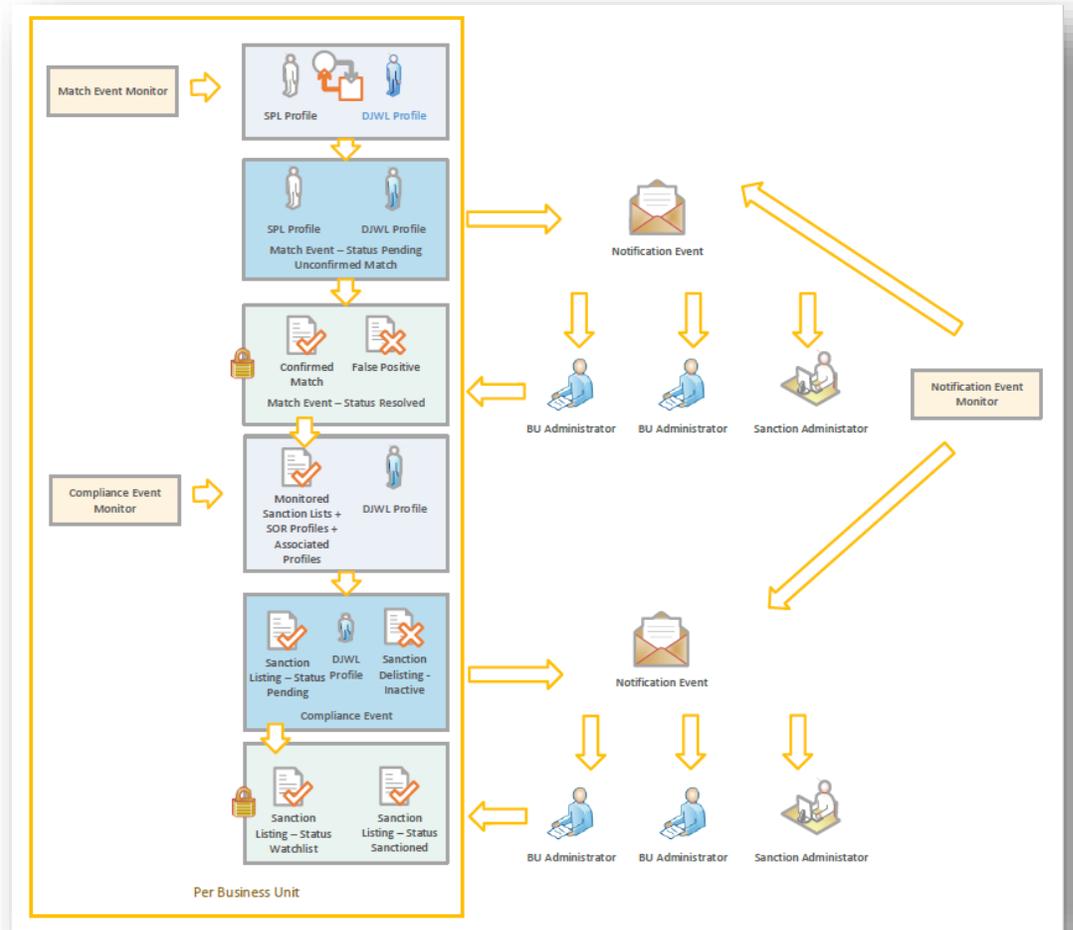
Use Case 2: Skanska Sanctions Cloud

- **Project financing** requires that all counterparties are continuously checked against global Sanctions lists
 - Suppliers and customers
- **Failure to comply** can result in penalty and other financial measures
- **Process must be simple and scalable**
 - Counter parties that are ok, can be added to list after initial contact
 - Use fuzzy logic to match counterparties with sanction profiles
 - Log all activities



Data Warehouse Cloud

- Dow Jones WatchList (DaaS)
 - 2 100 Sanction lists
 - 2 600 000 Profiles
 - 7 500 000 Name Variations
- Skanska profiles
 - 23 Source systems
 - 390 000 Profiles
- Jaro–Winkler algorithm
 - ML for the matching process



Analytics Cloud

SKANSKA Common Analytics
?

Sanctions
Home Catalog Favorites Dashboards Create Open

Overview Matching Compliance
⚙️ ?

1

Pending Match Events

Skanska profiles have matches against profiles that need to be flagged as a Confirmed Match or False / Positive

1

Pending Compliance Events

Skanska profiles have pending sanction events; a matched profile has been listed on any monitored sanction list or has been delisted from all monitored sanction lists

1

Matched Profiles

Skanska profiles have confirmed matches

1

Sanctioned Profiles

Number of unique DJ profiles that are actively listed on a sanction list Skanska monitor; and/or are SOR listed; or have an association with the above profiles and is matched to a Skanska profile. The compliance event is flagged as Sanctioned.

1

Watchlist Profiles

Number of unique DJ profiles that are matched to Skanska profiles and are actively listed on a sanction list Skanska monitor; and/or are SOR listed; or have an association with the above profiles. The Compliance event is flagged as Watchlist

Number of Confirmed Matches

Business Unit

Number of Confirmed Matches

System

Heatmap - Number Pending Matches

	BU
Salesforce	1
IPOINT	2

Color Number of ...

Number Sanctioned DJ Profiles

Number Sanctioned DJ Profiles

Sanctions: Overview > Sanctions: Overview

Analytics Cloud

SKANSKA Common Analytics ?

Sanctions Home Catalog Favorites Dashboards Create Open

Overview Matching Compliance ⚙️ ⓘ

Matching | Matches | Matching History

Review Match

Business Unit Profile Type System Dow Jones Profile ID Skanska Profile ID Event Subtype

Event Date	Business Unit	System	Profile Type	Dow Jones Single String Name (Primary)	Dow Jones Profile ID	Skanska Single String Name (Primary)	Skanska Profile ID	Event ID	Event Subtype	Highest Match Score	Confirm Match	False Positive
24-Apr-2020	BU	Salesforce	Entity	[REDACTED]	12183639	[REDACTED]	[REDACTED]	61457	Fuzzy Match - SSN	94%	Confirm Match	False Positive
		iPORT	Entity	[REDACTED]	12183639	[REDACTED]	[REDACTED]	61449	Fuzzy Match - SSN	100%	Confirm Match	False Positive
29-May-2020	BU	iPORT	Entity	[REDACTED]	11328539	[REDACTED]	[REDACTED]	61485	Fuzzy Match - SSN	95%	Confirm Match	False Positive

Refresh - Print - Export

SKANSKA Common Analytics ?

Sanctions Home Catalog Favorites Dashboards Create Open

Overview Matching Compliance ⚙️ ⓘ

Compliance Events | Current Compliance Status | Compliance Event History | Watchlist Profiles | Sanctioned Profiles

Compliance

Business Unit Profile Type Dow Jones Profile ID Skanska Profile ID

Business Unit	Profile Type	Event ID	Event Date	Event Type	Event Subtype	Current Event	Dow Jones Single String Name (Primary)	Dow Jones Profile ID	Sanction Start Date	Sanction To Date	Skanska Single String Name (Primary)	Skanska Profile ID	System
BU	Entity	60771	18-Jul-2019	Sanction Event	Sanction Listing	Y	[REDACTED]	1187701	18-Jul-2019	01-Jan-2099	[REDACTED]	[REDACTED]	[REDACTED]

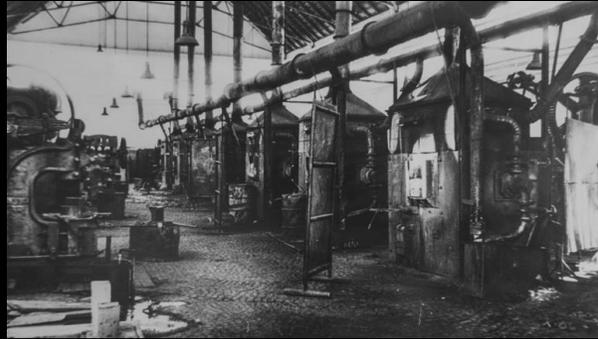
Refresh - Print - Export



Oracle Analytics Customer Panel

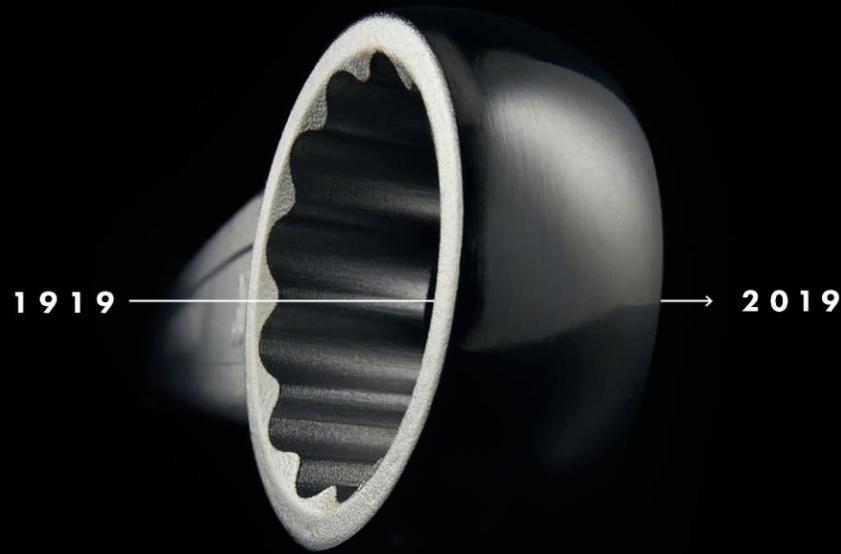


Rok Planinšec
CIO
UNIOR



AGENDA

- Introduction
- Unior & Oracle
- Oracle ADW & OAC
- Unior BI project
- Performance tests



A CENTURY OF EXCELLENCE
FOR NEXT MILLENNIUM

Introduction

- Experiences with production companies
- 15+ years of experiences in IT (10 years with Oracle technologies)
- Skills
 - Managing IT teams and IT projects
 - ERP implementations
 - Process renovation and optimizations
 - Development and implementations of own IT solutions
 - IT skills - SQL, BI tools, Excel, ERP systems, BPM tools
- Work experience
 - Head of IT in production company MLM Ltd. (automotive 10+ years)
 - IT senior project leader in production company ARIAN GmbH (printing 3 years)
 - Chief information officer in production company Unior Group (automotive 5+ years)



Rok Planinsec



UNIOR 2020



FORGE

SALES: 79,3 MIO €
EMPLOYEES: 906

58 %



HAND TOOLS

SALES: 28,2 MIO €
EMPLOYEES: 348

20 %



SPECIAL MACHINES

SALES: 17,2 MIO €
EMPLOYEES: 165

12 %



OTHER PRODUCTS & SERVICES, MAINTENANCE

SALES: 13,4 MIO €
EMPLOYEES: 247

10 %

DOMESTIC MARKET **5 %**

EXPORT **95 %**

Reference

2019



1919

OUR CUSTOMERS ARE THE MOST REPUTABLE CAR MANUFACTURERS:



ŠKODA



BENTLEY



BENTELER



RENAULT



JAGUAR



HYUNDAI



SCANIA



PACCAR

CATERPILLAR

Hoekle



CIMOS

Horta

BOSCH



BRILLIANCE

SYSTEM SUPPLIERS



BOSCH

THK
The Mark of Linear Motion

SEAC

JTEKT

株式会社ジェイテクト

2019



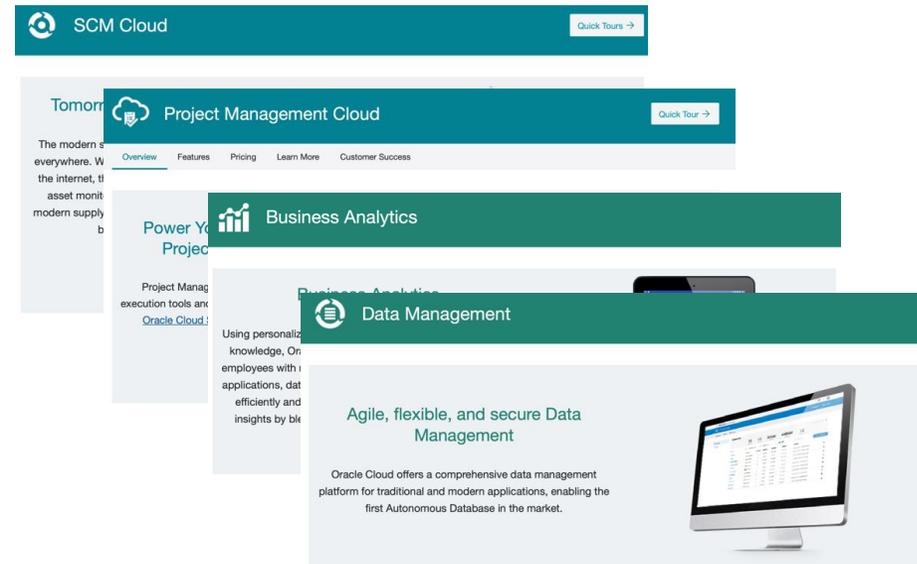
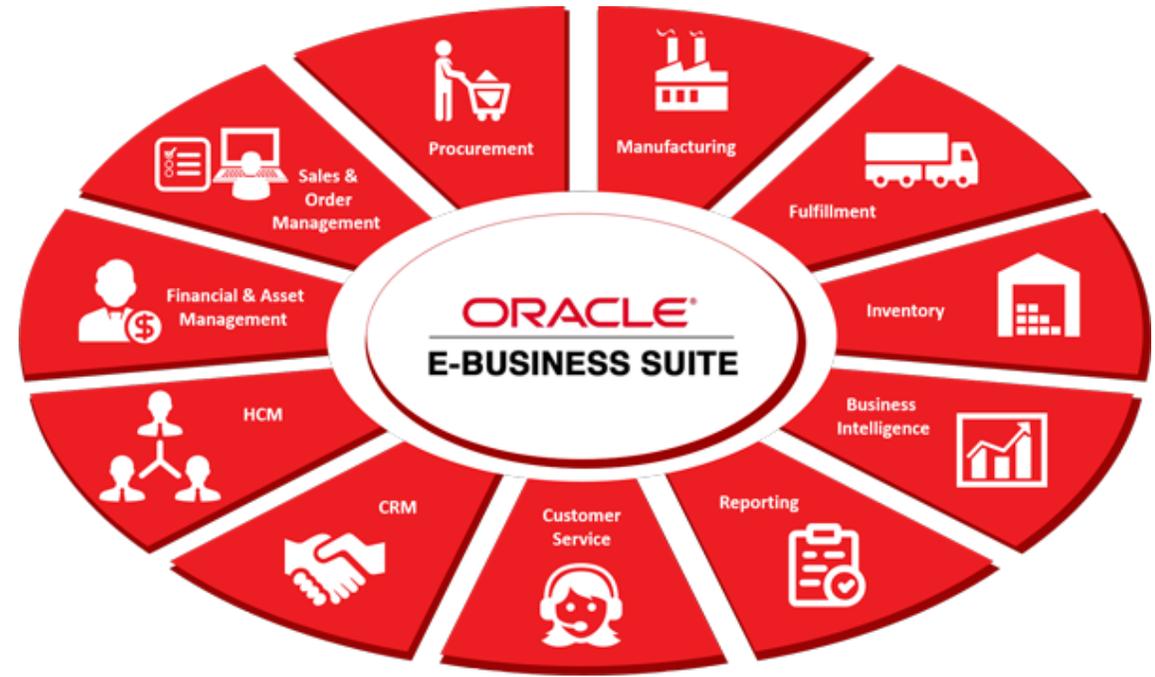
1919

UNIOR & ORACLE

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OBLETNICA **100**
UNIOR[®]
A century of excellence for next millennium
Stoletje izkušenj za novo tisočletje

Unior & Oracle

- 1989
 - Oracle DB 6 & Oracle Development tools
- 2007
 - Oracle E-Business Suite R11
 - Sales & Order Management
 - Procurement
 - Inventory
 - Financials
 - Human Resource
 - Discrete Manufacturing
 - Enterprise Asset Management
- 2017
 - Oracle E-Business Suite R12
- 2018
 - Oracle Cloud (SCM, OAC, ADW)
- 2020
 - Oracle Project management (PPM)



2019

1919





Role of DBA

Traditionally DBAs are Responsible for:

Freedom from Drudgery for DBA: More Time to **Innovate** and Improve the Business

- ~~Generic Tasks~~

- ~~– Configuration and tuning of systems, network, storage~~
- ~~– Database provisioning, patching~~
- ~~– Database backups, H/A, disaster recovery~~
- ~~– Database optimization~~

- **Tasks Specific to Business**

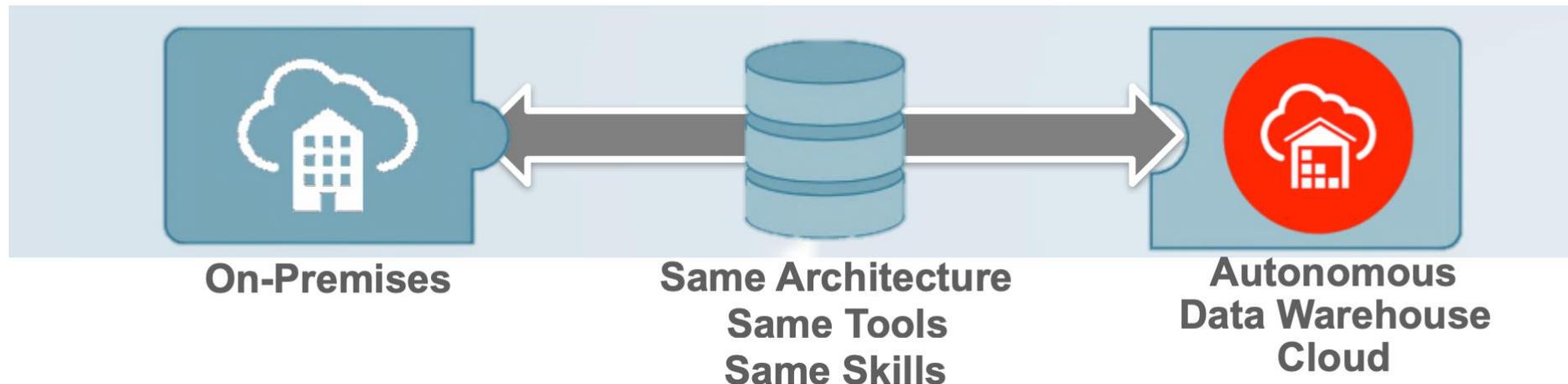
- Architecture, planning, data modeling
- Data security and data lifecycle management
- Application related tuning
- End-to-End service level management





Oracle ADW

- Oracle Database uses same software and technology that runs on existing on-premises, data warehouses, and applications so it is compatible with your existing data warehouse, data integration and BI tools.





Oracle ADW

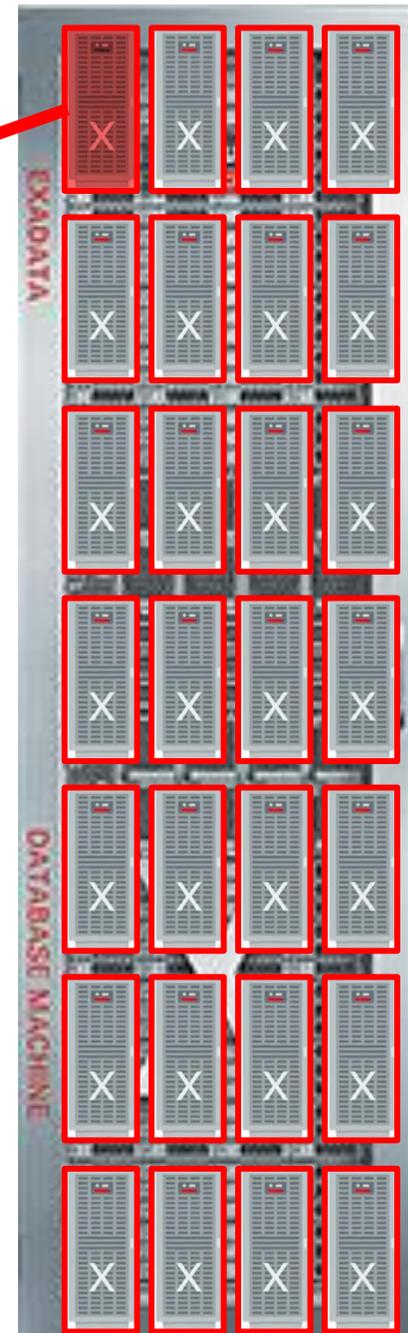
Instant Elasticity: Pay for Exactly What you Use

- Size the DW to the exact number of OCPU's and TB's required
 - Not constrained by fixed building blocks
- Scale the DW on demand
 - Independently scale compute or storage
 - Resizing occurs instantly, fully online
- Shut off idle compute save money
 - Restart instantly



Our Oracle Cloud environment

- ADW server is located in Frankfurt
- We use pluggable database
 - Not whole Exadata server
 - We host DB with 1TB and 2 OCPU
 - More TB & OCPU can be added anytime
 - Potential performance issues
 - I/O
 - CPU clock at high temperature
 - Oracle doesn't guarantee performance



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Cloud + Autonomous

- They represent a new IT model
 - Oracle DB as Paas
 - Immediately available
 - Business model with "OFF-ON" option
- Challenges
 - IT: eliminations of unnecessary tasks
 - Business user: use of new IT services without IT
- Reduces dependence on employees in IT
 - The pressure of a deficient staffing need is lower

2019



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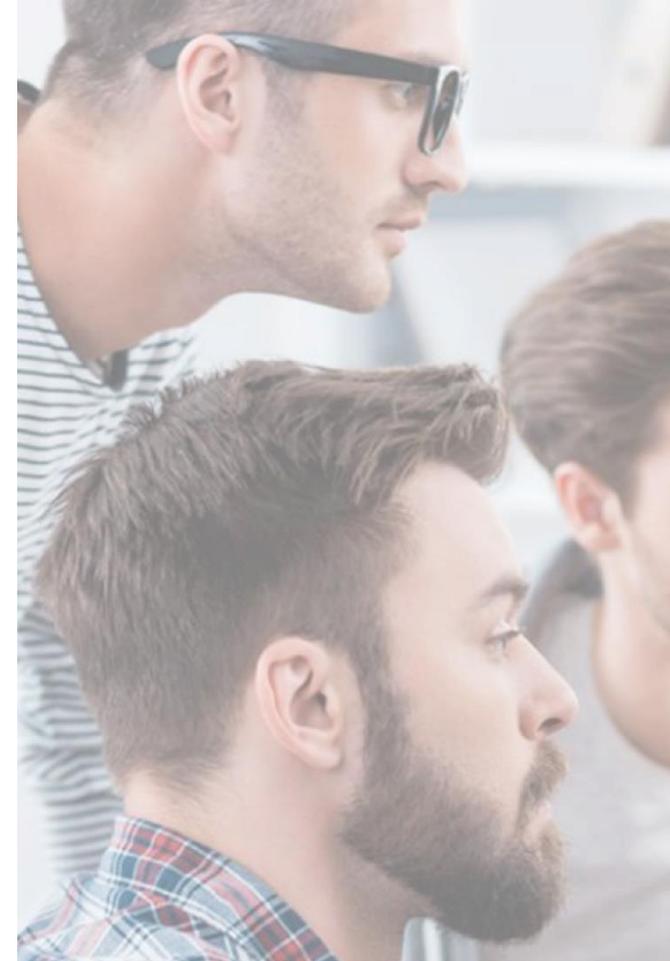
BUSINESS INTELLIGENCE PROJECT

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Stoletje izkušenj za novo tisočletje



The business challenge

- We lacked modern business analytic capabilities, making growth challenging
- The issue came from having various and dislocated software running across its business units
- This included different instances of E-Business Suite and special manufacturing software provided by multiple ISV
- Analysis and reporting was performed at an individual system level, using rudimentary-basic tools
- **Oracle BI Discoverer** was discontinued in 05/2018
 - We were facing the challenge of finding a BI tool to fill the gap
 - Alternatives (question of licence transfer, No. of reports in Discoverer,...)
 - Oracle Business Intelligence Enterprise Edition (OBIEE)
 - Oracle Analytics Cloud (OAC) as PaaS
- Aggregating these multiple data sources and reports to provide a single version of the truth was a manual task → too slow and triggered risk of mistakes





The solution



- Decision: use Oracle technologies
- Deployment of ADWC
- OAC will sit on ADWC
- Universal Credits
- Involve in project experienced teams
 - Fakta+ & QUBIX

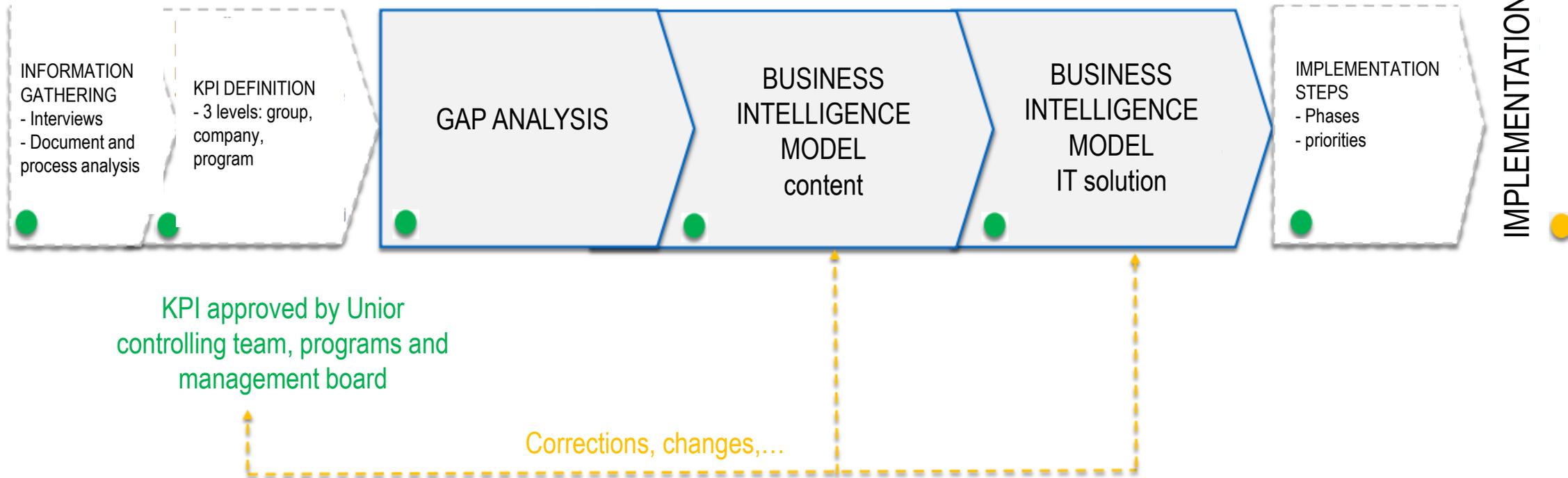


Project phases

Phase 1

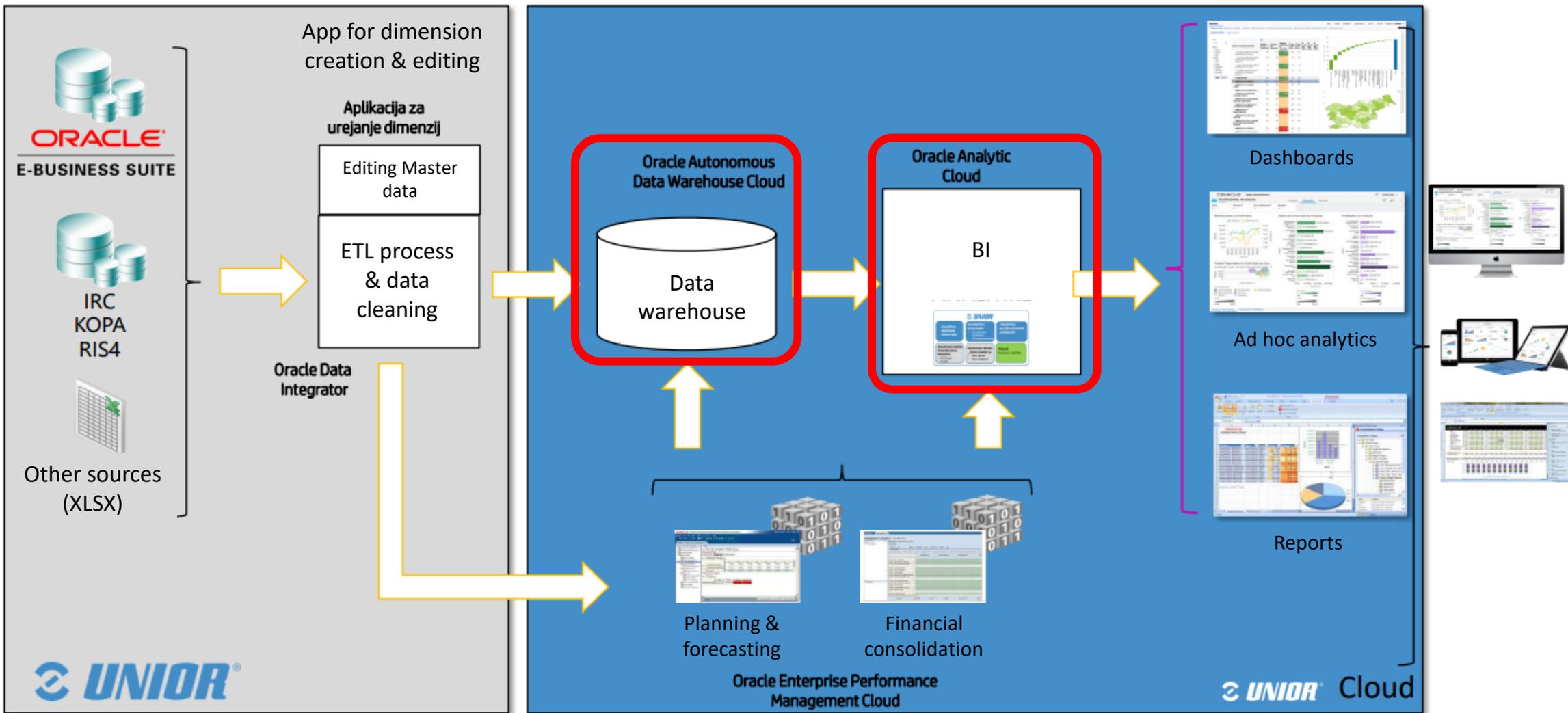
Phase 2

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Architecture

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Dashboards, KPI's...

- Available

- Payables & Receivables
- Stocks
- General ledger
- Purchase
- Investments
- Sales
- HR

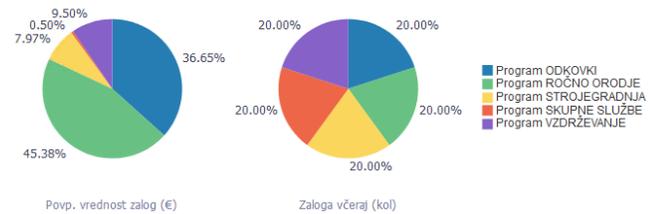
- Coming

- Production

Zadnji zajem podatkov: 09.11.2021 00:11:14

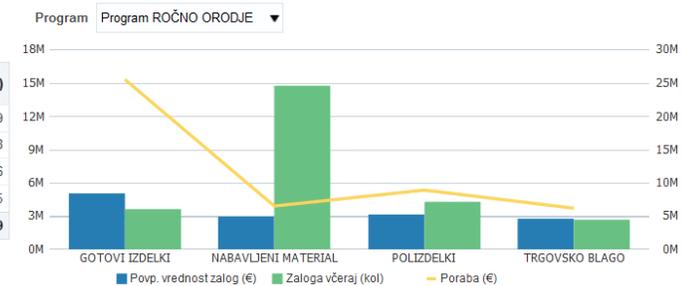
Program Program ODKO Predmeti dela (All Column Val) Mesec Between 202101 - 202110 Apply Reset

Program	Poraba (€)	Povp. vrednost zalog (€)	Koef. obračanja zalog (poraba / povprečna vrednost zalog)	Dnevi vezave (dnevni koef)	Zaloga brez premikov (zadnjih 12 mesecev/včera)
Program ODKOVKI	131,748,765	11,178,801	14.20	26	743,767
Program ROČNO ORODJE	47,189,034	13,839,290	4.11	89	1,556,185
Program STROJEGRADNJA	4,232,797	2,430,385	2.10	175	1,574,724
Program SKUPNE SLUŽBE	1,794,832	152,691	14.16	26	7,825
Program VZDRŽEVANJE	2,051,156	2,896,418	0.85	429	1,548,800
Skupaj	187,016,585	30,497,585	7.39	50	5,431,301



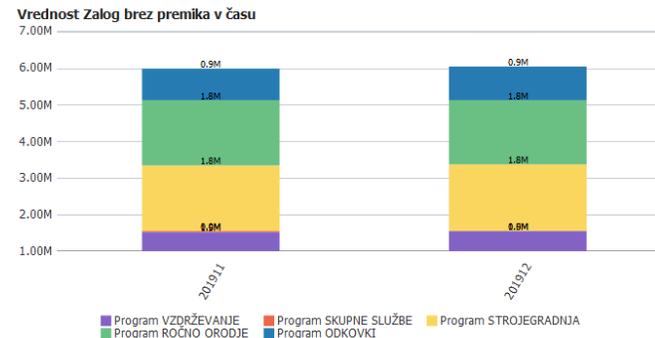
Program Program ROČNO ORODJE

Predmeti dela	Poraba (€)	Povp. vrednost zalog (€)	Koef. obračanja zalog (poraba / povprečna vrednost zalog)	Dnevi vezave (dnevni koef)	Zaloga brez premikov (zadnjih 12 mesecev/včera)	Zaloga včeraj (kol)
GOTOVI IZDELKI	25,500,170	5,043,508	6.09	60	134,552	3,595,509
NABAVLJENI MATERIAL	6,559,483	2,960,263	2.67	137	891,491	14,688,778
POLIZDELKI	8,874,369	3,111,516	3.44	107	433,061	4,272,616
TRGOVSKO BLAGO	6,255,012	2,724,004	2.77	132	97,080	2,669,105
Skupaj	47,189,034	13,839,290	4.11	89	1,556,185	25,226,009



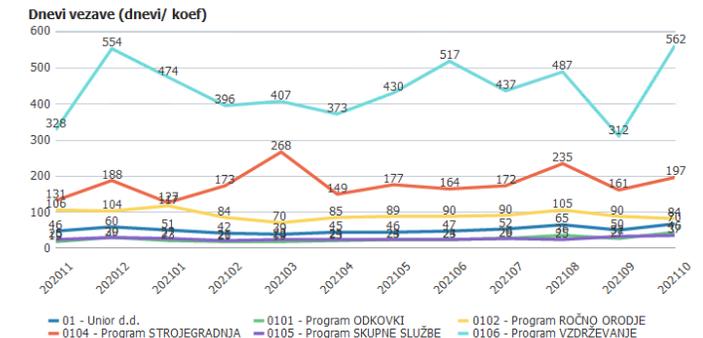
Analyze - Edit - Refresh - Export

Izberi pogled: Po programih



Analyze - Edit - Refresh - Export

Izberi pogled: Po programih



Analyze - Edit - Refresh - Export

Use of BI in Unior

- Business intelligence
 - Dashboards, KPI, real-time reports, drill-down or up analysis,...
- Trends analysis
 - Sales and marketing, services, supply chain, maintenance

Future use

- Predicting events
 - Predictive maintenance
- Identification of samples
 - Detection of fraud, defects in production
- Process automation and decision making
 - production control - error detection-deviation-anomaly



Results of performance testing

Scope	Action	Standard DB 2 CPU on-prem	ADW 2 OCPU	ADW 8 OCPU
General 85 mi.	Create table as select	N/A	23 min	10.5 min
General 85 mi. (per parts by month)	Insert append parallel	12 min	9.5 min	2.8 min
I/O (Insert *)	Insert append parallel	90 s	311 s	82 s
Select 85 mi. table	Select	12 s	6 s	2 s
Select 6 mi. table	Select	7 s	10 s	3 s
Select 3 mi. table	Select	2 s	1.5 s	1 s

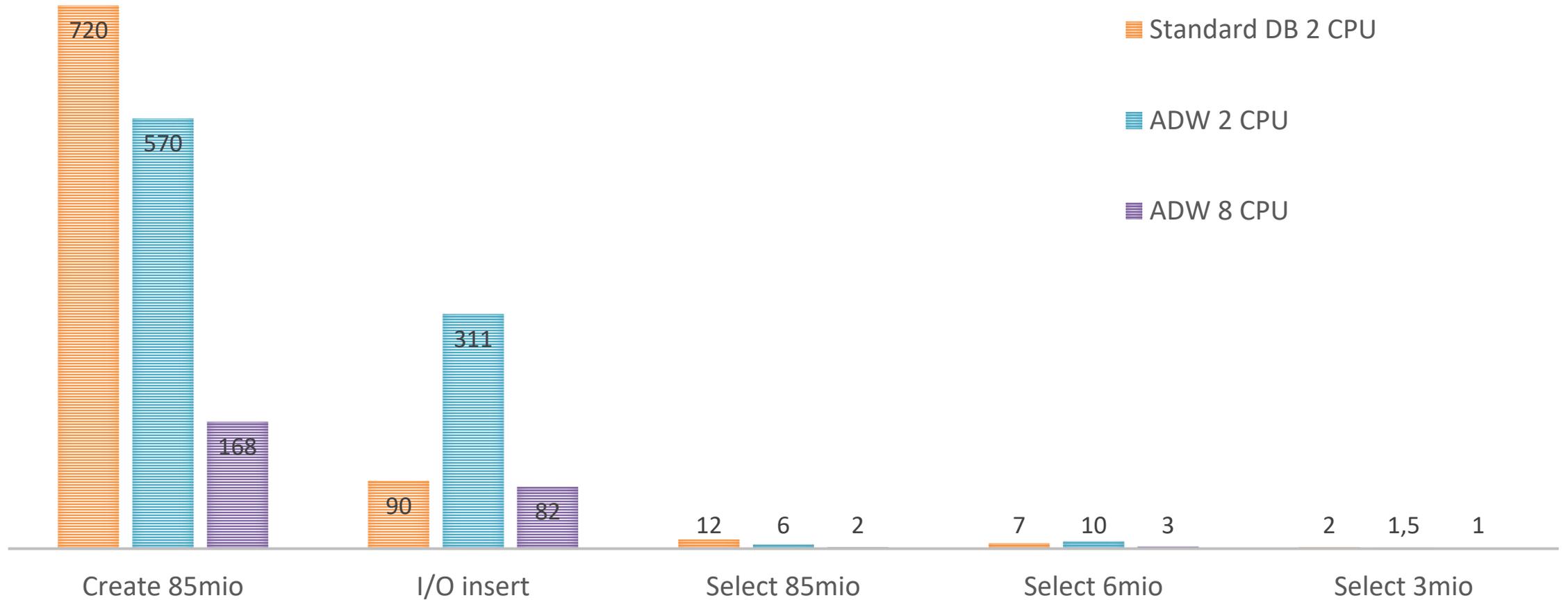
* No filters and no processing

Results of performance testing

2019



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* Lower number is better

Unior Cloud BI SWOT

2019



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Strengths

- Managed Infrastructure
 - backups, upgrades
- High Availability Infrastructure
- Scalability
- Scheduler to switch DB “on” or “off”
- All database options available
 - In memory, compression,...
- Near Exadata performance
- Low initial investment
 - no need to buy licenses and hardware in advance

Opportunities

- Cost saving with feature growth

Weaknesses

- Connection Timeout
- Unable to use regular ETL tool to run long running procedures
 - need to use scheduler
- Slow updates on big table
 - faster to create new table
- No DBA user
 - for some tasks need to ask Oracle support – time consuming
- No mail support

Threats

- Oracle doesn't guarantee availability
- No rollback available if there is bug

THANKS A LOT



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