Buzzword Bingo ~~or~~ in Reality~~?~~!

OAC, ADW & ODA Combined

Christian Berg

Special thanks to Asaf Lev & Kiran Tailor

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Christian Berg

- Oracle ACE Director Business Analytics
- Oracle Analytics since 2001
- Speaker at OpenWorld, KScope,
  User Groups and open-source conferences
- Blogger on Analytics, DWH, Data Science
  http://dimensionality.ch
- Telegram/IRC #obihackers moderator
- ODC and OCCC community advocate
- Trainer for Oracle University since 2006

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Agenda

1. Introductions
2. Use Cases & Personas
3. Solution Product's Overview
   - Autonomous Datawarehouse (ADW)
   - Analytics Cloud (OAC)
   - Digital Assistant (ODA)
4. Tutorial Architecture
5. Tutorial Step-by-Step

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450+ Technical Experts Helping Peers Globally

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ORACLE ACE

ORACLE ACE Associate

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Nominate yourself or someone you know: acenomination.oracle.com

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Use Cases & Personas

Movie Store – Information on Customer Movie Purchases, Types of movies purchased, HR data extensions

- CFO
  - how is our revenue this year?
  - what has been our growth compared to last year?
  - What do we see the growth for the coming years.
- Once these questions are asked
  - the team take days to provide answers.
  - In todays world SLT's require this information available when needed.
  - We will show how this can be done via OAC

- Customer
  - Having an order enquiry issue
  - telephone's contact centre queue time are long for speaking to an agent
  - Eventually decides to ask his questions to the Digital Assistant.
  - Not happy with the Digital Assistant – he escalates the issue to a live agent.
  - Digital Assistant will start communicating between live agent and customer.
- Employees
  - How many holidays do I still have for this calendar year?
  - Digital Assistant hands over to HR

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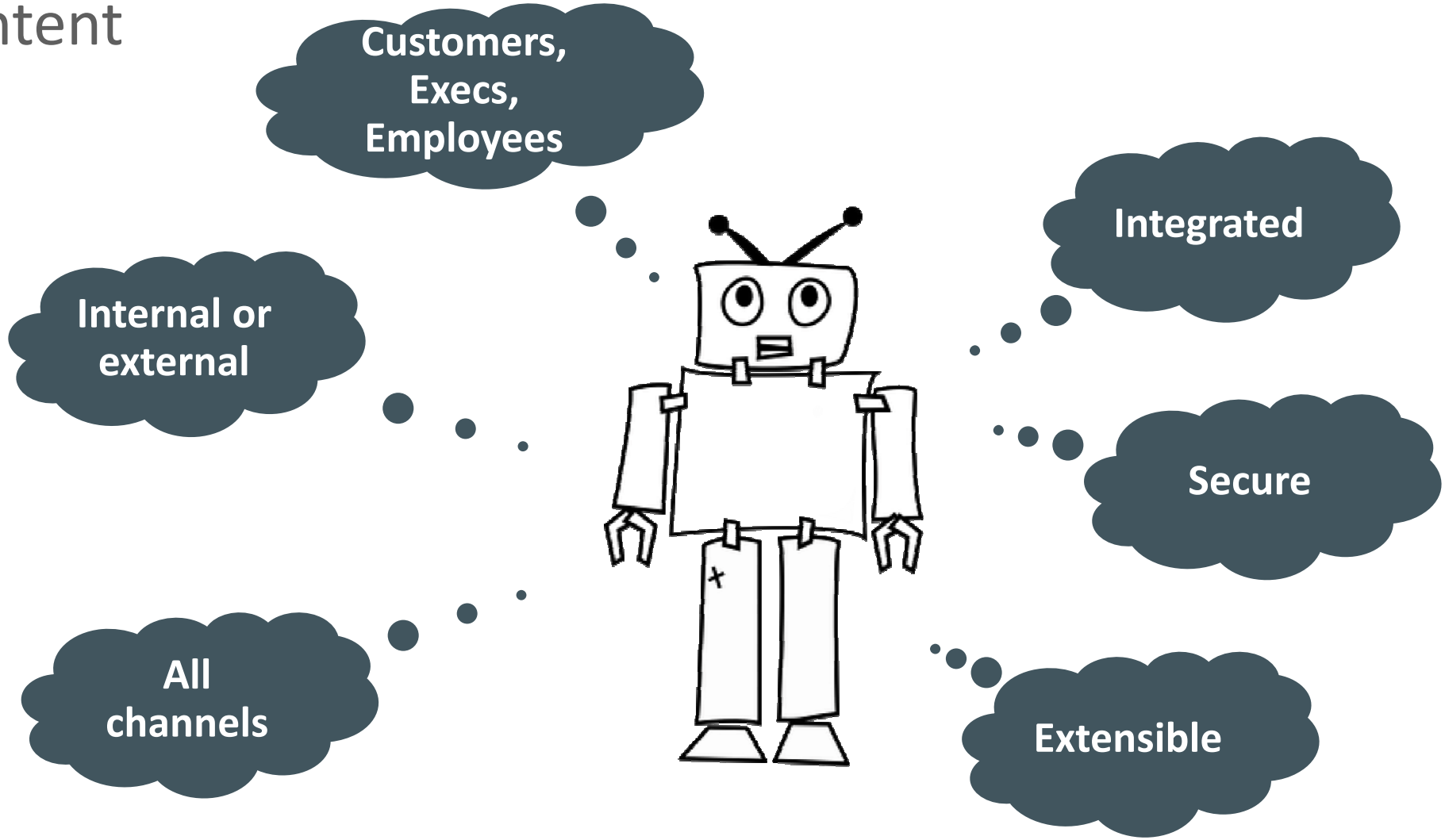
Intent



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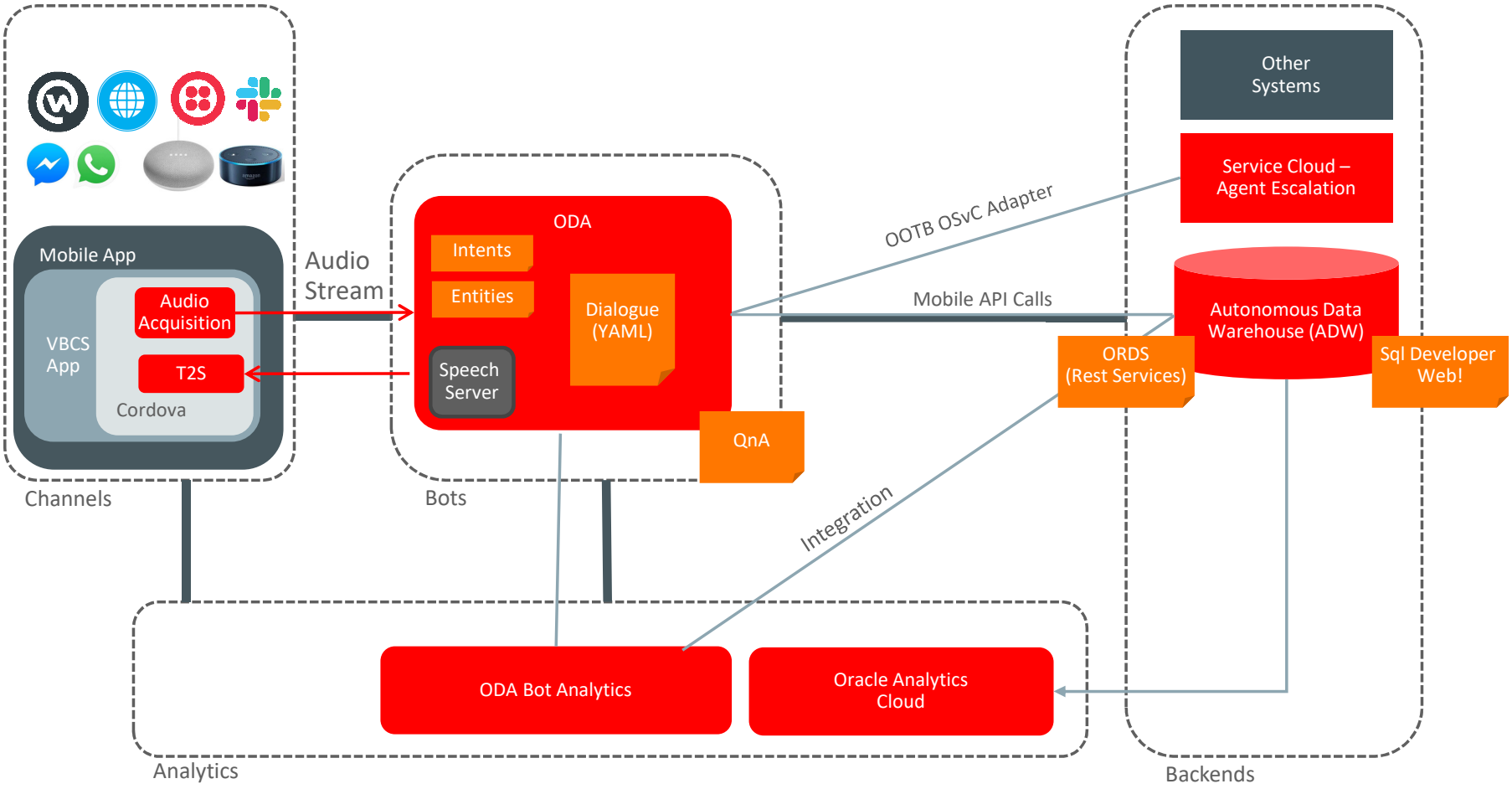
Architecture



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Channels Workbook

Chat Channel		Properties	Select	Comment
	FB Messenger	> 1.2 Billion active users. Connect to FB Page		
	Workplace Chat	Facebook enterprise messaging		
	In Web	Most accessible does not need to depend on 3rd party messaging	*	Because it's just basic
	In App	Allows linkage to custom mobile app		
	Slack	Enterprise messaging, Collaboration tool. Used extensively in DevOPs	*	Cool channel
	Skype 4 Business	Enterprise messaging (being replaced by MSFT Teams)		
	Alexa, Google Home	Audio bot – communal setting. Hands free operation	*	Use Alexa to show the dialogue in a prototype
	Telegram	Dominant chat in some markets. E2E encryption		
	Text	Most used and most accessible. Limited interaction UI. Texts costed.		
	Voice	Using voice capability in mobile phones – Siri and Google Assistant OR in future organic voice capability	*	Use Oracle Voice new tech!
	Microsoft Teams			

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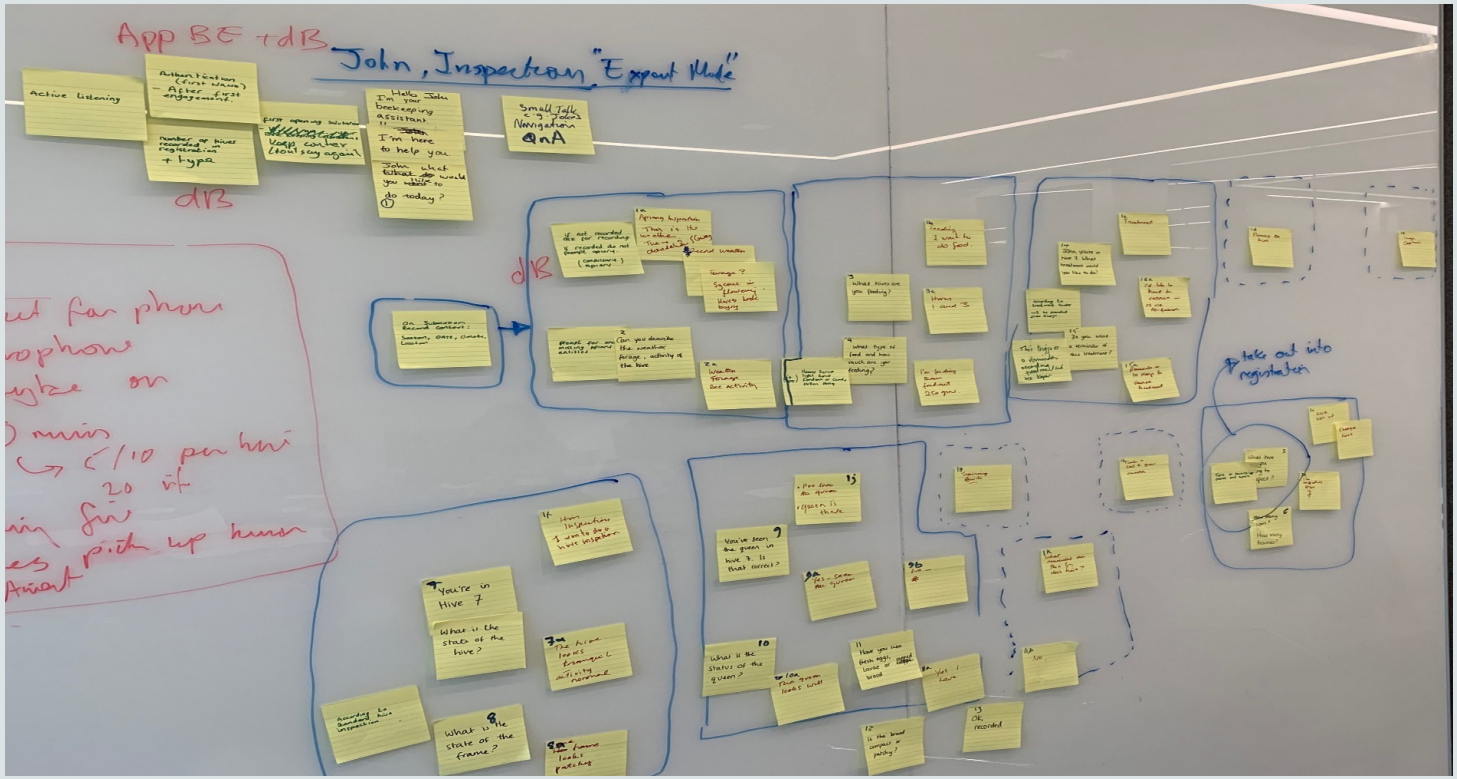
Building Phase



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Oracle Analytics Cloud (OAC)

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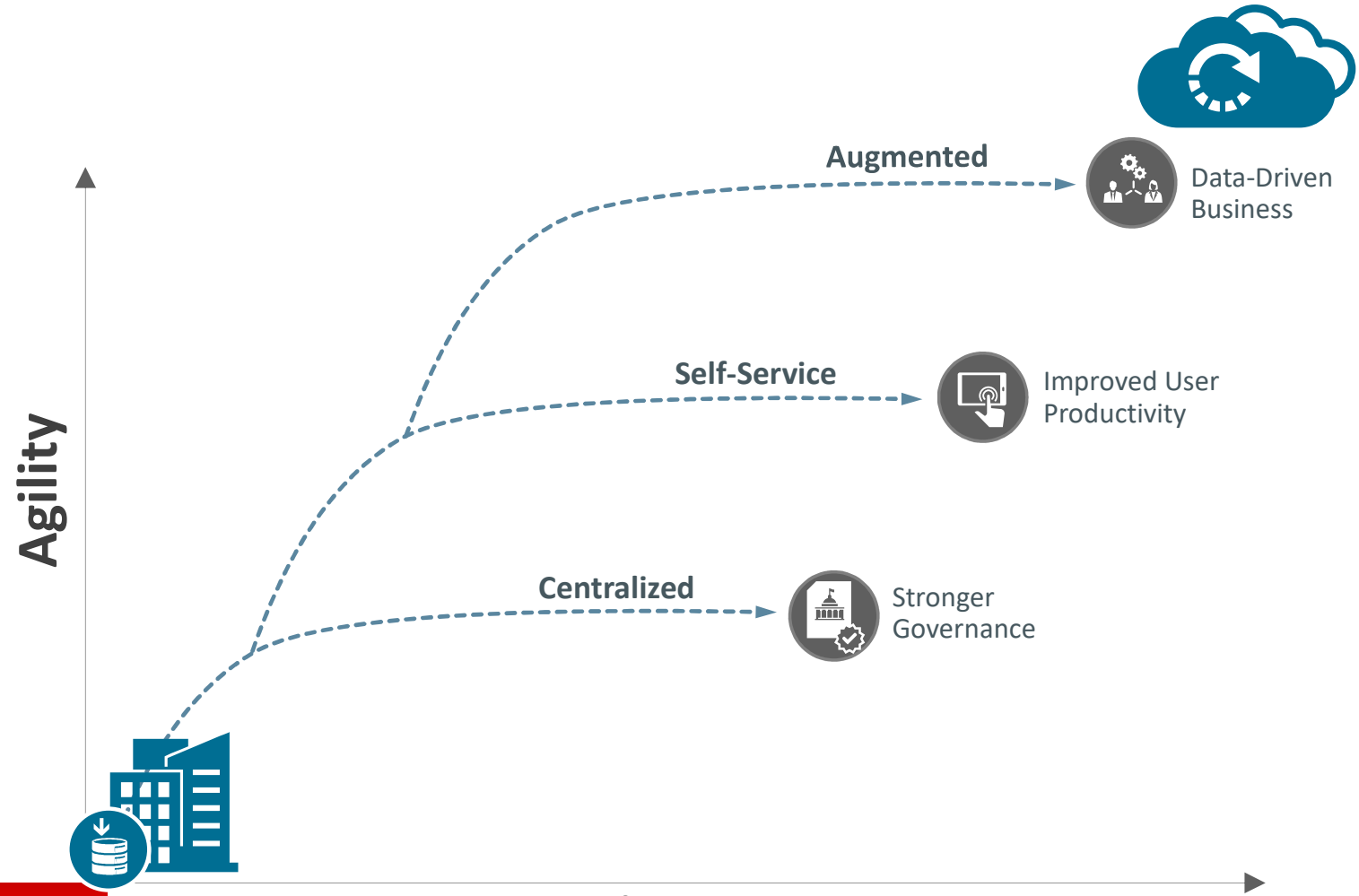
Analytics waves over time



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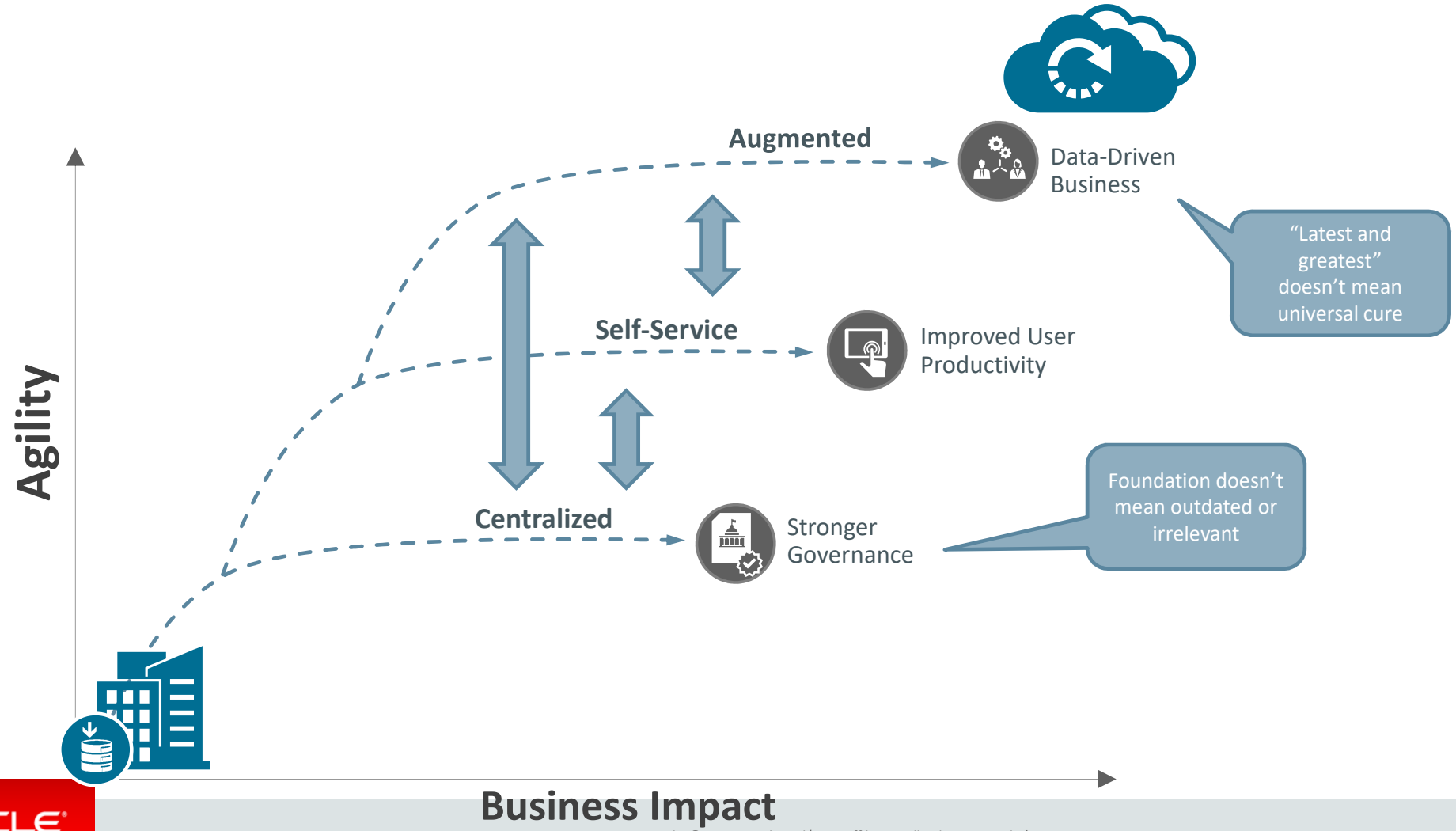
Analytical needs – Integration and Unification



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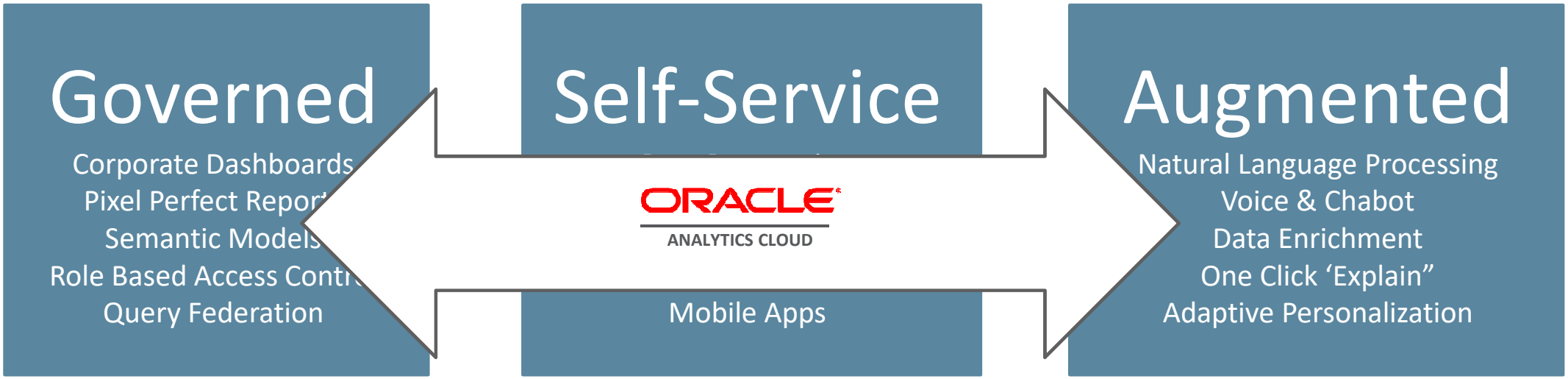
Covering all the needs



Unified. Integrated. Coherent.

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Covering all the needs

Oracle Analytics Cloud

Data Analysis and Collaboration

Explore and discover using natural language, visualization, & storytelling

Data Preparation

Prepare enriched, sharable, & reliable data sets

Data and Model Catalog

One place to collect, search, explore & curate all data,
Self Service along side enterprise semantics.

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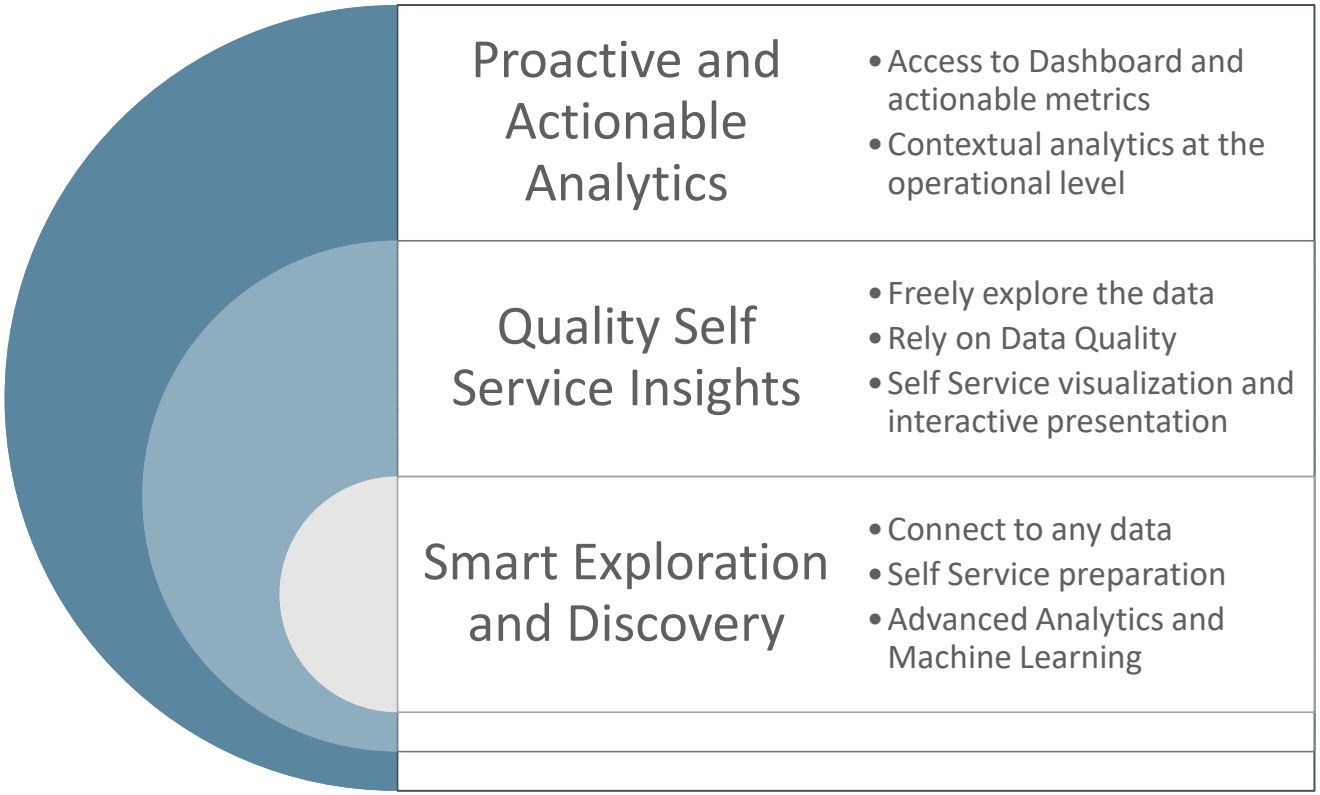
The right capability for the right job and the right people



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Streamlined product offering

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Oracle Analytics Server (OAS)

Functional parity with Oracle Analytics Cloud (yearly updates)

Move to cloud any time and on your own terms

Existing OBIEE licenses automatically converted (functional gains!)

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Oracle Analytics for Applications (OAX)

Fully managed data pipeline and warehouse

Ready to use semantic model, reports & dashboards

Extensible and customizable using ADW and OAC

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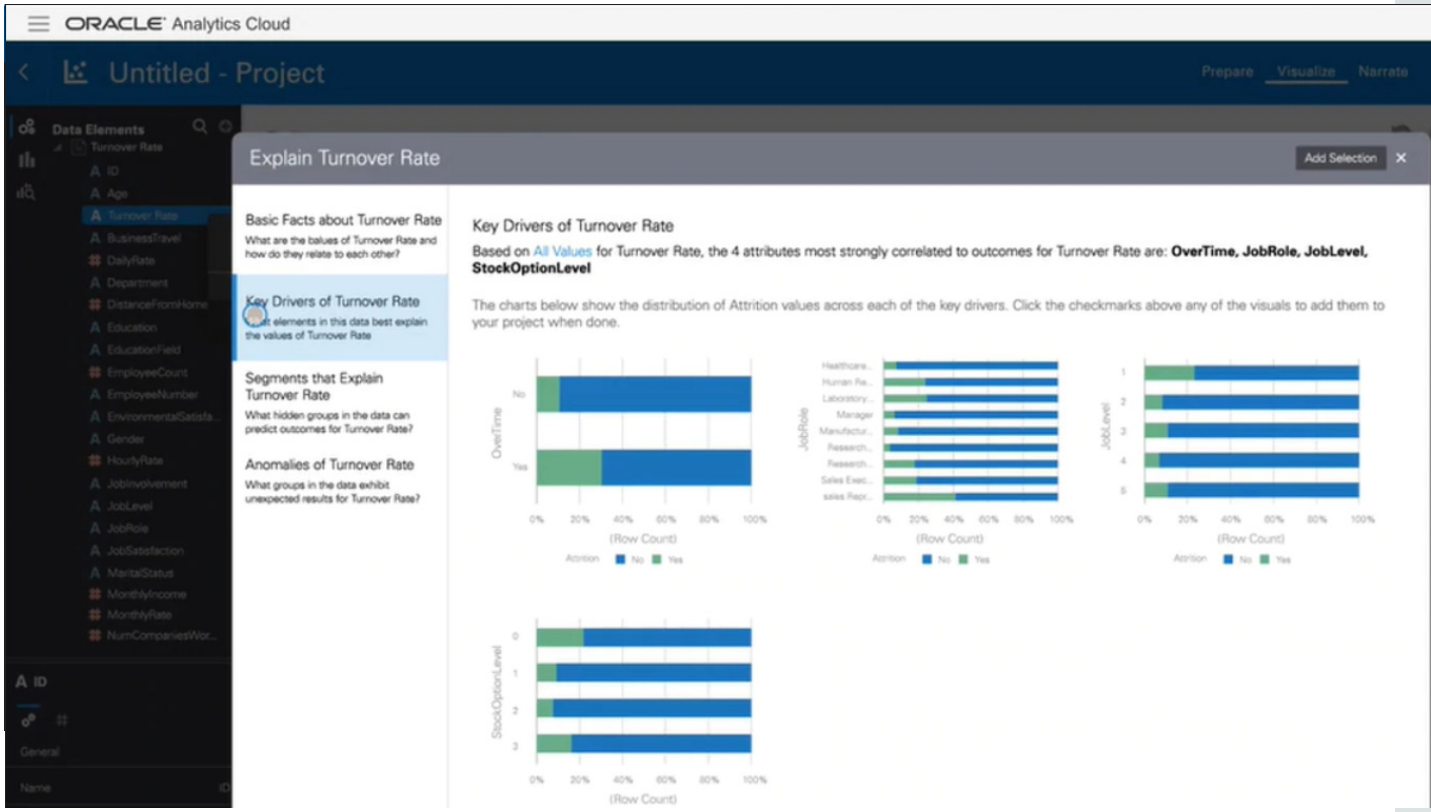
Pervasive Augmented Analytics

- From Data Gathering to Data Analysis
- Data Flows
- Data Sets
- Data Engineering & Enrichment
- Data Visualization
- Self-Service ML capabilities for in-depth analytics
- More with each release
- Fastest-growing functional aspect



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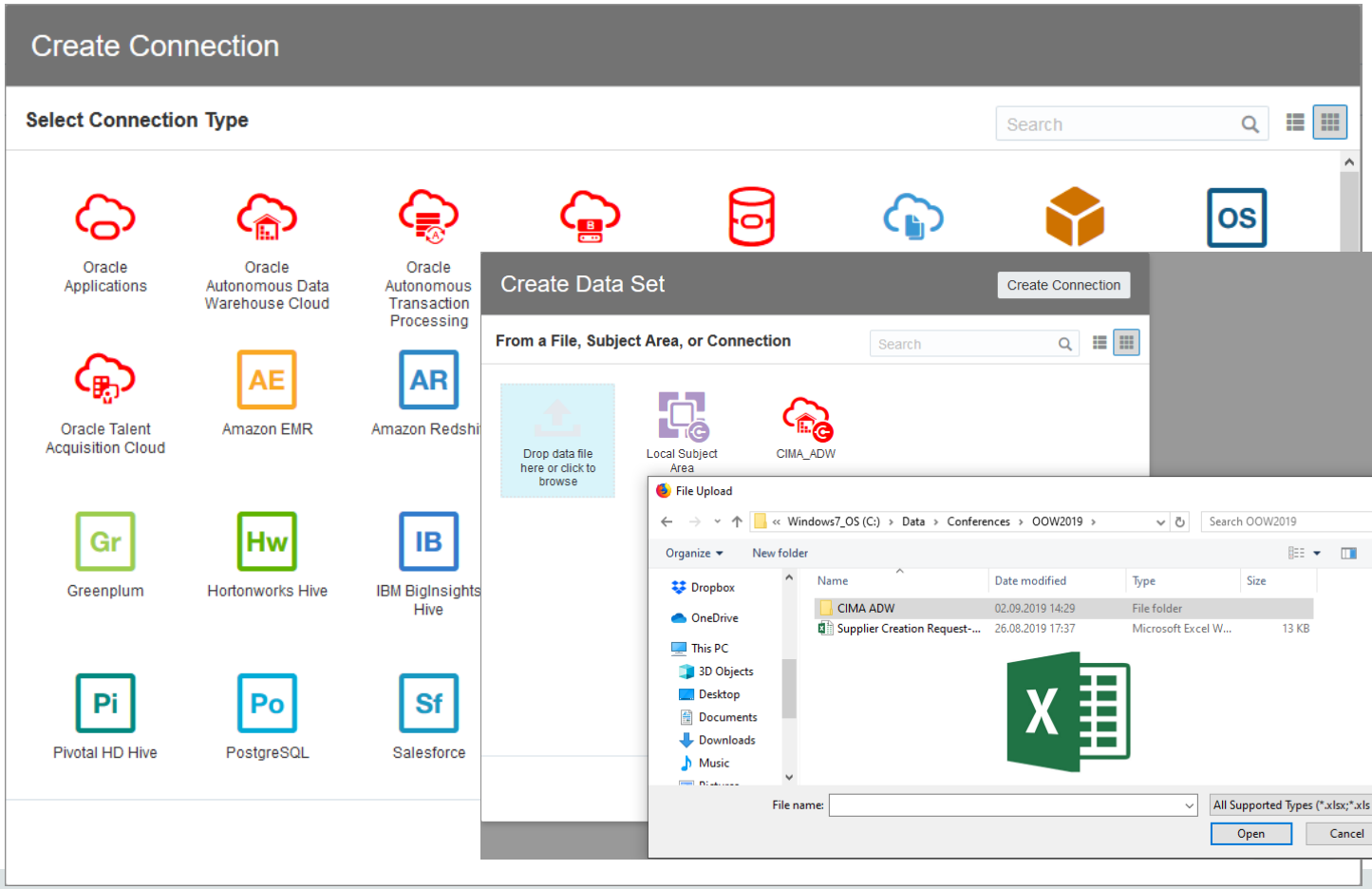
One Place to Analyze Your Data

- Mashup, Blend, Wrangle
- Self-service
- When **you** want it
- What **you** need
- Low coding
- The Excel monster comes into the fold
- Controlled, traceable, auditable
- Secured
- Integrated



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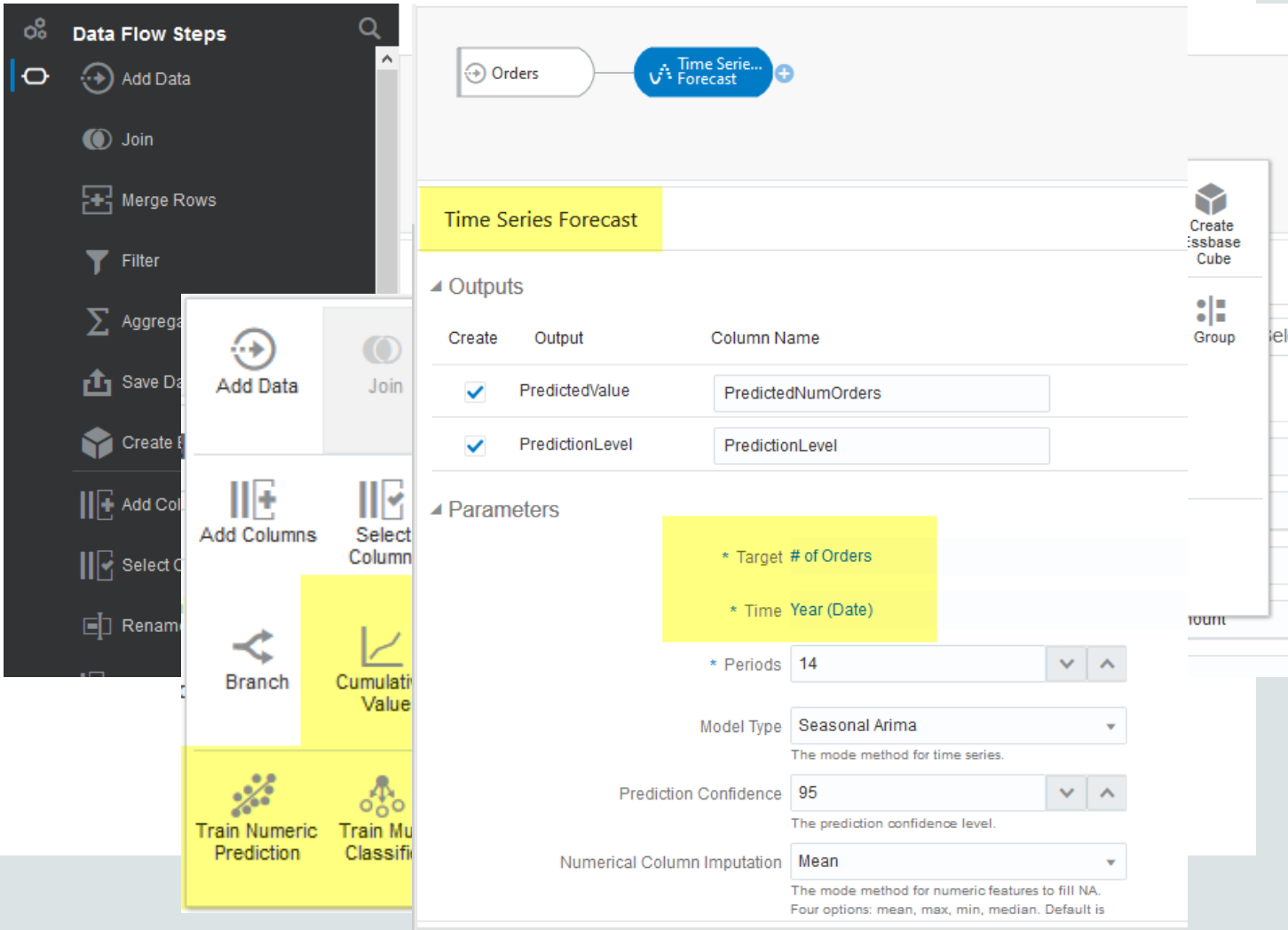
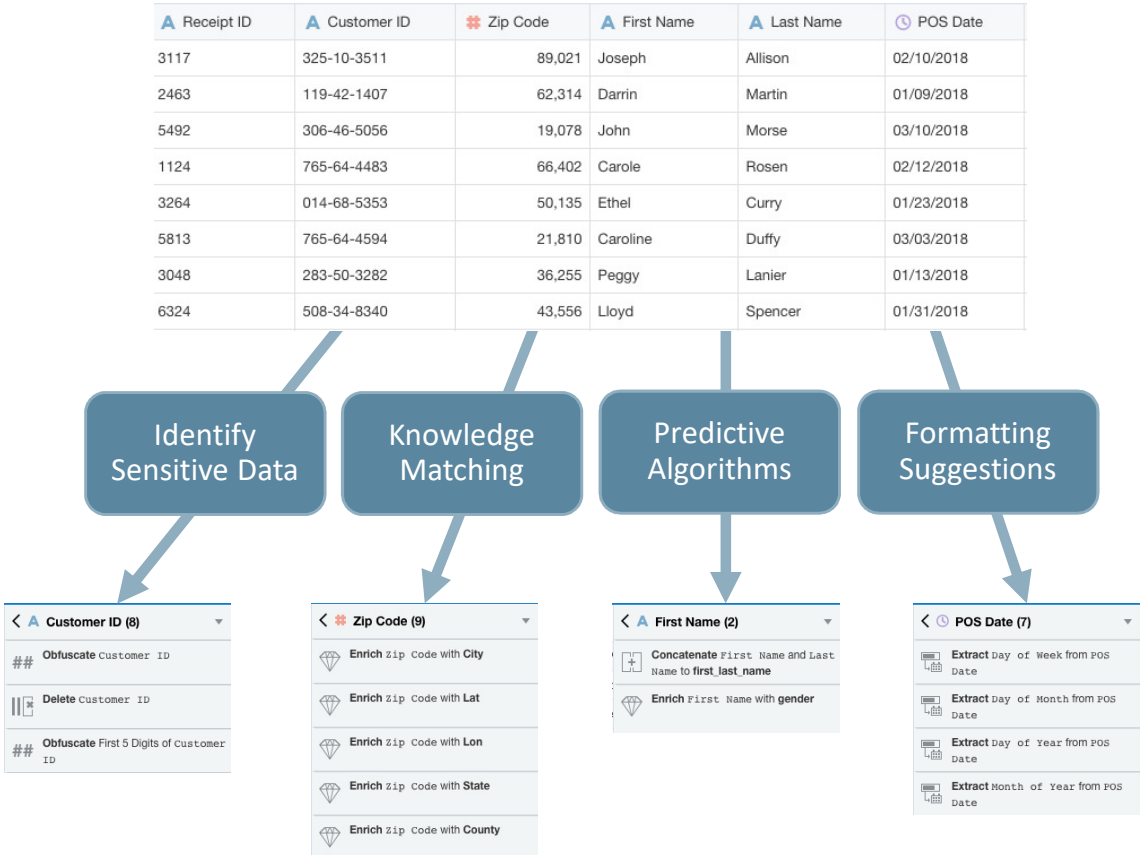
Data Flows

- ETL and Data Engineering for everybody
- Declarative
- Easy to use
- Don’t wait for IT
- Augmented



Augmented Data Engineering and Enrichment

- Embedded in Data Flows and Data Set preparation
- Recommendations based on patterns and profiling
- ML-driven enrichment
- Out-of-the-box without coding or config needs
- Immediately see the transformation results



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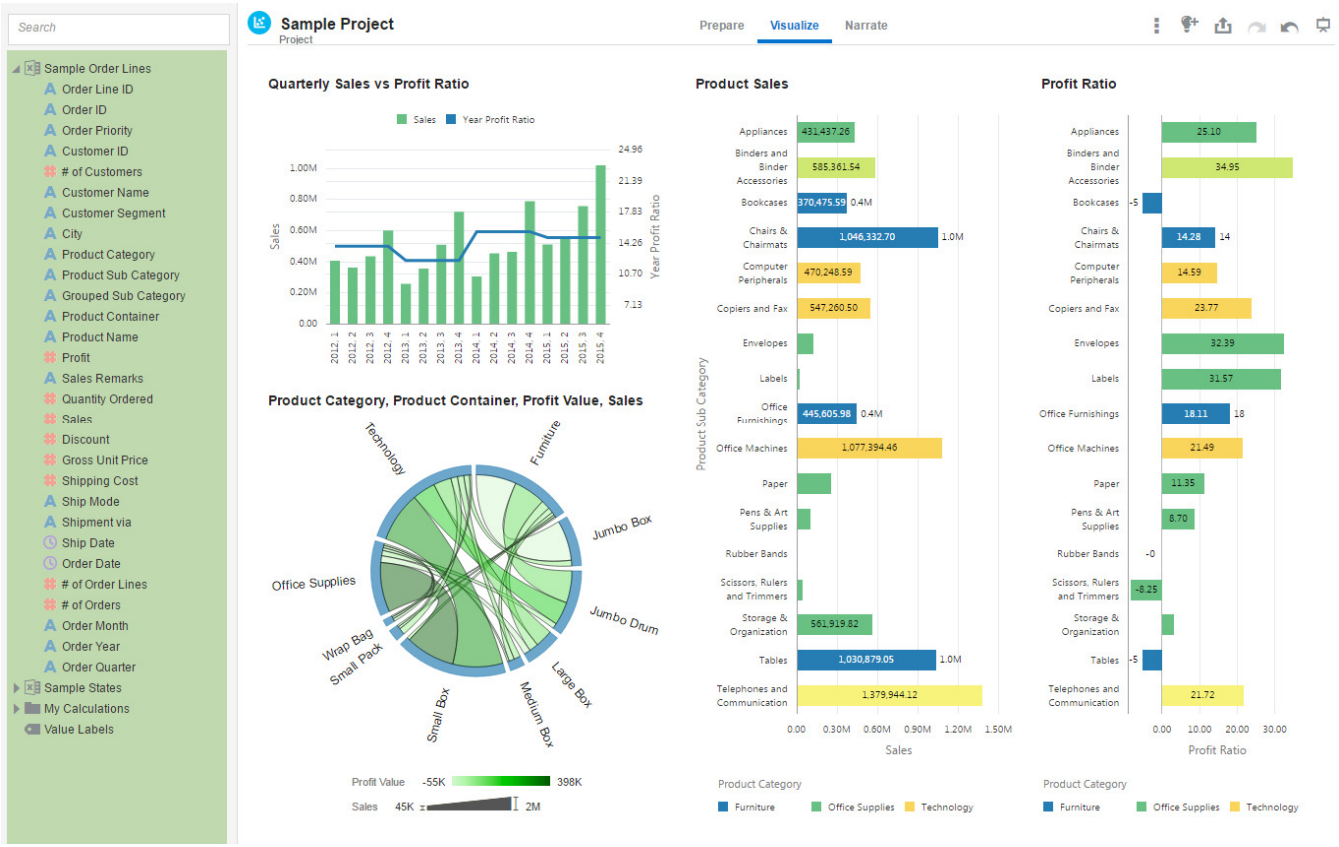
Interactive Visualization

- Let your data tell story and explain
- Go beyond “showing numbers”
- Let the tool create your charts
- Augmented through automatic forecasting, trends, outliers etc.



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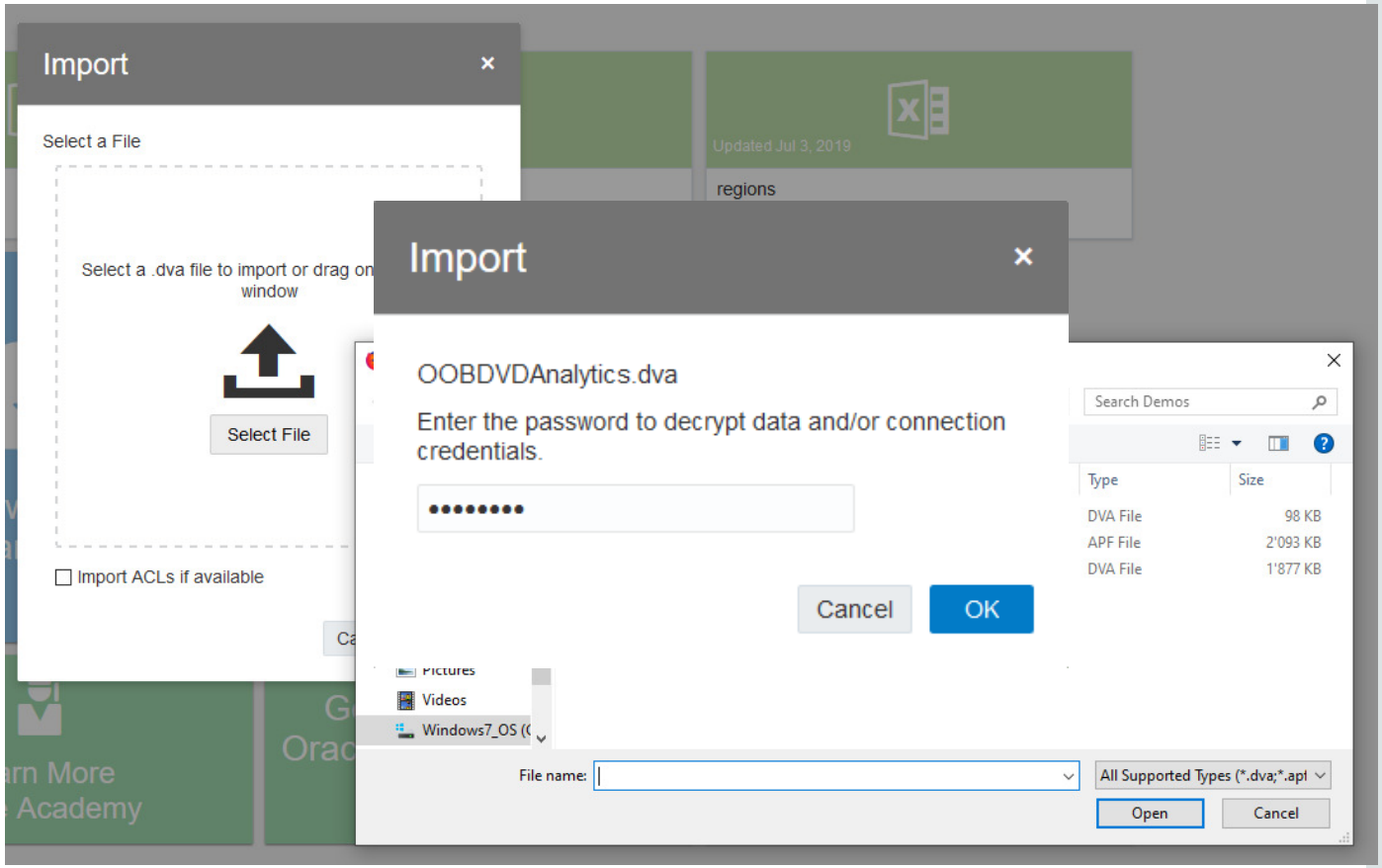
Cross-platform and cross-implementation

- Share all your content
- Cloud, on-premises, desktop
- Across environments
- Testing & lifecycle
- Minimal effort
- Secure what you transport



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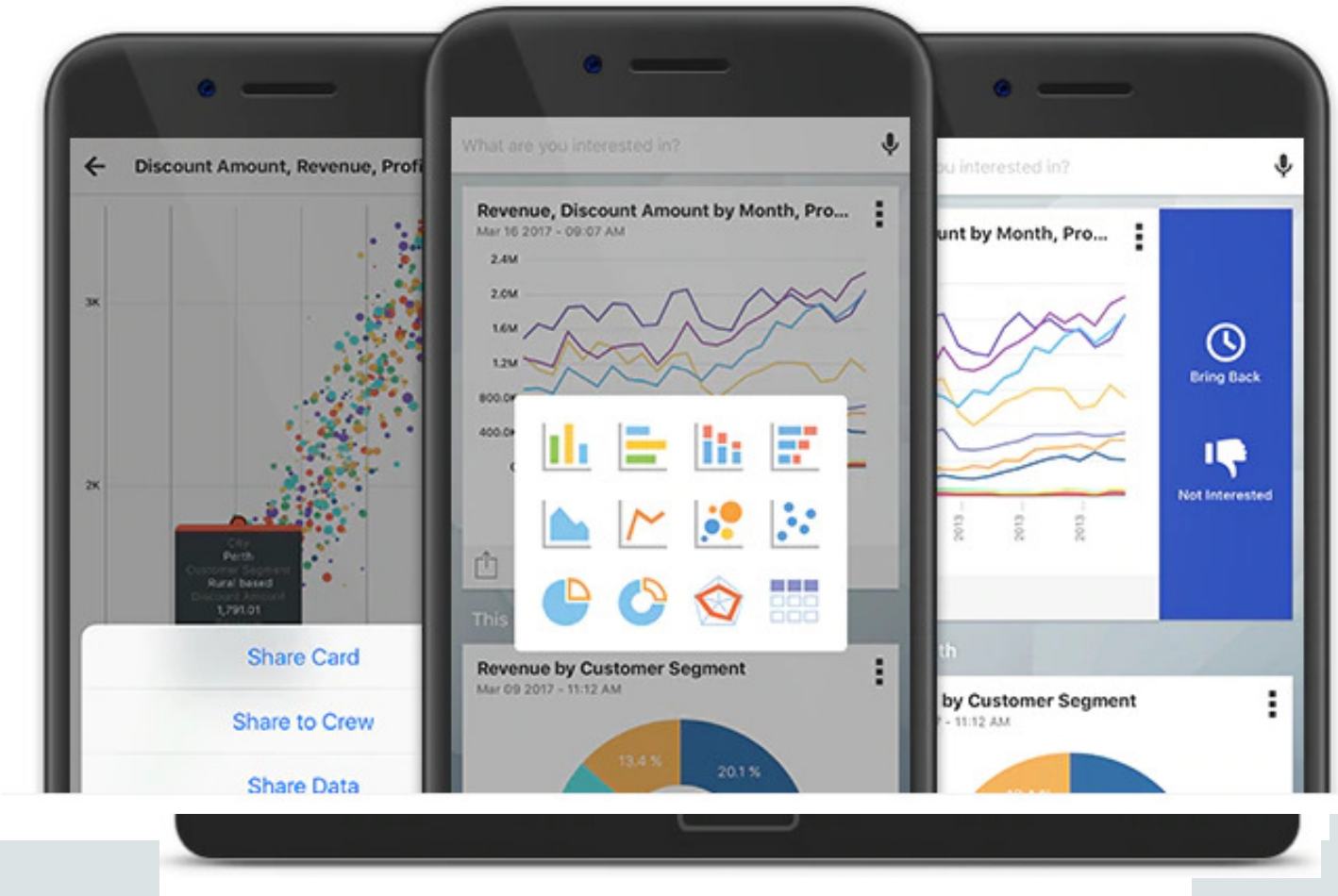
Mobile Analytics – whenever, wherever

- Oracle Day by Day
- Oracle Synopsis
- Access your corporate analytics or create your own analytics on the fly
- Get daily feeds
- Natural speech enabled
- Collaborate and share your findings
- Start on mobile, push to enterprise



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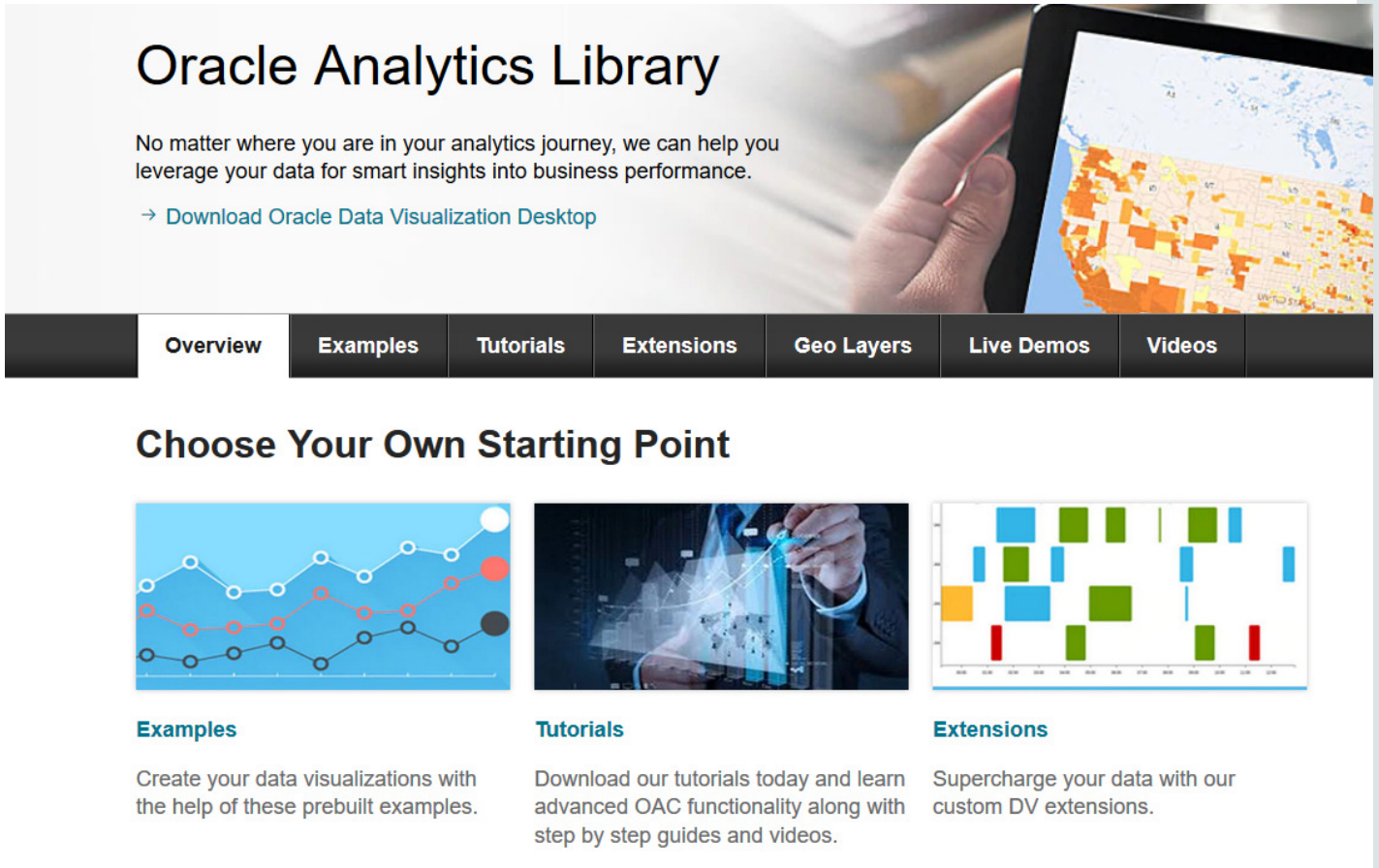
Oracle Analytics Library

- Get whatever you want
- Grows all the time
- Absolutely free
- Built by industry experts and power users
- Participate in the community by sharing your approaches and inputs
- One-click imports
- No coding



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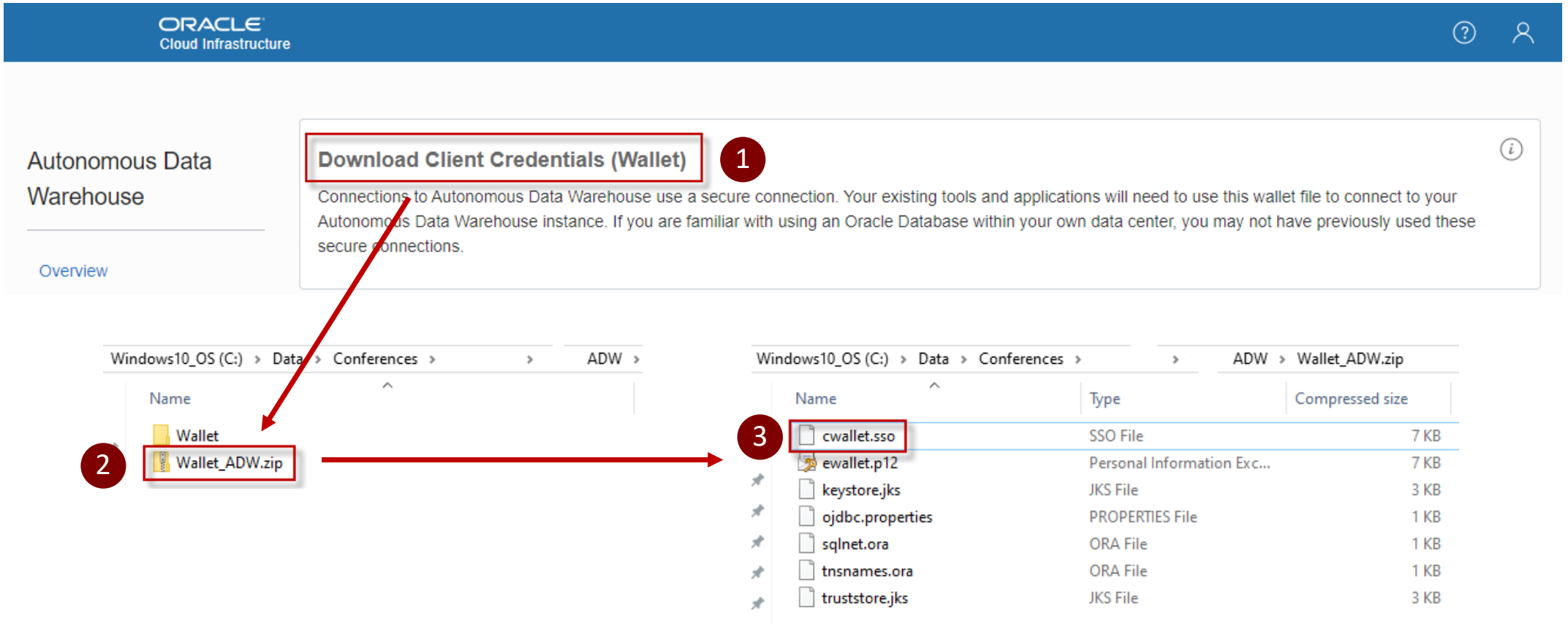
Integrating ADW into OAC: Get ADW Wallet



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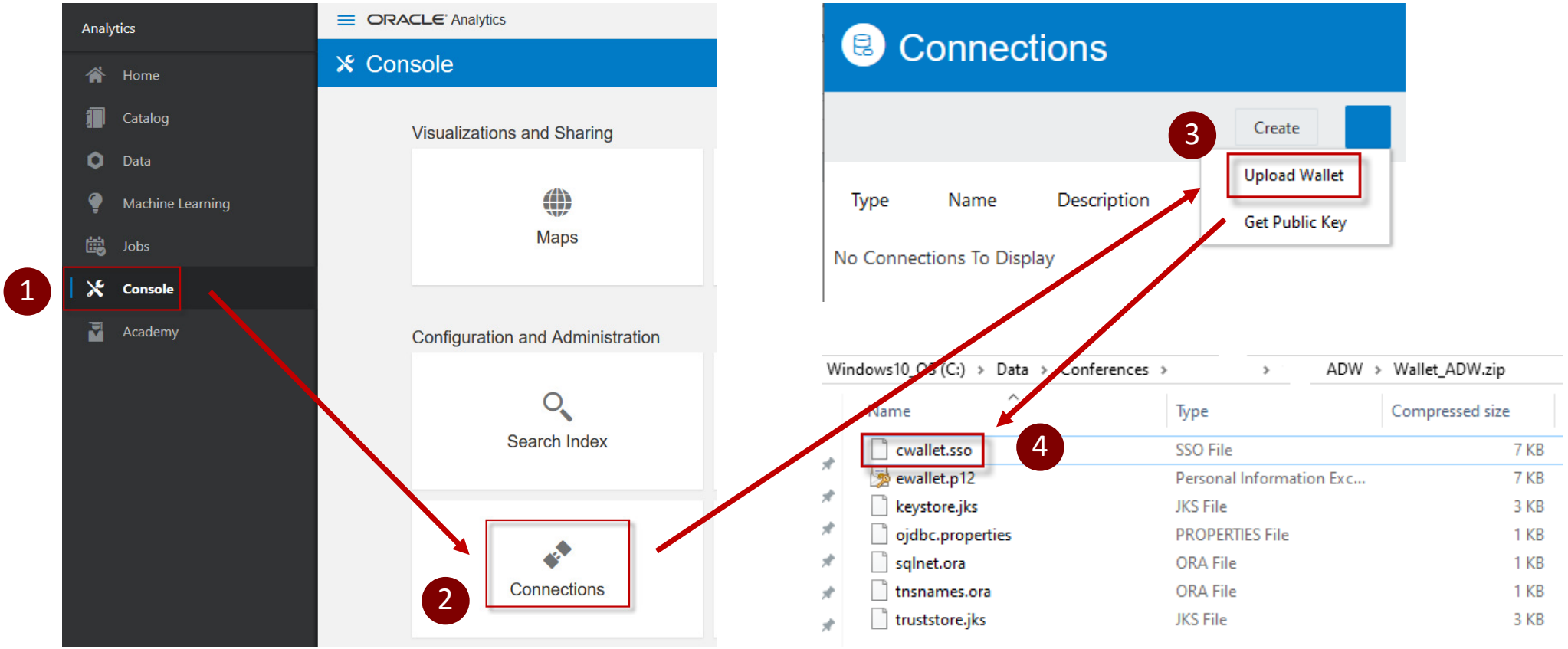
Integrating ADW into OAC: Import ADW Wallet



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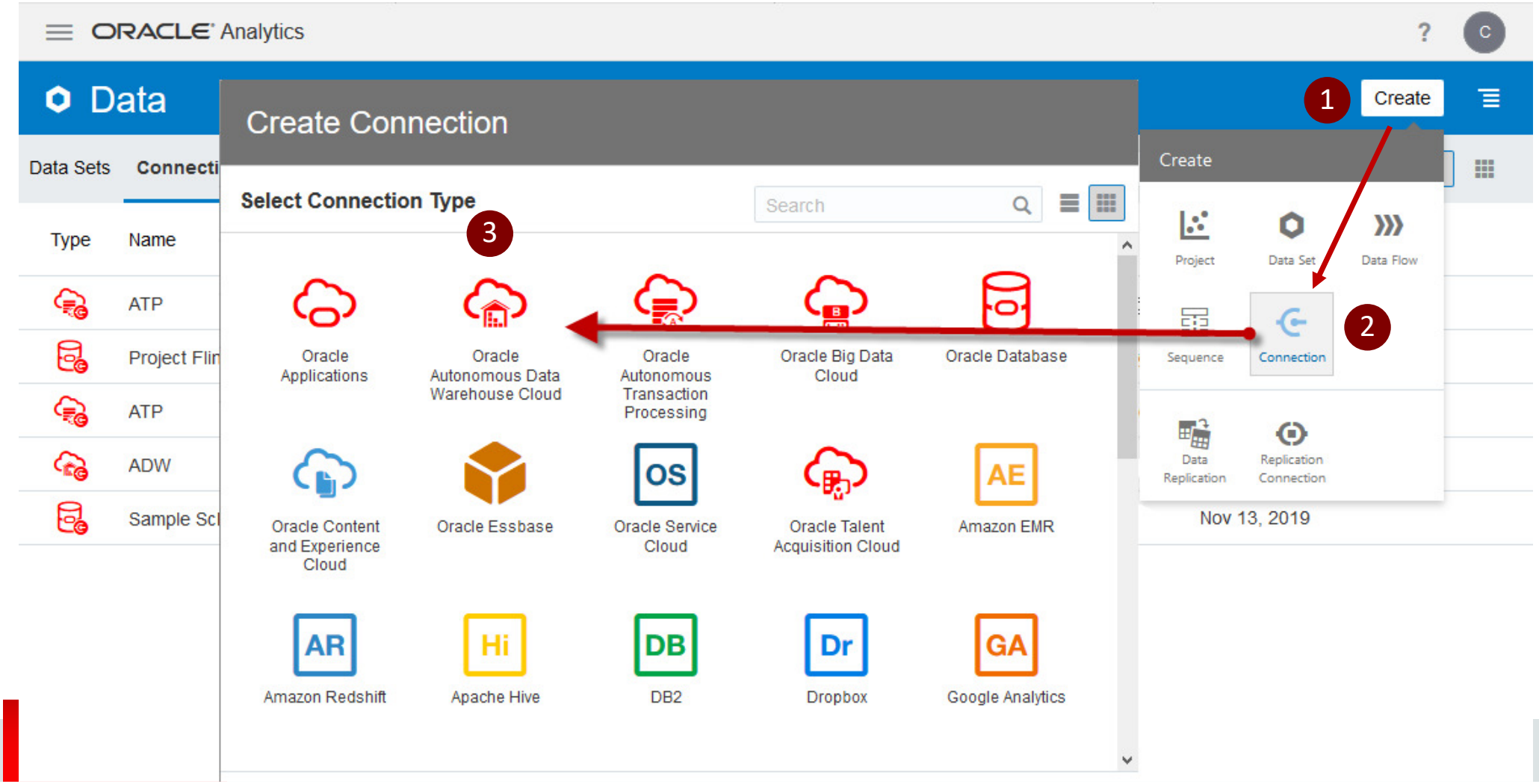
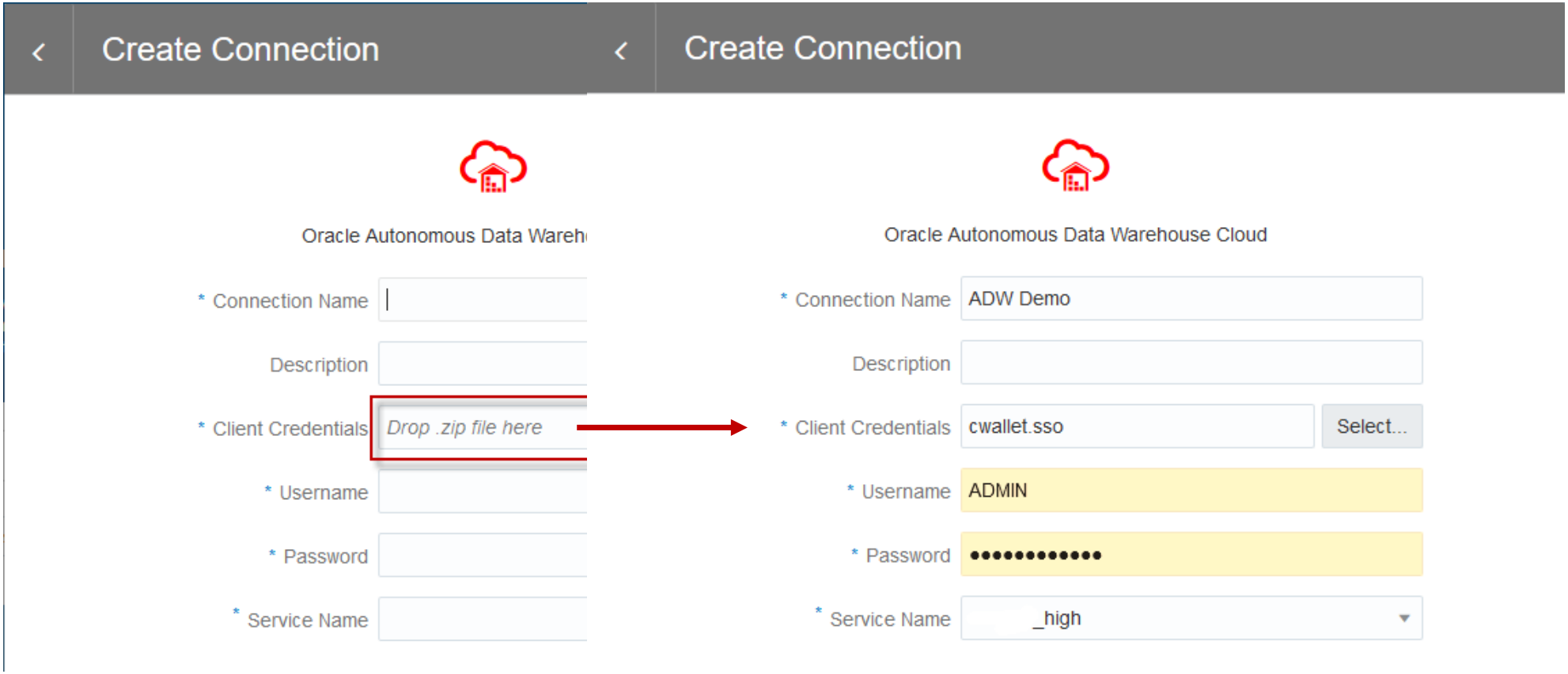
Integrating ADW into OAC: Create Connection



Integrating ADW into OAC: Create Connection



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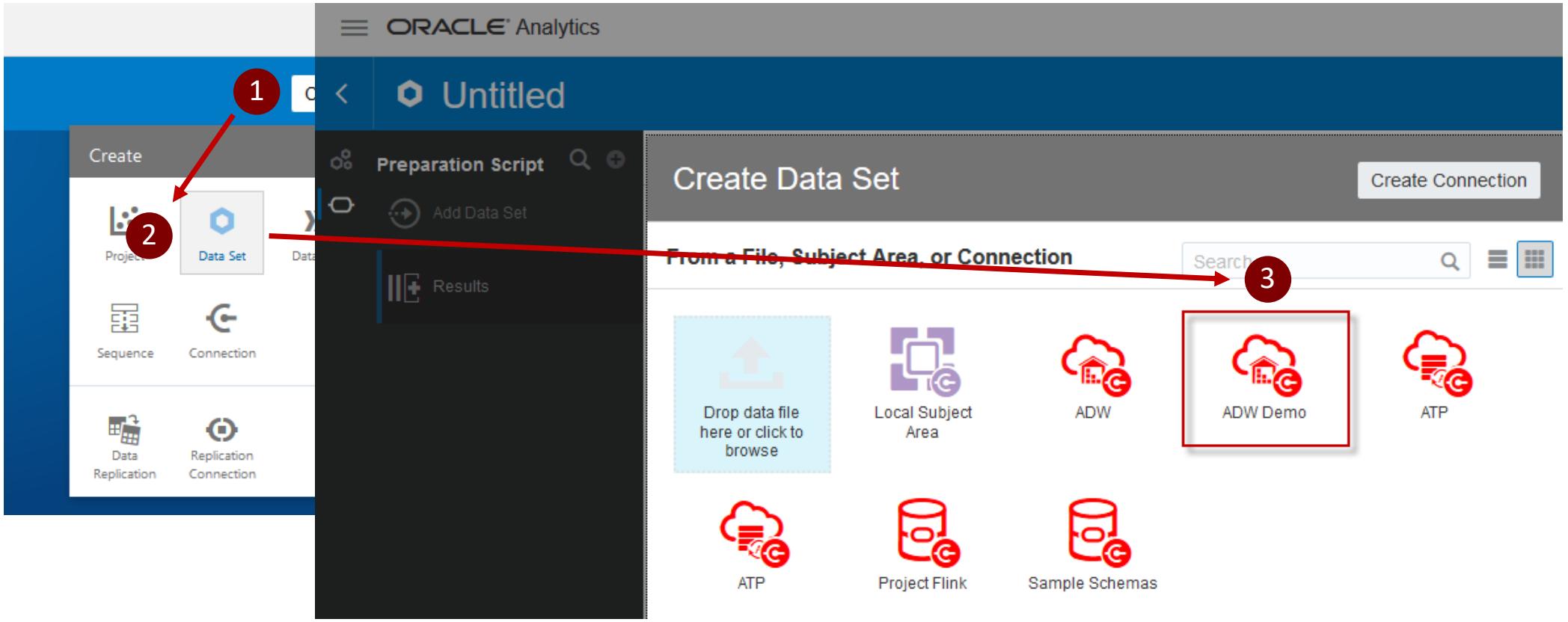
Integrating ADW into OAC: Create Data Set



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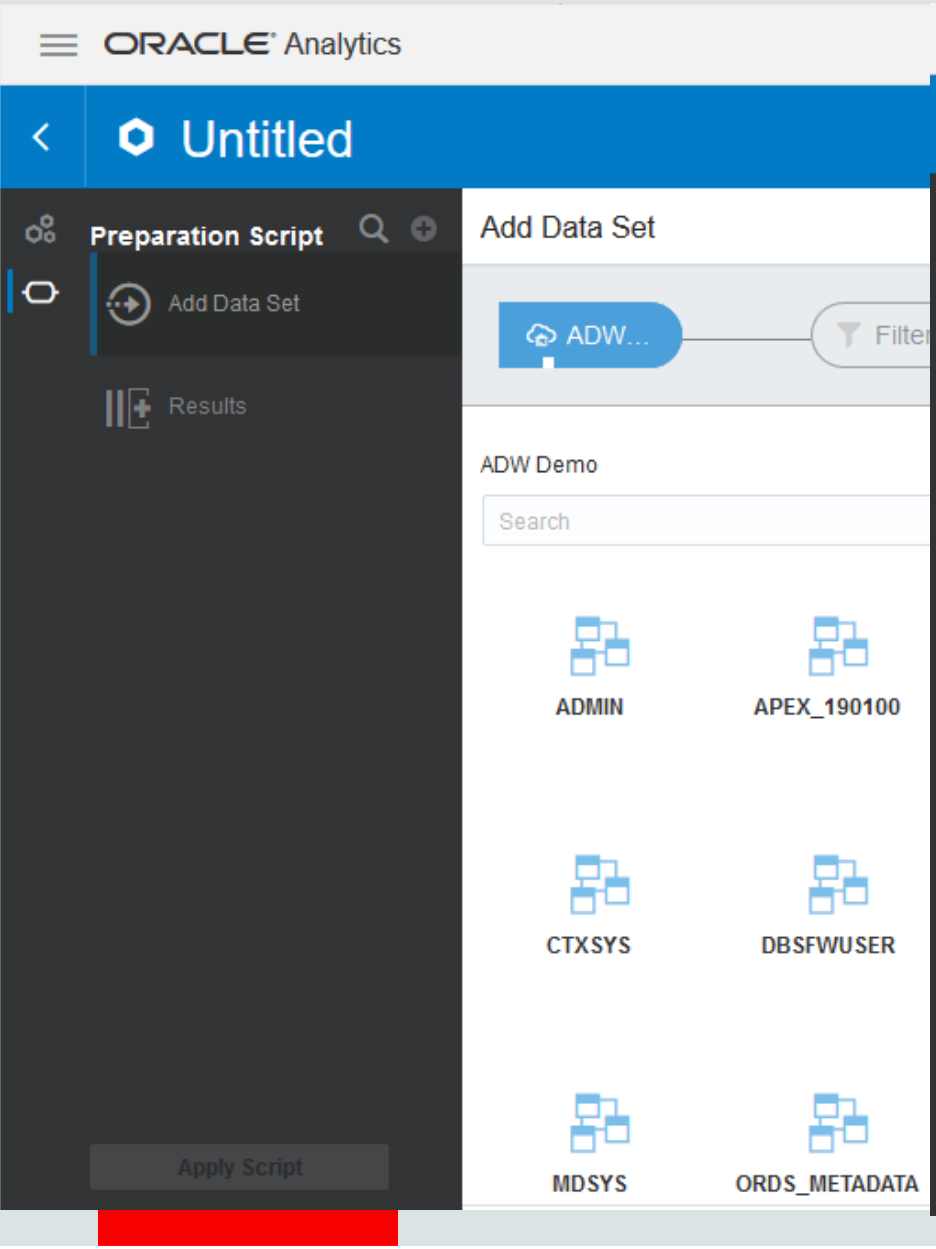
ORACLE Analytics
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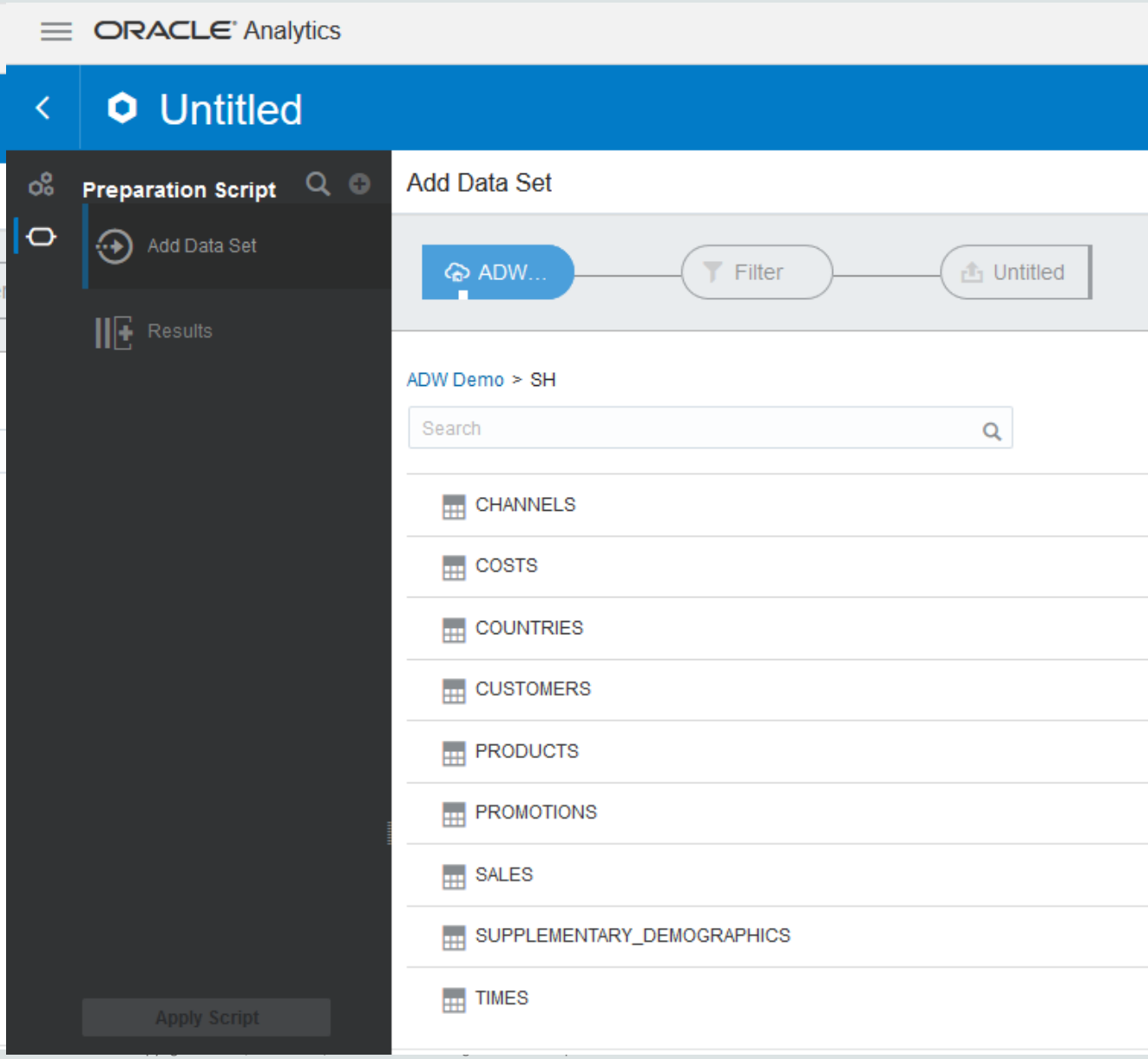
Preparation Script
Add Data Set
Results
Apply Script
Add Data Set
ADW...
Filter
ADW Demo
Search
ADMIN
APEX_190100
CTXSYS
DBSFWUSER
MDSYS
ORDS_METADATA


ORACLE Analytics
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Results
Apply Script
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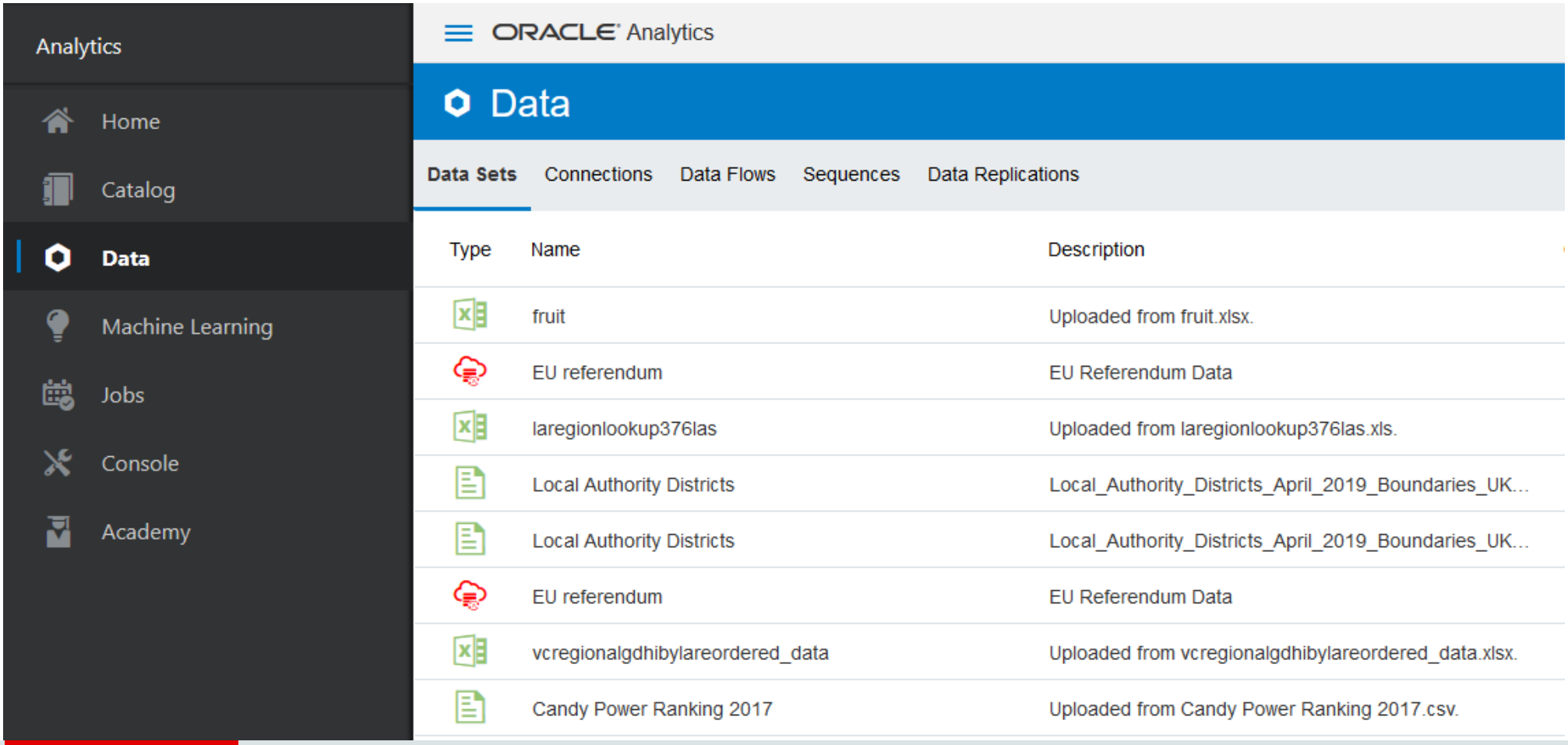
Search
CHANNELS
COSTS
COUNTRIES
CUSTOMERS
PRODUCTS
PROMOTIONS
SALES
SUPPLEMENTARY_DEMOGRAPHICS
TIMES

Integrating ADW into OAC: Manage Data Sets



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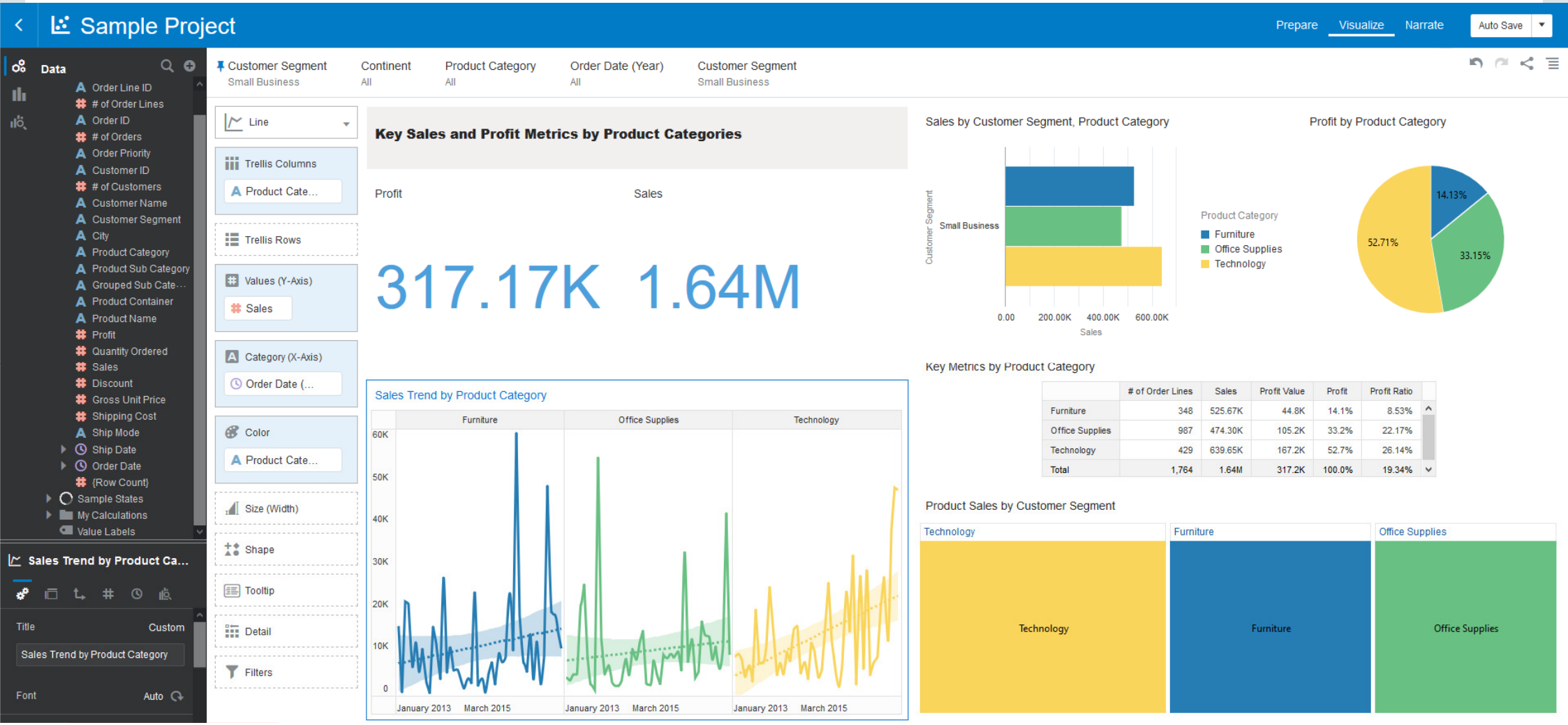
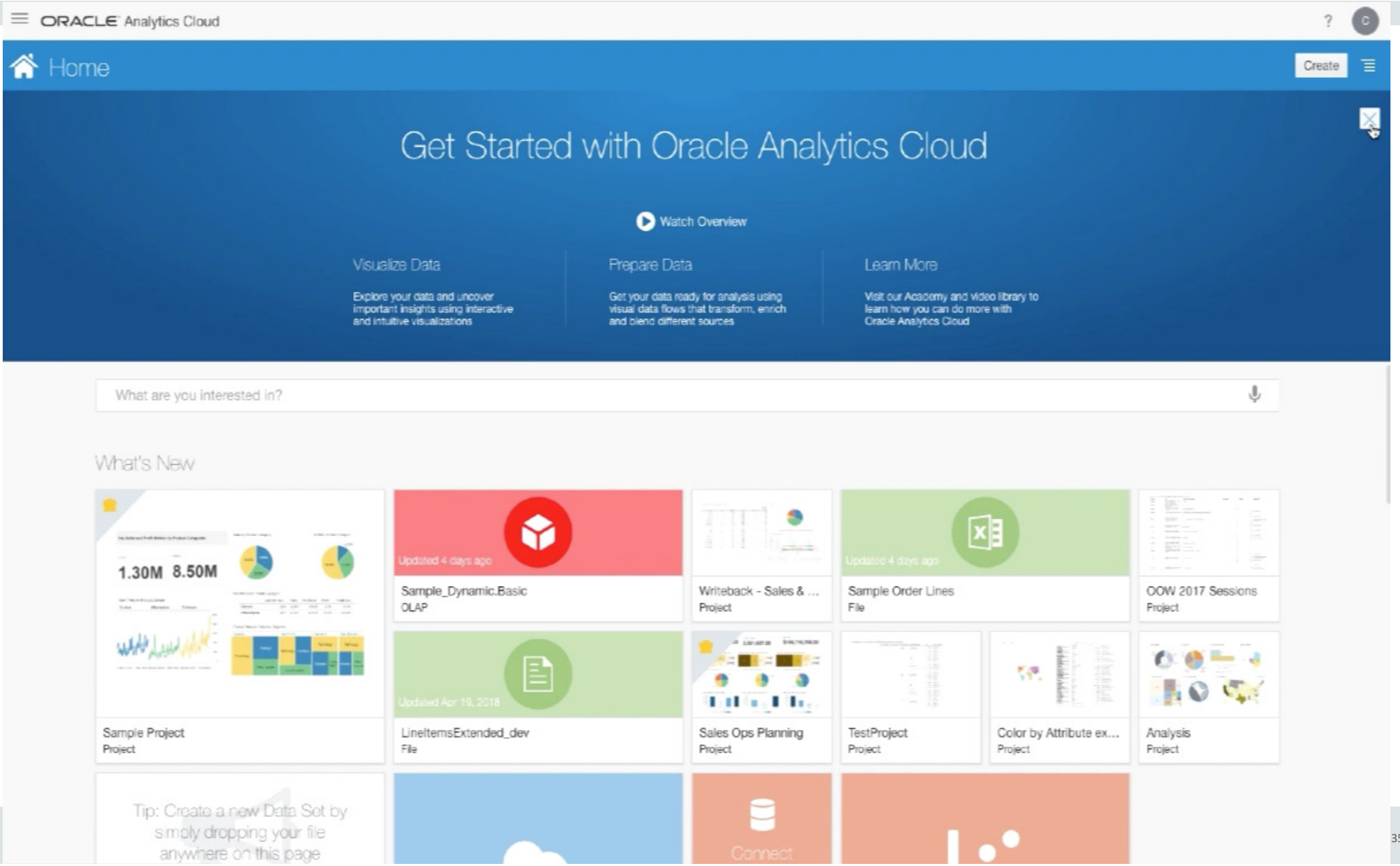
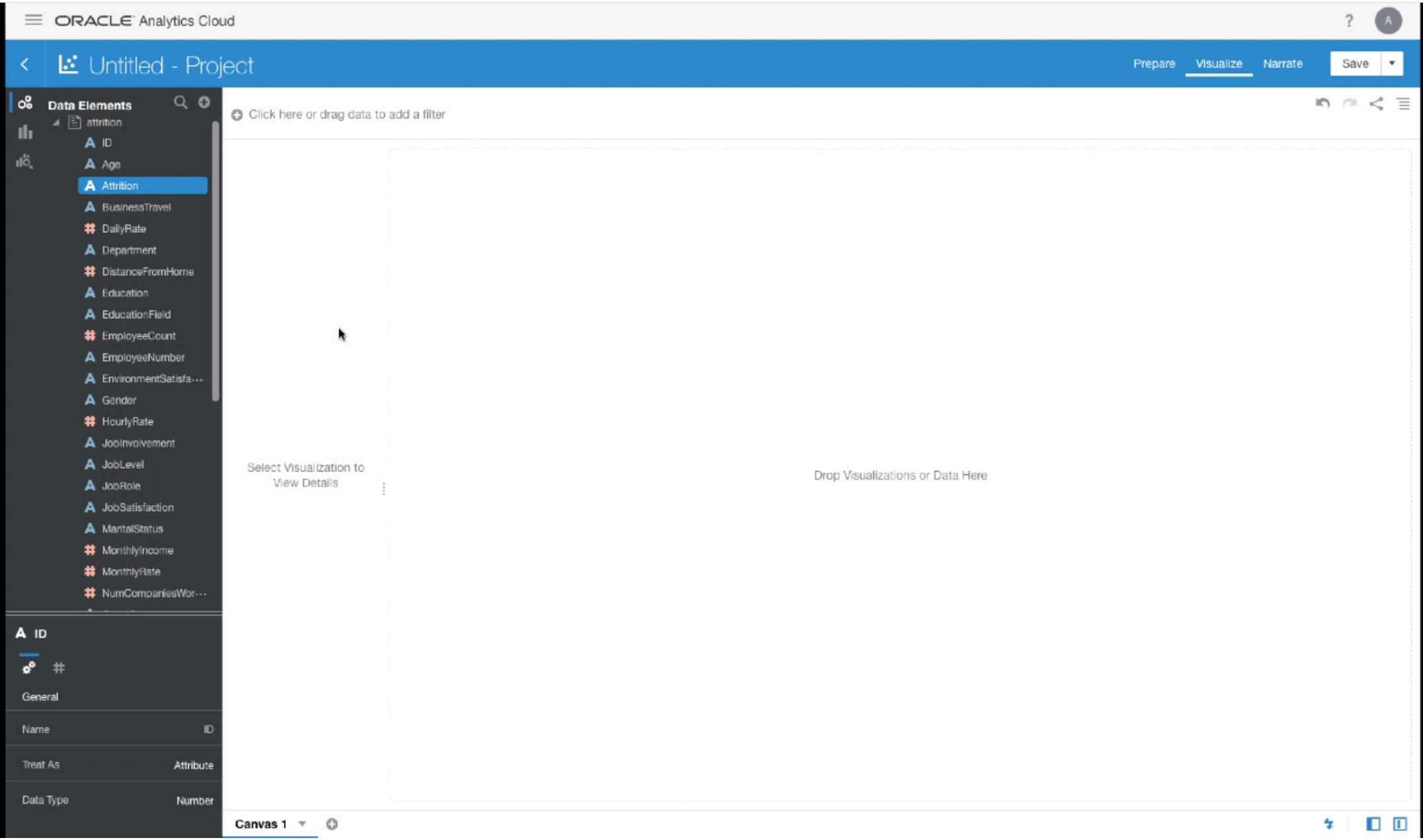
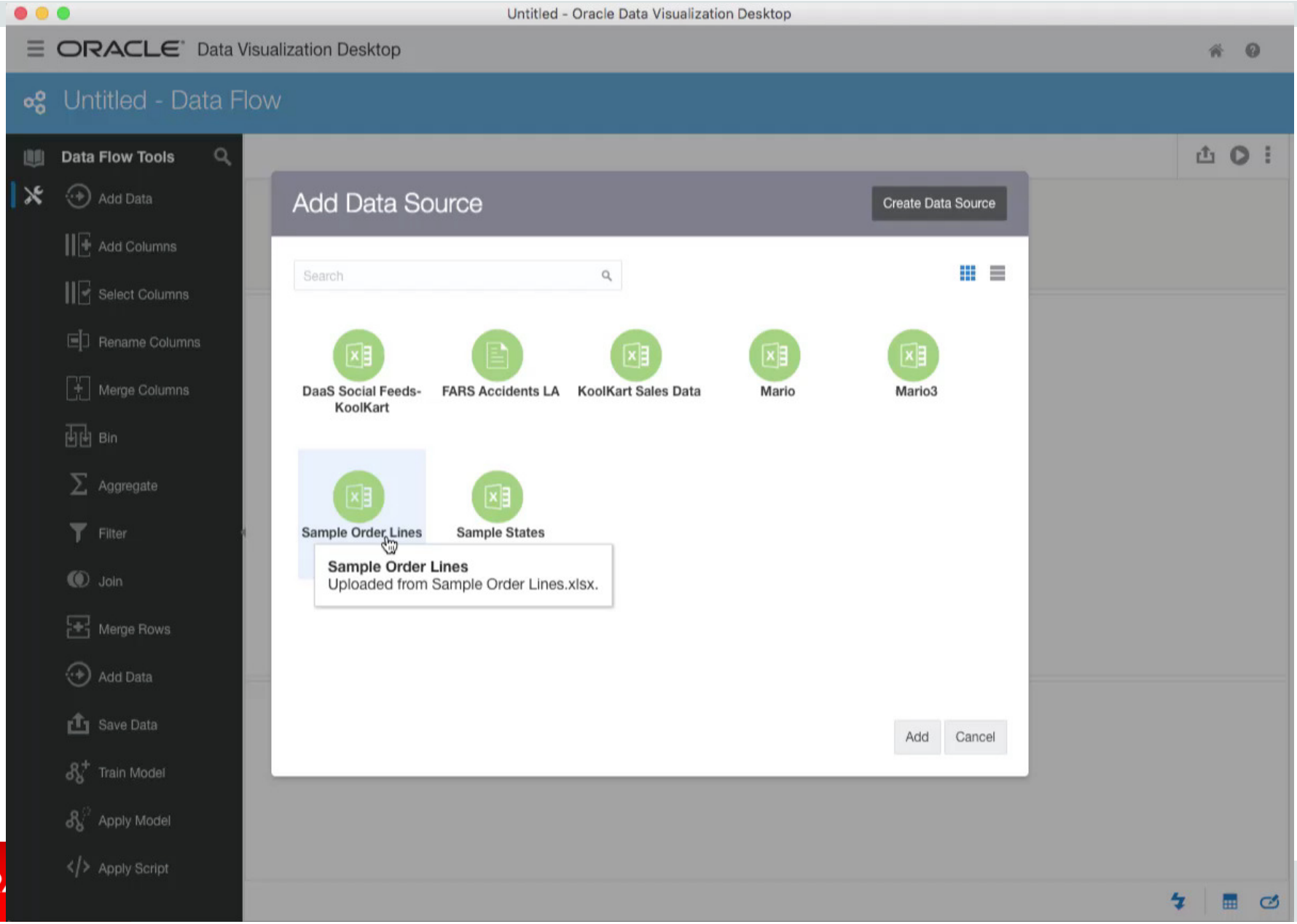
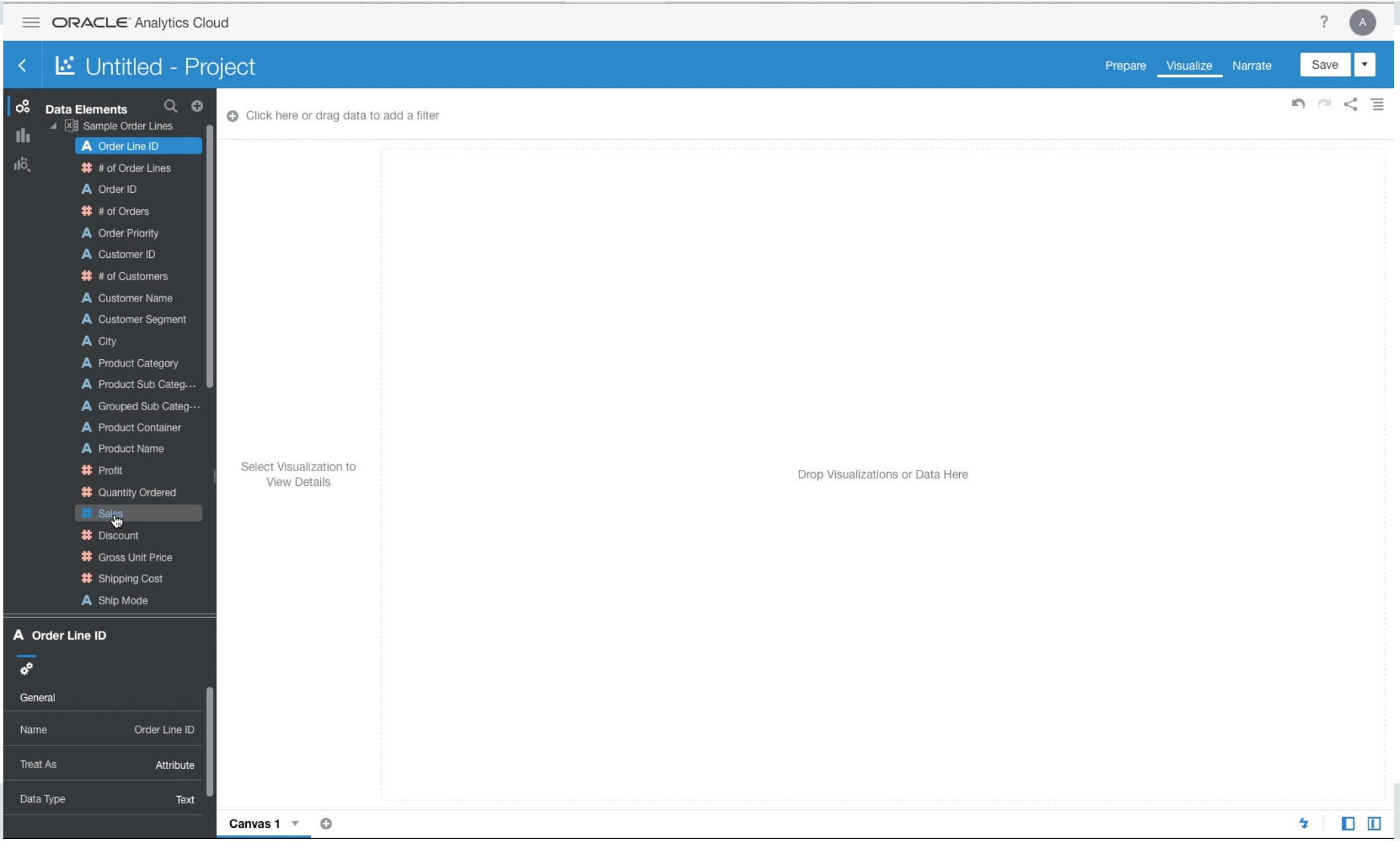
Integrating ADW into OAC: Have fun with Data




ORACLE Analytics Cloud
Home
Create
Get Started with Oracle Analytics Cloud
Watch Overview
Visualize Data
Explore your data and uncover important insights using interactive and intuitive visualizations
Prepare Data
Get your data ready for analysis using visual data flows that transform, enrich and blend different sources
Learn More
Visit our Academy and video library to learn how you can do more with Oracle Analytics Cloud
What are you interested in?
What's New
1.30M 8.50M
Sample Project
Project
Updated 4 days ago
Sample_Dynamic.Basic
OLAP
Writeback - Sales & ...
Project
Updated 4 days ago
Sample Order Lines
File
OOW 2017 Sessions
Project
Updated Apr 19, 2018
LineItemsExtended_dev
File
Sales Ops Planning
Project
TestProject
Project
Color by Attribute ex...
Project
Analysis
Project
Tip: Create a new Data Set by simply dropping your file anywhere on this page
Connect


ORACLE Analytics Cloud
Untitled - Project
Prepare
Visualize
Narrate
Save
Data Elements
attrition
ID
Age
Attrition
BusinessTravel
DailyRate
Department
DistanceFromHome
Education
EducationField
EmployeeCount
EmployeeNumber
EnvironmentSatisfa···
Gender
HourlyRate
JobInvolvement
JobLevel
JobRole
JobSatisfaction
MaritalStatus
MonthlyIncome
MonthlyRate
NumCompaniesWor···
Click here or drag data to add a filter
Select Visualization to View Details
Drop Visualizations or Data Here
ID
General
Name
ID
Treat As
Attribute
Data Type
Number
Canvas 1


Untitled - Oracle Data Visualization Desktop
ORACLE Data Visualization Desktop
Untitled - Data Flow
Data Flow Tools
Add Data
Add Columns
Select Columns
Rename Columns
Merge Columns
Bin
Aggregate
Filter
Join
Merge Rows
Add Data
Save Data
Train Model
Apply Model
Apply Script
Add Data Source
Create Data Source
Search
DaaS Social Feeds-KoolKart
FARS Accidents LA
KoolKart Sales Data
Mario
Mario3
Sample Order Lines
Sample States
Sample Order Lines
Uploaded from Sample Order Lines.xlsx.
Add
Cancel


ORACLE Analytics Cloud
Untitled - Project
Prepare
Visualize
Narrate
Save
Data Elements
Sample Order Lines
Order Line ID
# of Order Lines
Order ID
# of Orders
Order Priority
Customer ID
# of Customers
Customer Name
Customer Segment
City
Product Category
Product Sub Categ...
Grouped Sub Categ...
Product Container
Product Name
Profit
Quantity Ordered
Sales
Discount
Gross Unit Price
Shipping Cost
Ship Mode
Order Line ID
General
Name
Order Line ID
Treat As
Attribute
Data Type
Text
Click here or drag data to add a filter
Select Visualization to View Details
Drop Visualizations or Data Here
Canvas 1

Say Hello to
Oracle Digital Assistant

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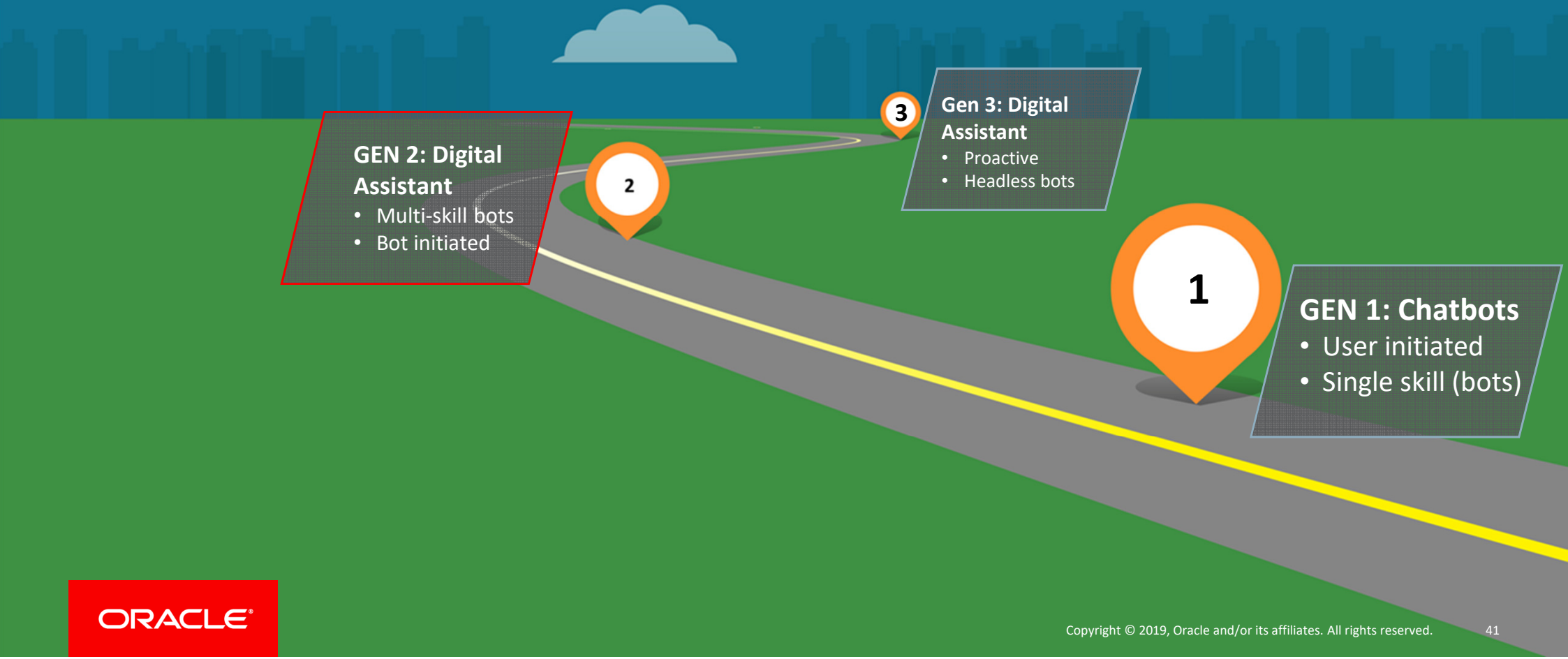
From Today's Chatbots to Tomorrow's Digital Assistants



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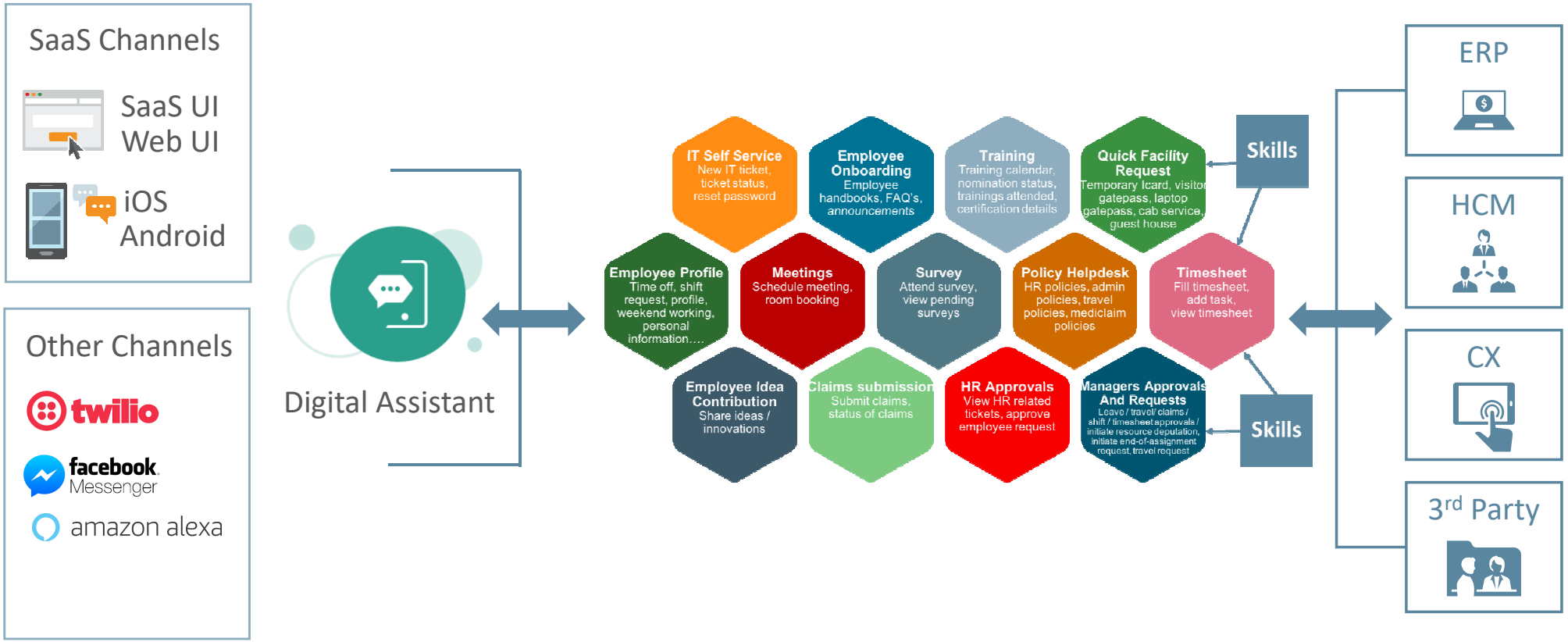
Oracle Digital Assistant – Skills and Channels



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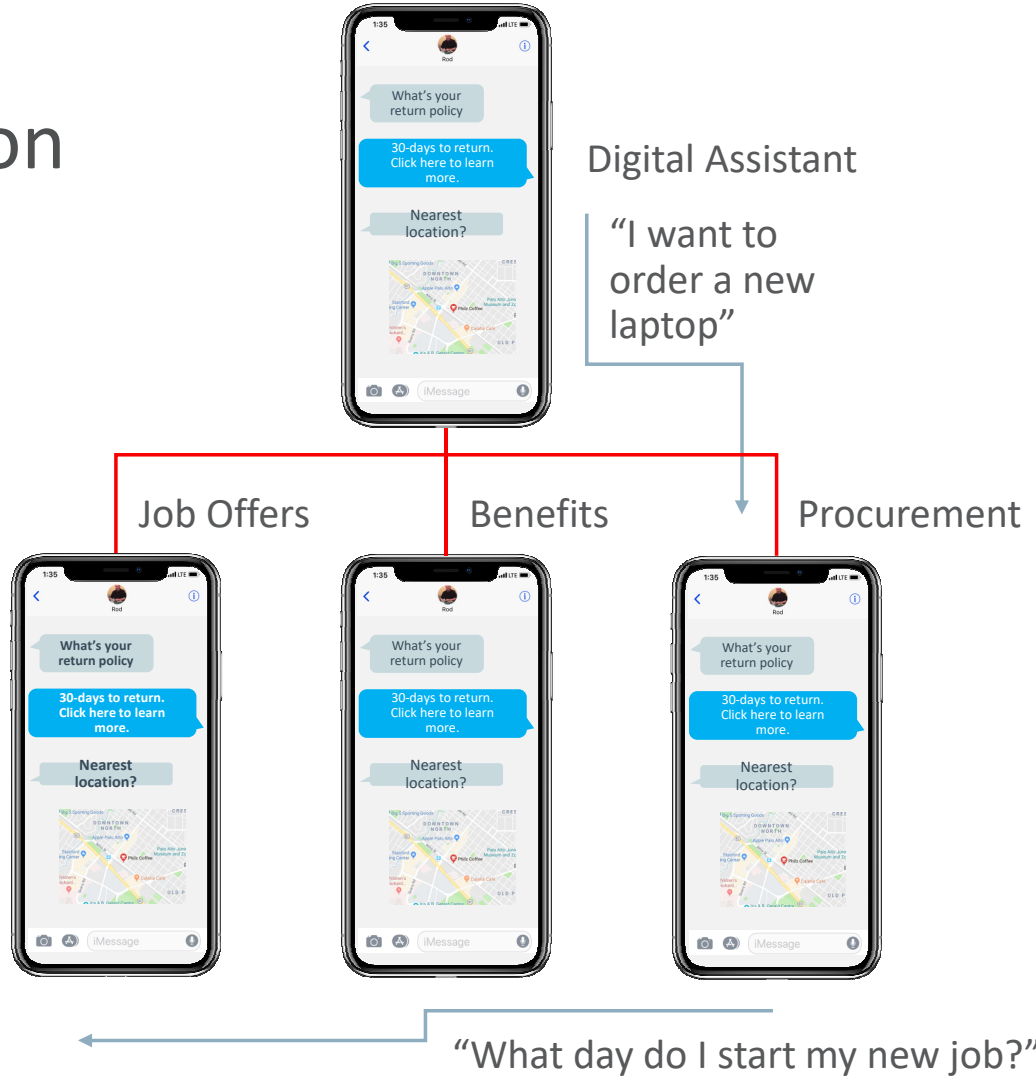
Automated Skill Coordination

Digital Assistant routes requests to the right skill bots:

- Explicit routing – “Ask Banking Bot my savings balance”
- Implicit routing – “What’s my savings balance?”
- Jump seamlessly
- User remains unaware and untouched



Skill benefits:

- Modularize functions
- Enable incremental development
- Simplify code management
- Simplify versioning and LCM
- Enable segmented authorization

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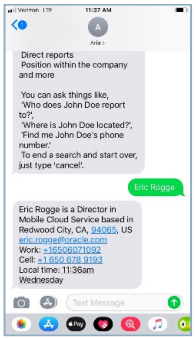
Conversations via Any App, Any Device

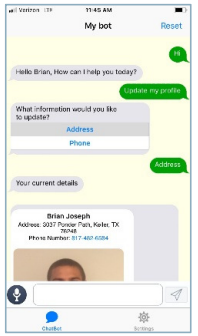
- Public Messaging Channels
  - SMS, FB Messenger, FB WhatsApp*, TwitterDM, KIK, WeChat, Line, Telegram
- Enterprise Messaging Channels
  - Slack, MSFT Teams, Skype for business
  - Oracle Svc Cloud Chat
- Mobile and Web Chat SDK
- Voice / VPA / IVR
  - Siri, Cortana, Google Voice
  - Alexa, GoogleHome,
  - Oracle Voice (speak.ai)
  - Genesys
- Same conversation regardless of channel
- Rich responses – text, images, links, cards, lists, carousels.

*Requires WABA

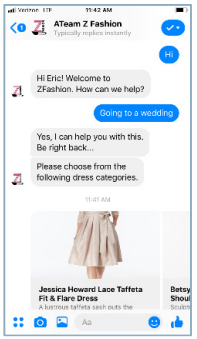
Voice



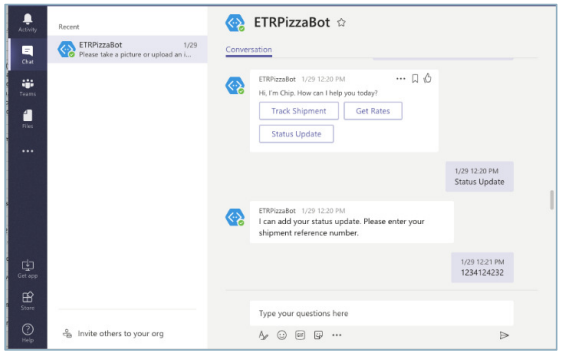
Mobile SMS



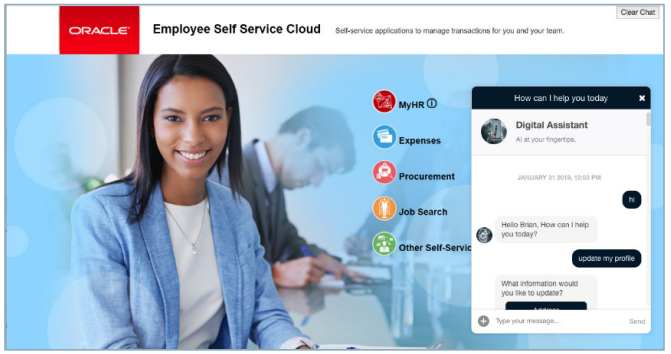
Mobile Apps



Messaging Platforms



Embedded in Team Collaboration



Embedded in portal or web app

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Enterprise Skills

HCM

- HCM (19c)
  - Absences, Employee feedback, Pay slip, Employee directory, Perf mgmt./MBO, Salary, Tax forms, Pay Slip, Goals, Manager Self Service, Benefits, Onboarding, Candidate Experience, Hiring
- Approvals

OTM

- Shipments
  - Shipment status, details, stops, history, time of delivery, last waypoint

CX

- Sales (19c)
  - Appointments, Opportunities, Accounts, Contacts, Tasks, Appointment follow-up, Email CPQ
- Marketing:
  - Campaign chatbot

EPM

- Fin. Consol. and Close
- Account Reconciliation

SCM

- Order Management

ERP

- Expenses (19d)
  - Submit expense, Create expense report, Get status
- Project Management
  - Review project status, Report team tasks, See overdue tasks, Report time worked
- Procurement
  - Product search, Recommendations, Create/approve requisition, Status check
- Time Capture

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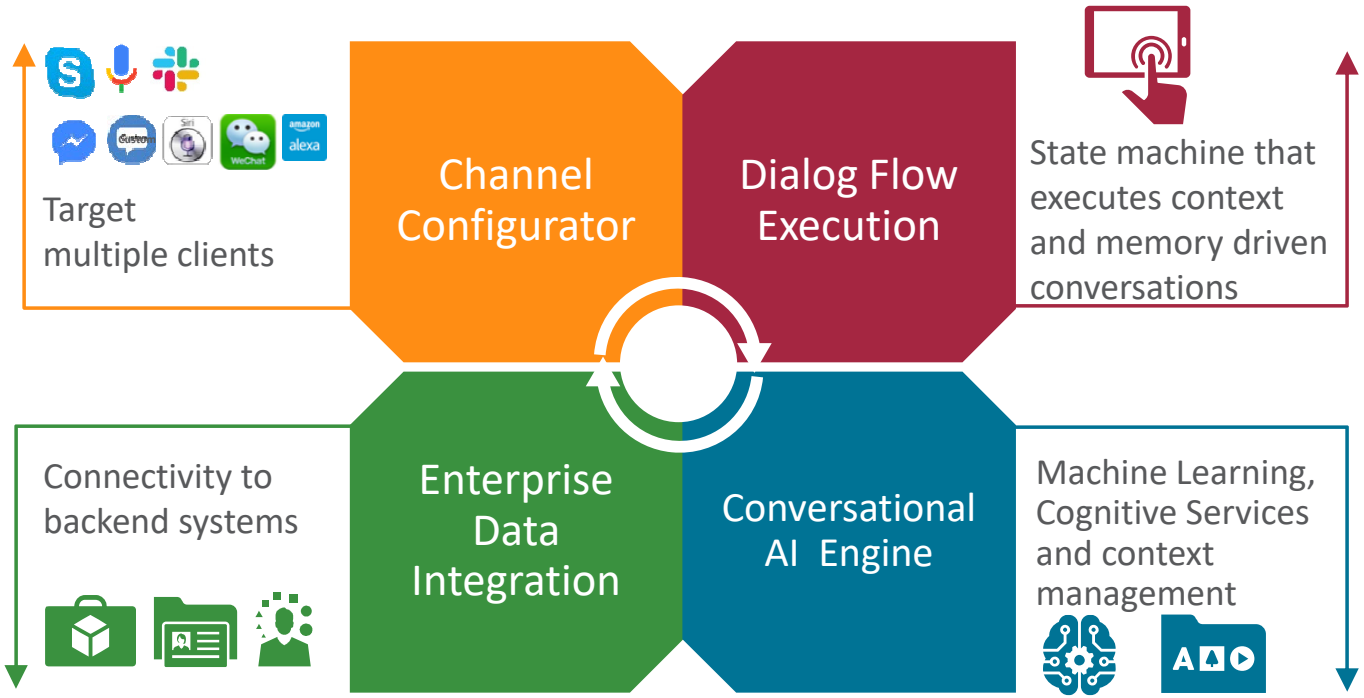
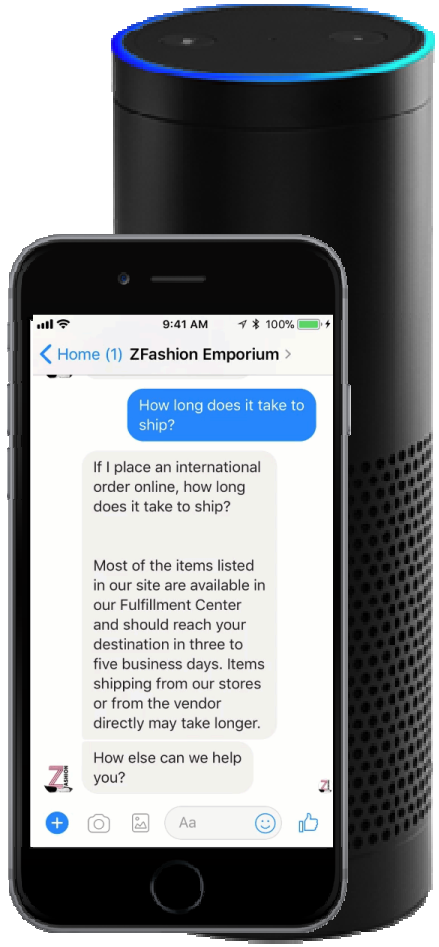
Skill Components





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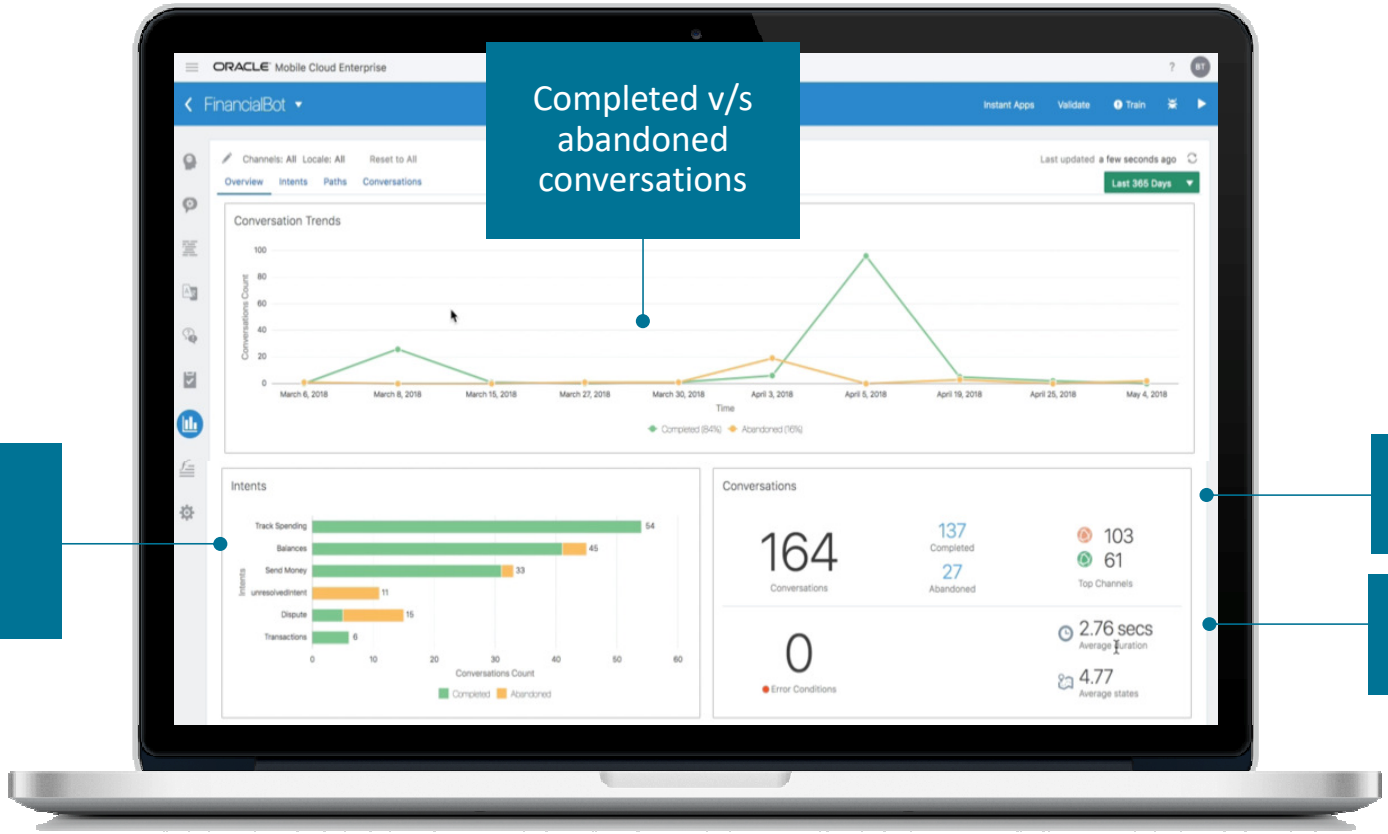
DA Insights: How Are My Skills Used? Keep an eye on things



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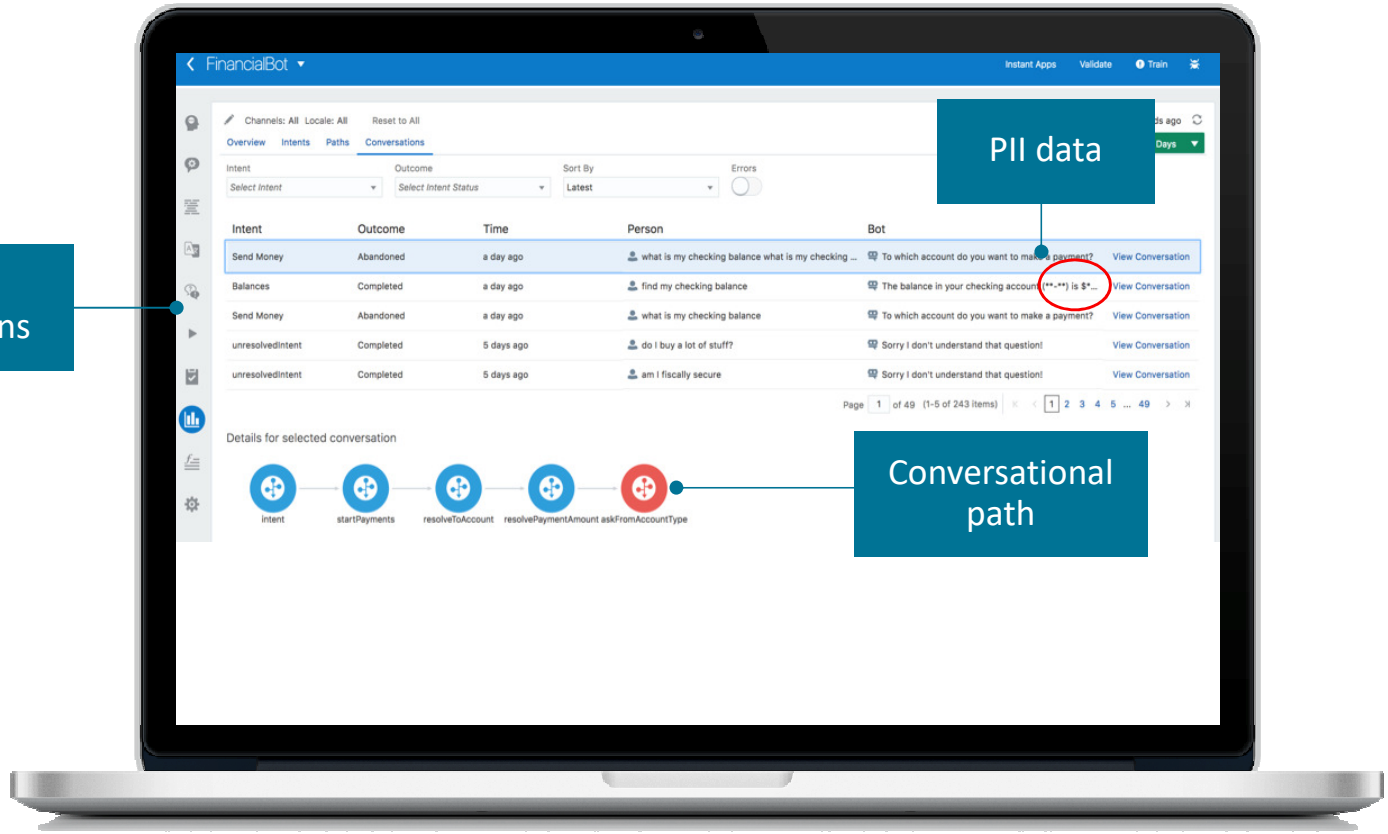
Insights on Dialog Paths, Preferences, Errors

End user conversations



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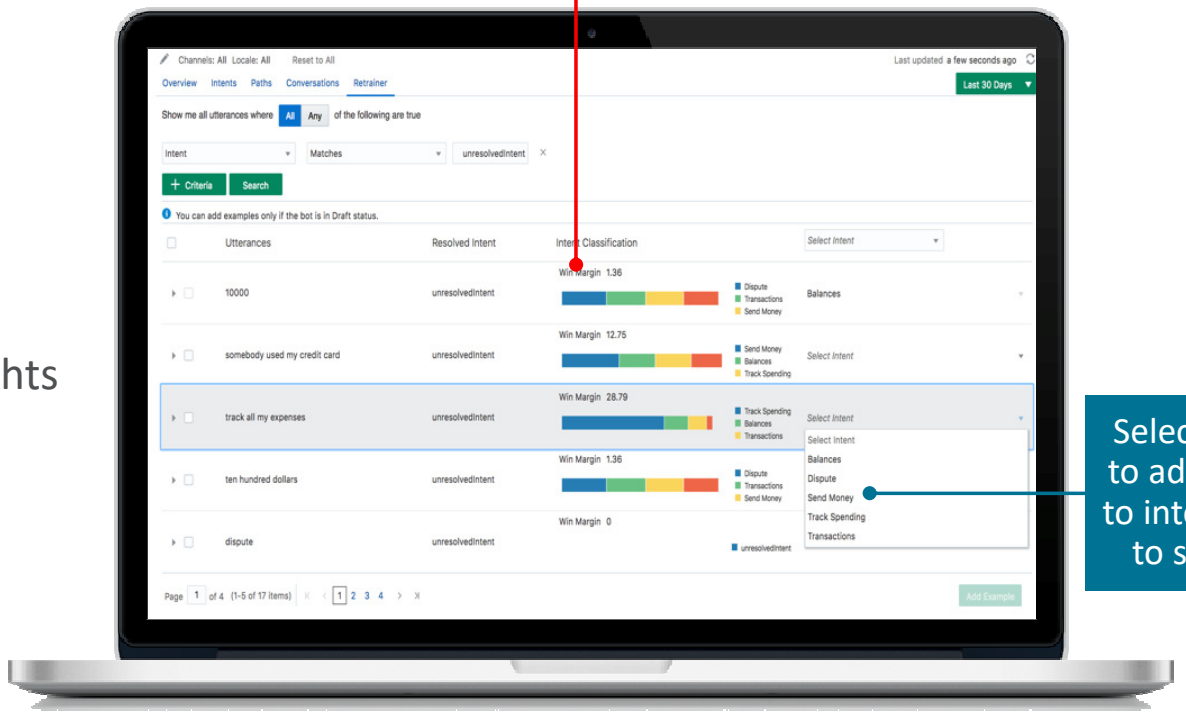
Moderated Self Learning for Skills

- Initial set-up
  - Define intents
  - For each intent add 8 - 10 phrases
  - Train model
- Supervised self-learning
  - Review unresolved utterances in insights
  - Click on phrases
  - Add to model



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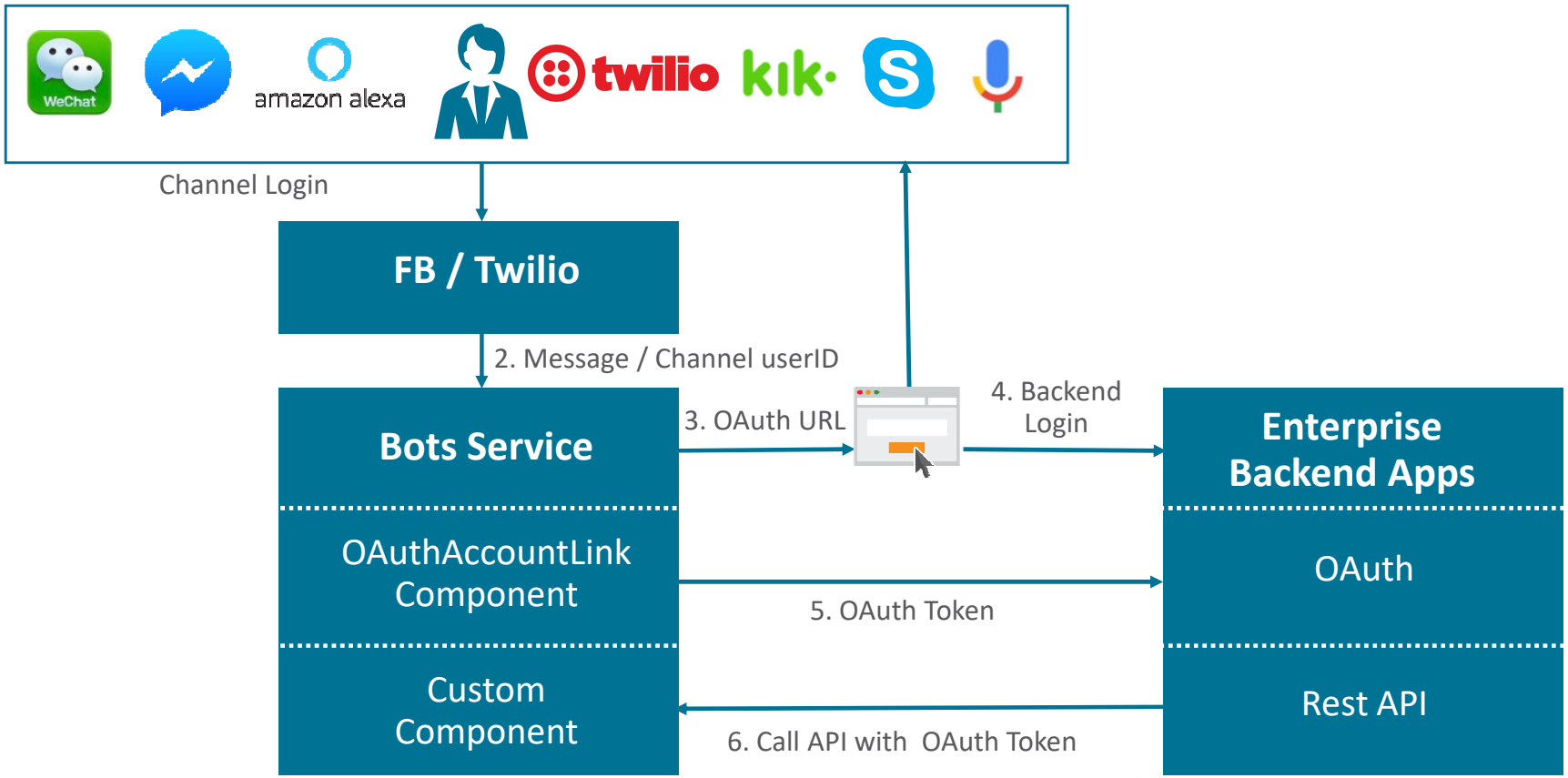
Security : Authentication and Authorization.
3 Legged OAuth with Public Channels



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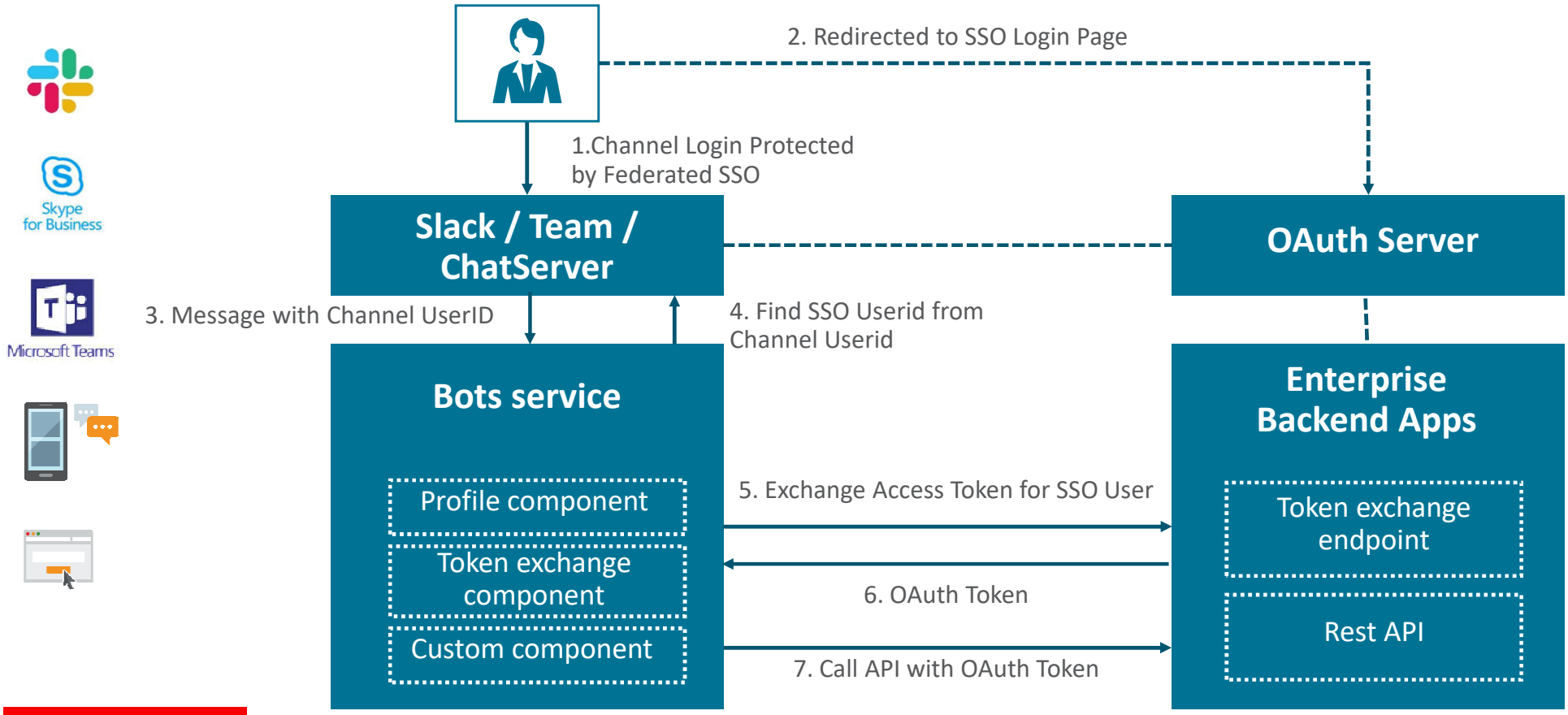
Security: Authentication and Authorization. SSO



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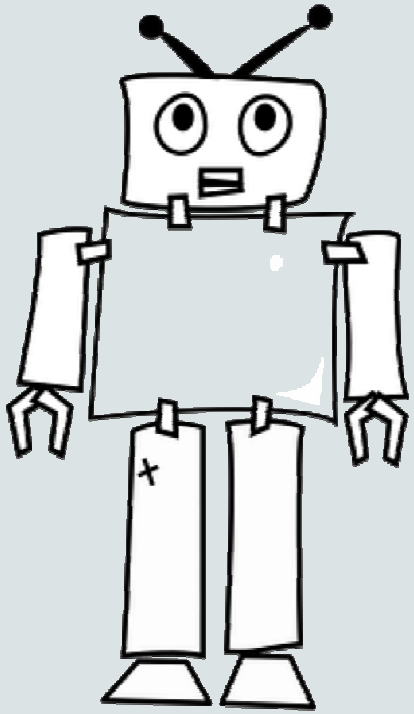
Implementing the bot



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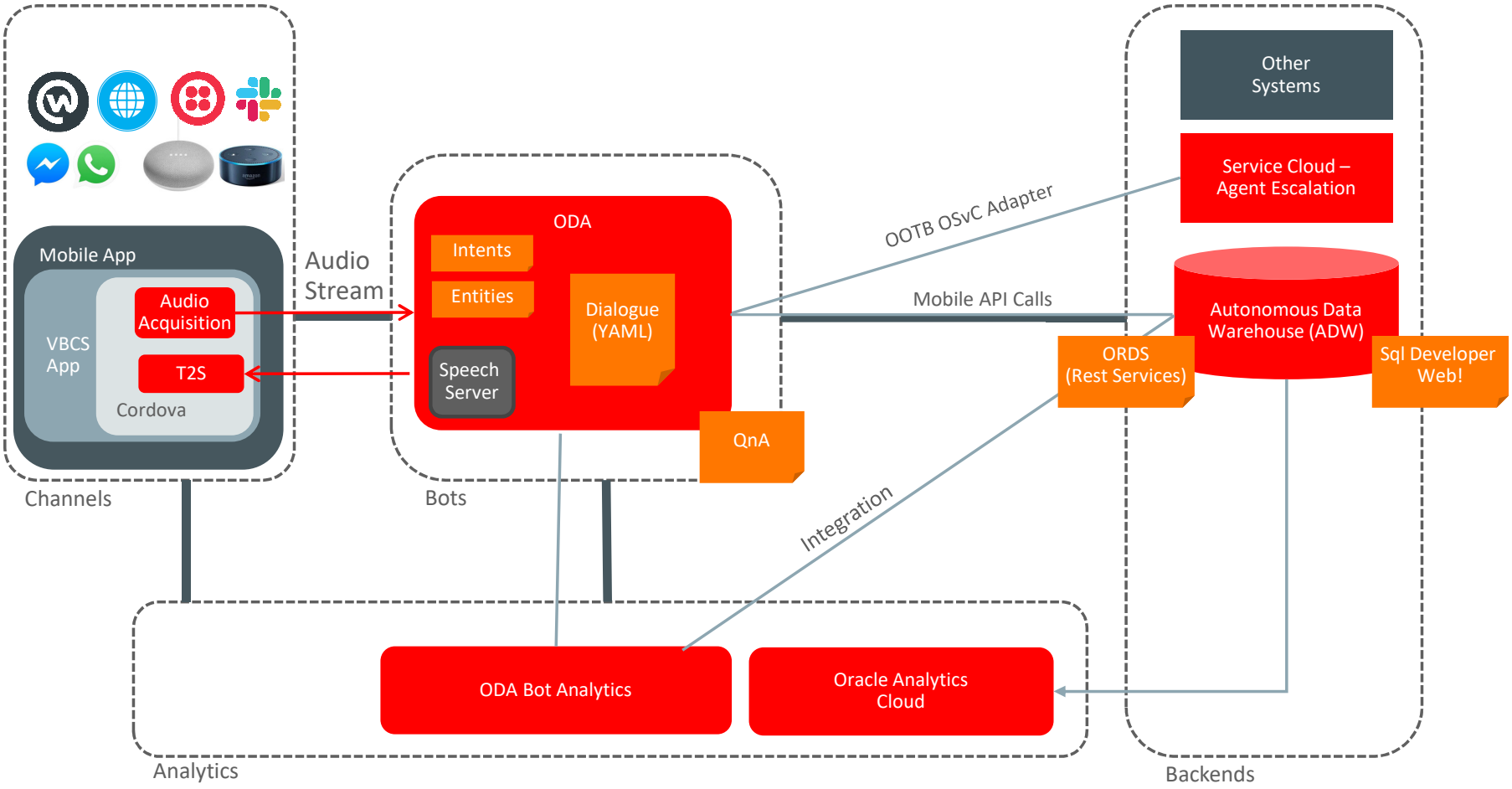
Architecture



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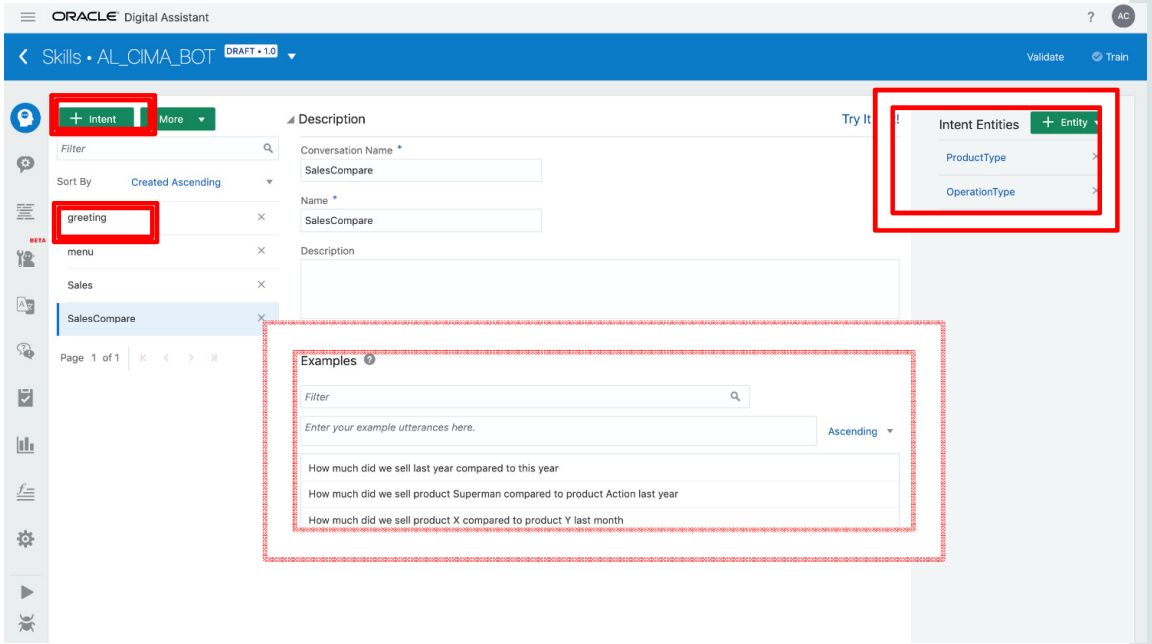
Intents & Utterances

Create the “Greeting” Intent

- In the left navigation for the designer, make sure that is selected.
- Click the **+ Intent** button.
- In the **Name** field, type `Greeting`.
- Copy the example sentences below, paste them into the **Enter your example utterances here** field, and press the Enter key. (Yes, you can paste all of them at once.)
  - Hello
  - Heya
  - Yo yo yo
  - Allo
- You'll notice that it's fine for utterances to have inconsistent punctuation and capitalization.
- Now add the Intent Entities for auto detect of aggregation type operation and product type



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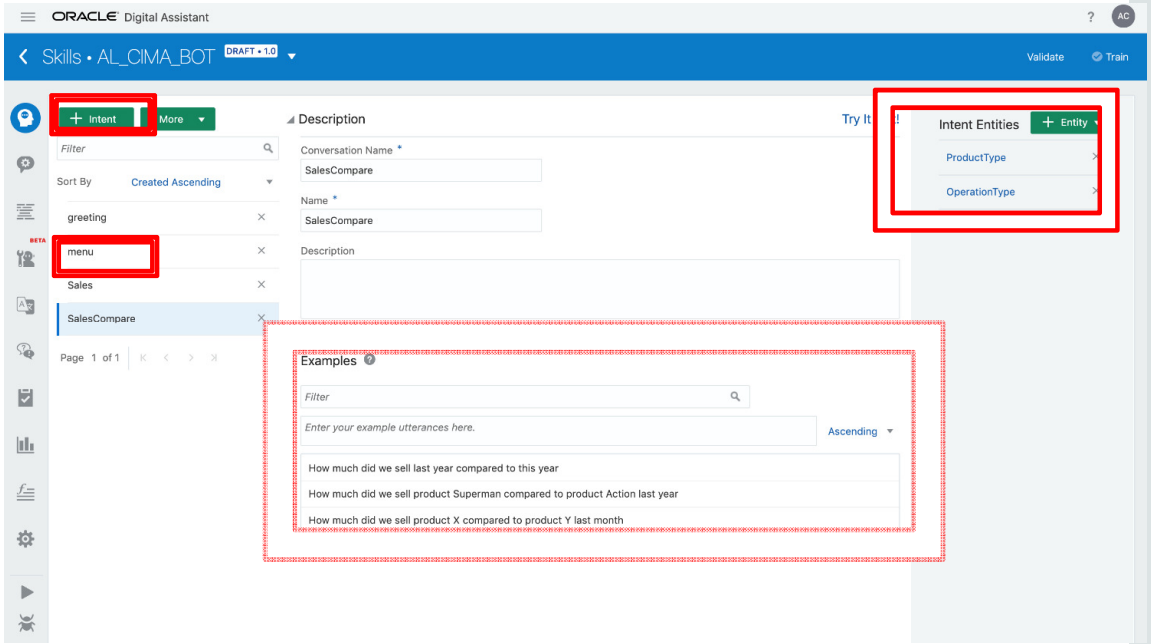
Intents & Utterances

Create the “Menu” Intent

- In the left navigation for the designer, make sure that is selected.
- Click the **+ Intent** button.
- In the **Name** field, type `Menu`.
- Copy the example sentences below, paste them into the **Enter your example utterances here** field, and press the Enter key. (Yes, you can paste all of them at once.)
  - What can you do
  - Menu
  - Options
  - Please help
- You'll notice that it's fine for utterances to have inconsistent punctuation and capitalization.
- Now add the Intent Entities for auto detect of aggregation type operation and product type



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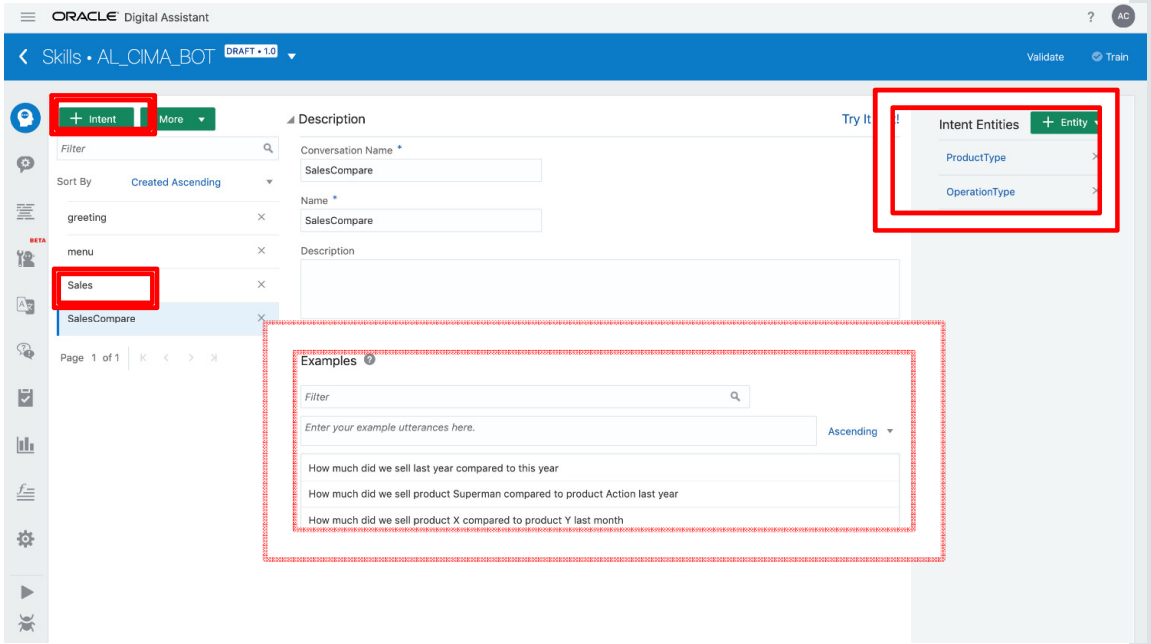
Intents & Utterances

Create the “Sales” Intent

- In the left navigation for the designer, make sure that is selected.
- Click the **+ Intent** button.
- In the **Name** field, type `Sales`.
- Copy the example sentences below, paste them into the **Enter your example utterances here** field, and press the Enter key. (Yes, you can paste all of them at once.)
  - How much did we sell last year
  - How much money did we get by selling last day
  - what was the sum amount of the products we sold this month
- You'll notice that it's fine for utterances to have inconsistent punctuation and capitalization.
- Now add the Intent Entities for auto detect of aggregation type operation and product type



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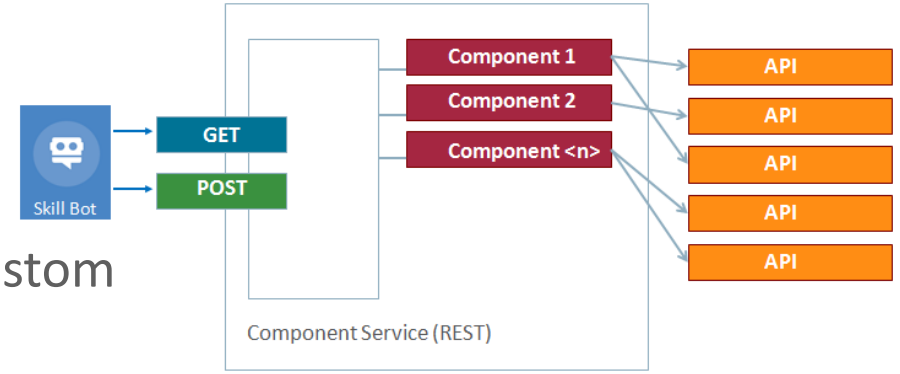
Custom component service development basics

- A custom component is simply a REST API
- – Always GET and POST which "plug" into Oracle Digital Assistant
- – Custom component typically calls an external API • You can "package" related custom
- components together
  – Called a component service
- • Oracle provides
  – A "starter" which has most of the code for a custom
- component
  – SDK to simplify bot interaction



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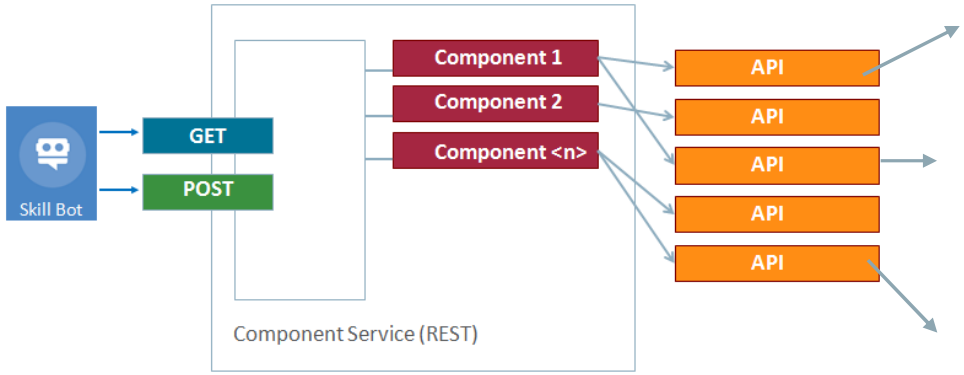
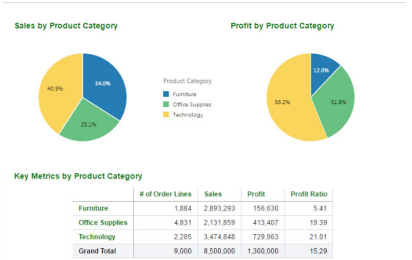
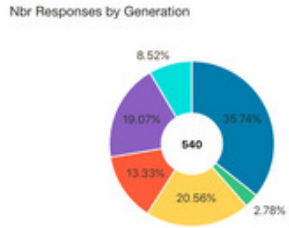
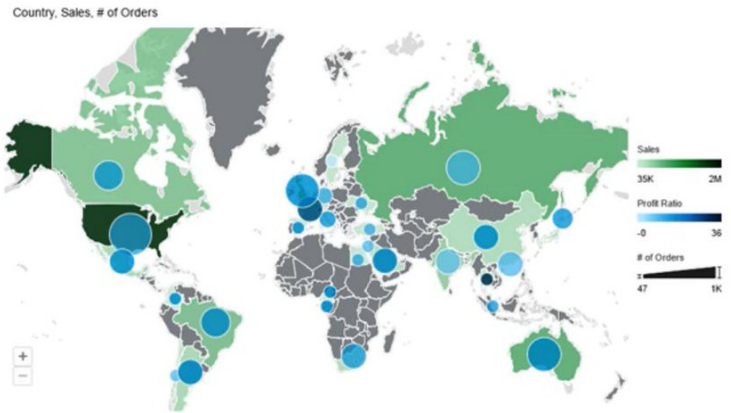
Custom component OAC

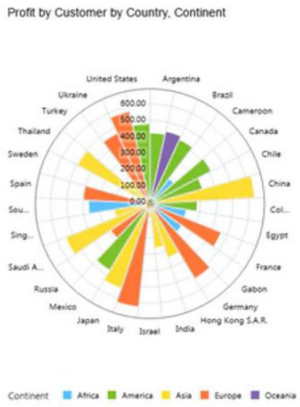
- Native Oracle Analytics Cloud and Oracle Analytics Server not yet available (Jan. 2020)
- Web Services and URL calls both available











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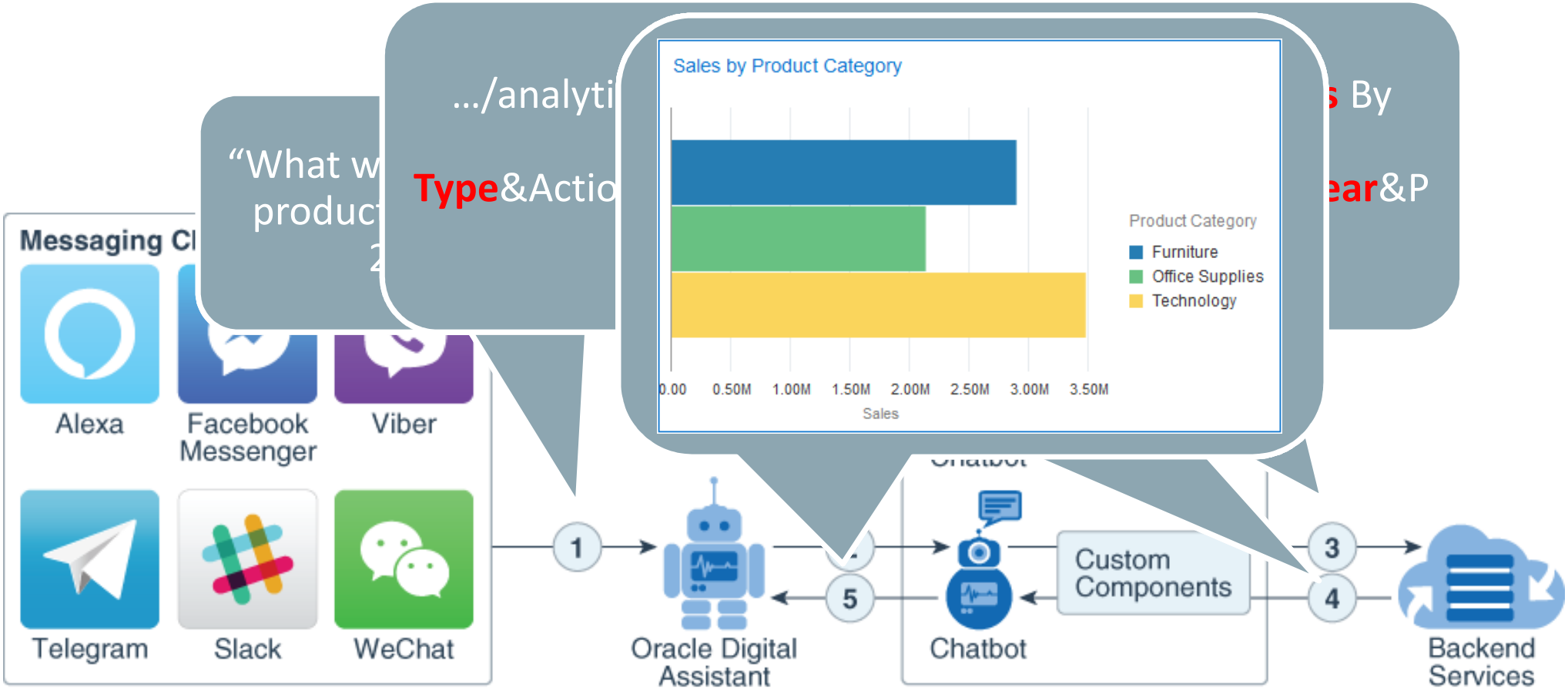

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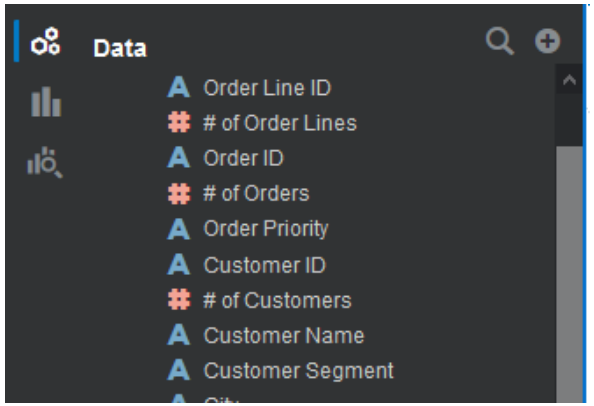
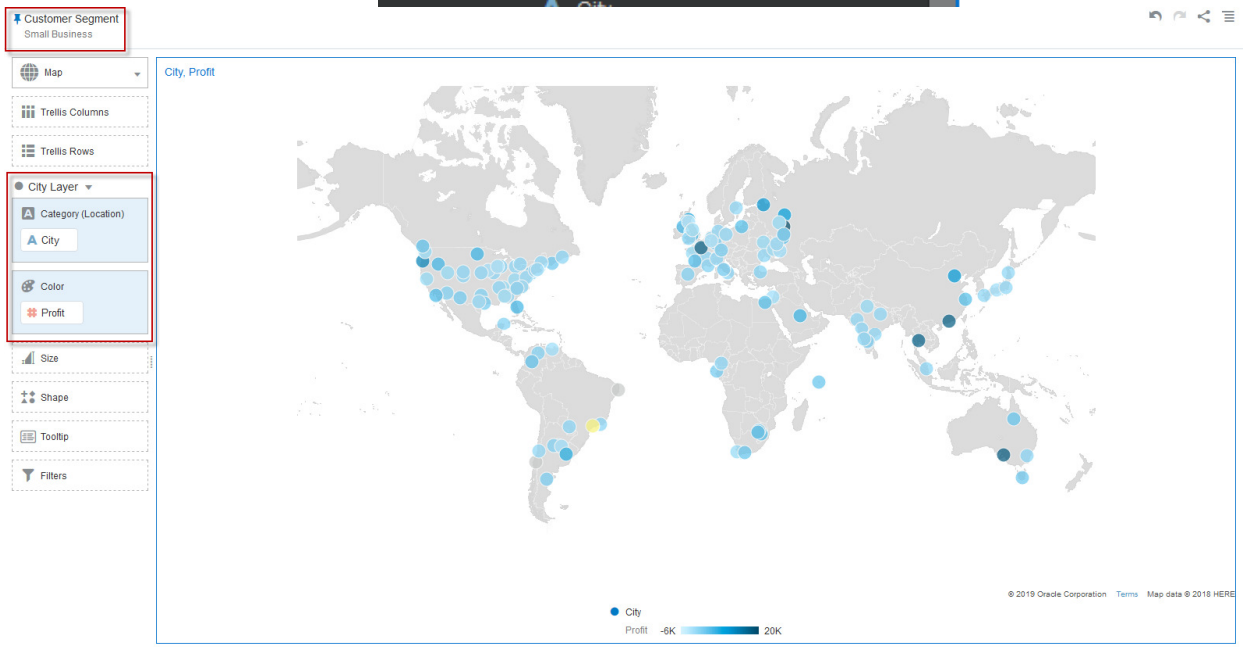
Custom component OAC

- Future: analytical objects created on the fly
- Native integration similar to BI Ask and Explain
- Content and metadata crawling

"What was our profit by city for **Small Business**?"





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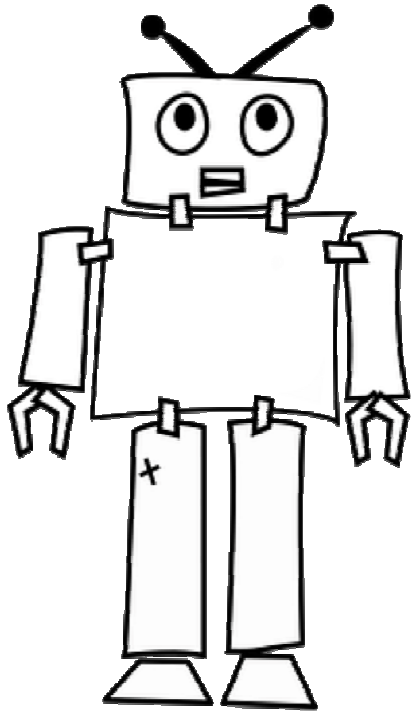
Oracle provides Oracle Bots Node.js SDK, a free utility that makes custom component development and deployment easy



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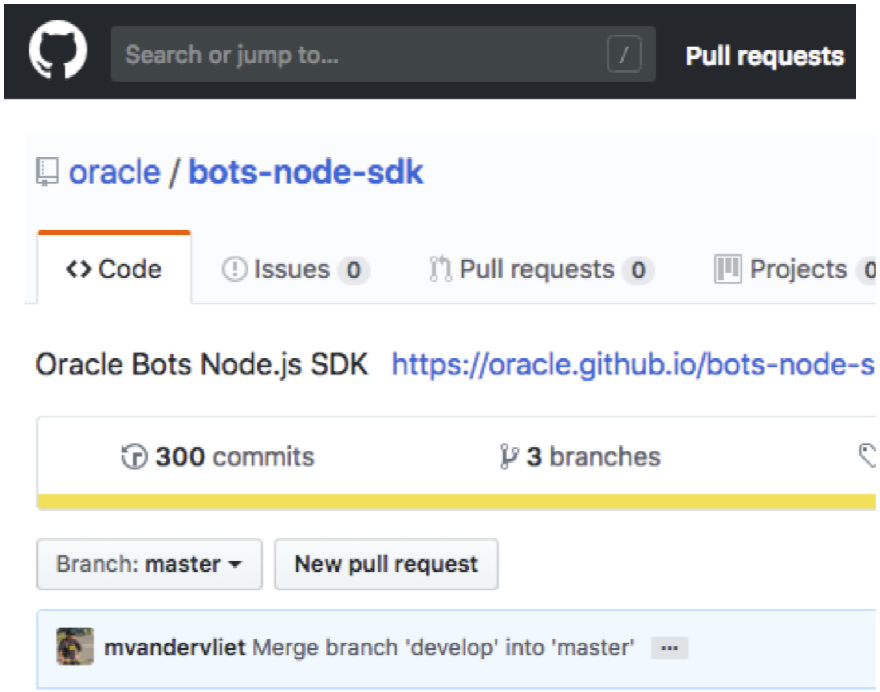
Oracle Bots Node.js SDK

- Development and test tools for custom components and webhook
- Available on GitHub and NPMJS
- Requires Node Package Manager (NPM)
- Command Line Interface (CLI)
  - Creates component service and components
  - Provides custom component SDK to project
  - Integrated runtime for testing



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Thanks for the Chat!

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