

# 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, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

# CON6622

# Oracle Data Integrator

## PRODUCT UPDATE AND ROADMAP

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Head of Integration Competence Center, Helsana

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Senior Consultant, ipt

Julien Testut (@JulienTestut)  
Senior Principal Product Manager

September, 2016



September 18–22, 2016  
San Francisco

A decorative graphic consisting of several overlapping circles and lines in shades of white and light orange. One large white circle is the central focus, with other smaller circles and lines scattered around it, some pointing towards the central circle.

**Accelerate** Your  
Digital Transformation  
in the Cloud

# Agenda

- 1 Oracle Data Integration Overview
- 2 Product Update and Roadmap
- 3 Customer Spotlight - Helsana
- 4 Q & A

# Five Core Capabilities

1. Business Continuity

*DATA ALWAYS AVAILABLE*

2. Data Movement

*DATA ANYWHERE IT'S NEEDED*

3. Data Transformation

*DATA ACCESSIBLE IN ANY FORMAT*

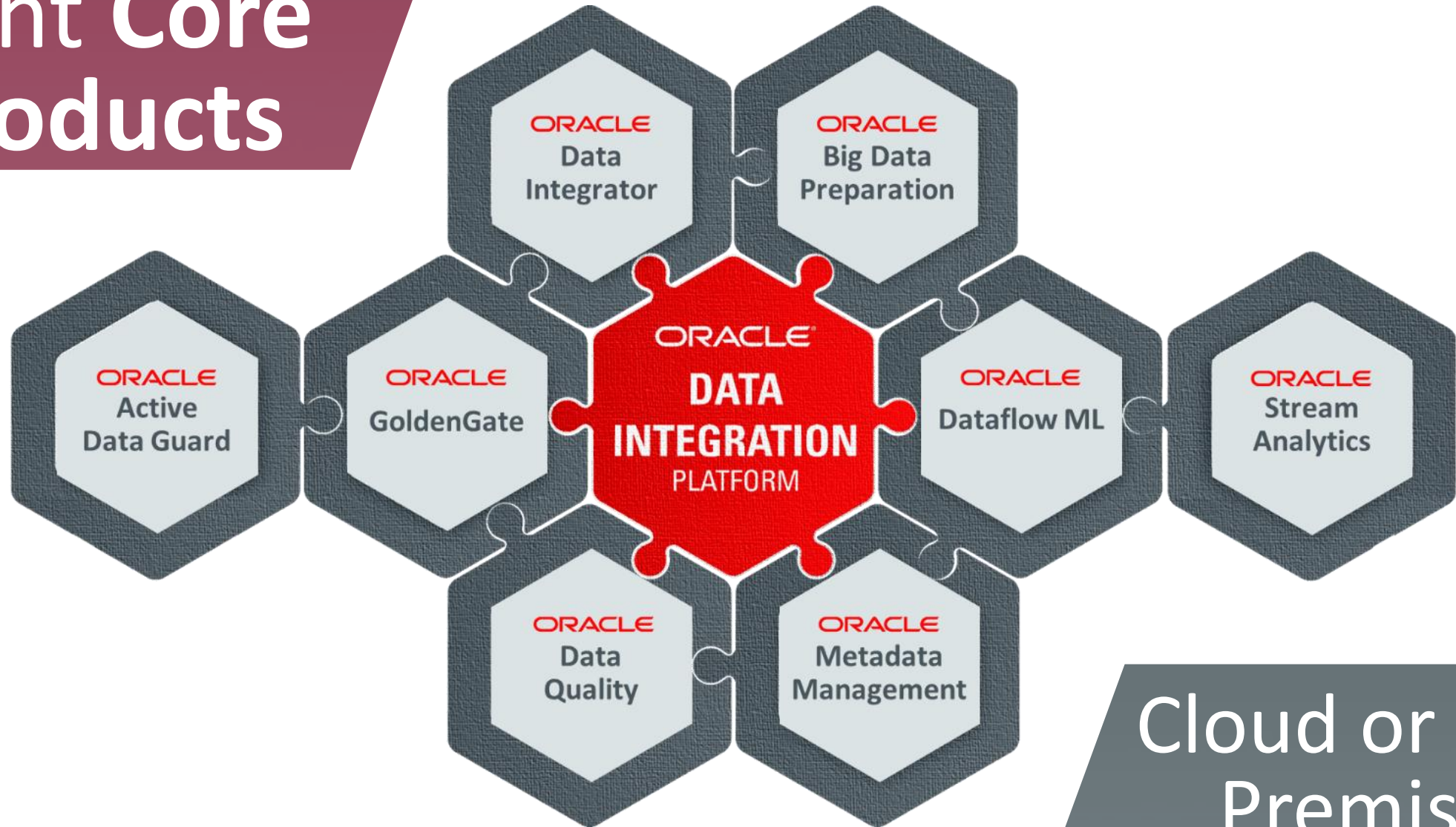
4. Data Governance

*DATA THAT CAN BE TRUSTED*

5. Streaming Data

*DATA IN MOTION OR AT REST*

# Eight Core Products



Cloud or On-Premise

# Most Innovative Technology

**#1** Realtime / Streaming  
Data Integration Tool

**#1** Pushdown / E-LT  
Data Integration Tool

**1<sup>st</sup>** to certify replication with  
**Streaming Big Data**

**1<sup>st</sup>** to certify E-LT tool with  
**Apache Spark/Python**

**1<sup>st</sup>** to power Data Preparation  
w/ML + NLP + **Graph Data**

**1<sup>st</sup>** to offer **Self-Service &**  
**Hybrid Cloud** solution

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# Oracle Data Integrator

*Oracle Data Integrator provides high performance bulk data movement, massively parallel data transformation using database or big data technologies, and block-level data loading that leverages native data utilities*

**Bulk Data Performance**

**Non Invasive Footprint**

**Future Proof IT Skills**



*1000's of customers – more than other ETL tools*

*Flexible ELT workloads run anywhere: DBs, Big Data, Cloud*

*Up to 2x faster batch processes and 3x more efficient tooling*

# Now Available: ODI 12.2.1 and 12.2.1 PS1

## Improved Big Data Support

Apache Spark, Pig & Oozie

## Enterprise Lifecycle Management

Integration with Apache Subversion

## Core ETL Enhancements

Cubes and Dimensions Support

Certification with Oracle DBaaS (Database Cloud Service and Exadata Cloud Service)

Partition Exchange Loading

Analytic/Window Functions Support


## Support Vibrant ODI Community

ODI Exchange for sharing ODI objects

## Deeper Integration with Oracle Stack

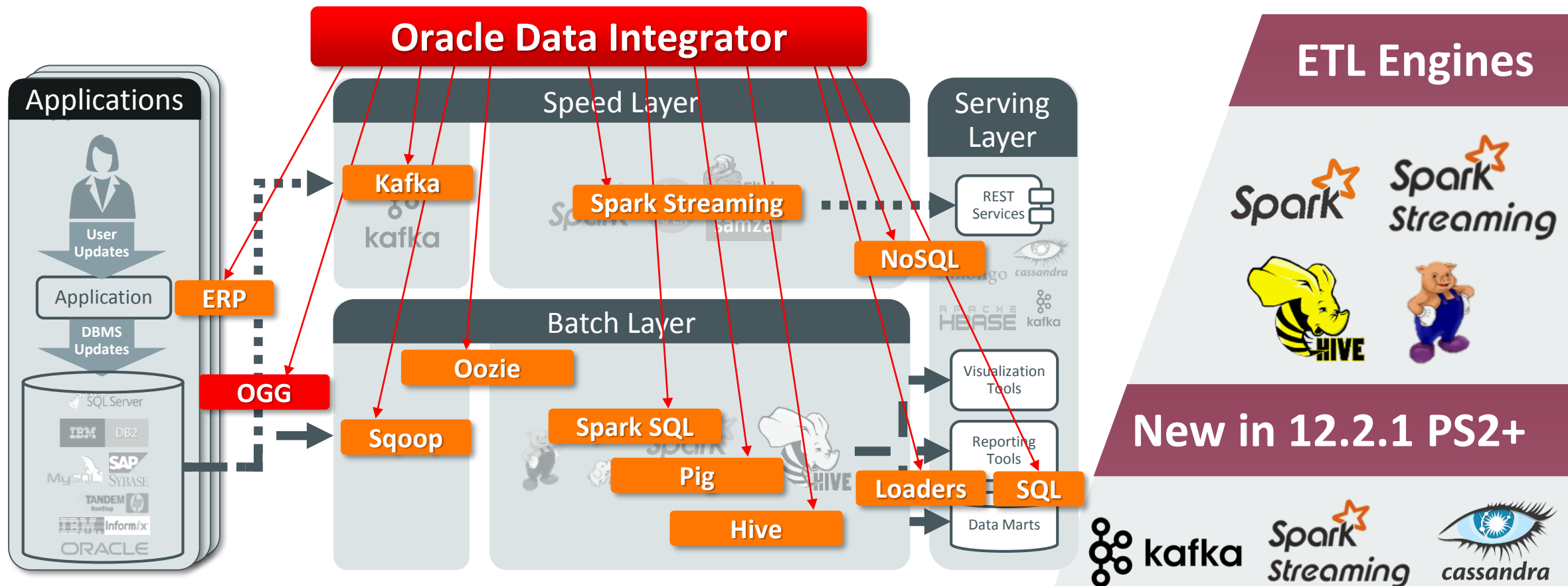
Integration with Oracle Enterprise Data Quality

Integration with Oracle Web Services Manager (OWSM)



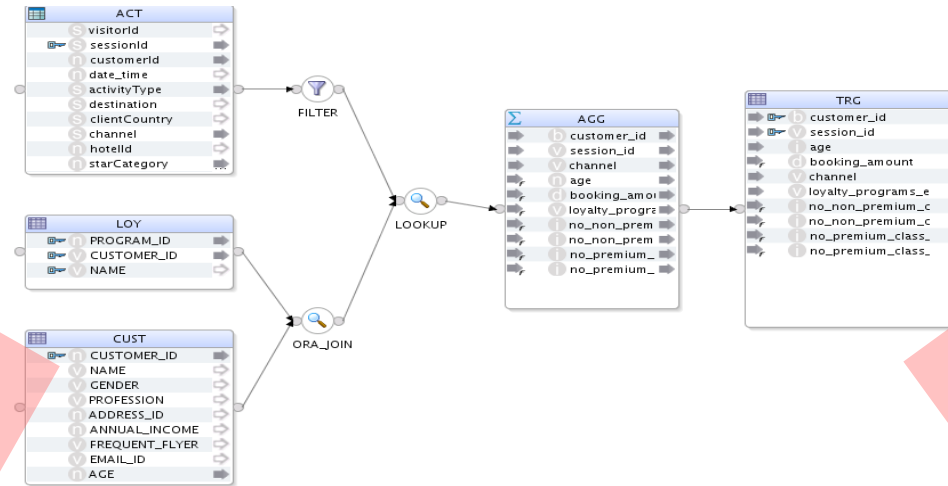
# ODI 12.2.1 PS2+

# ODI for Big Data Transformations

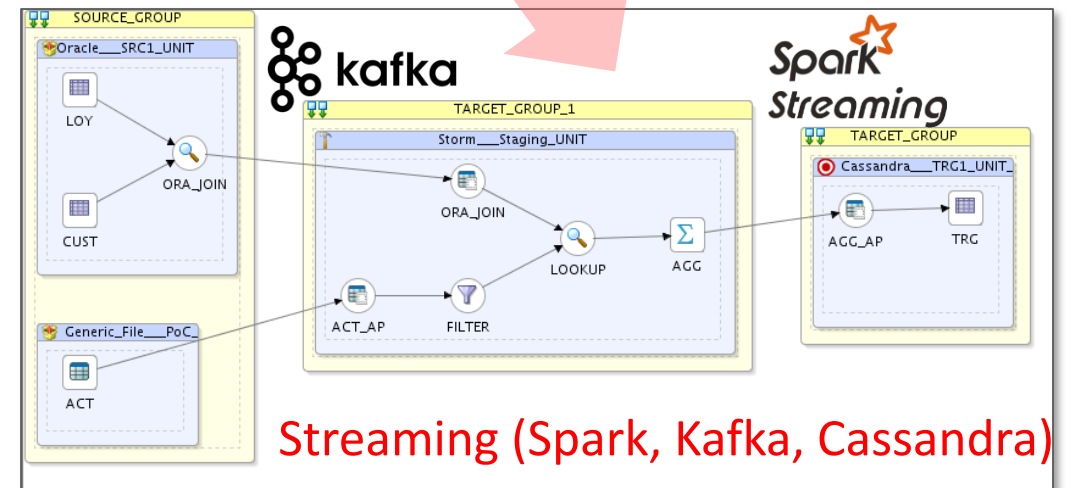
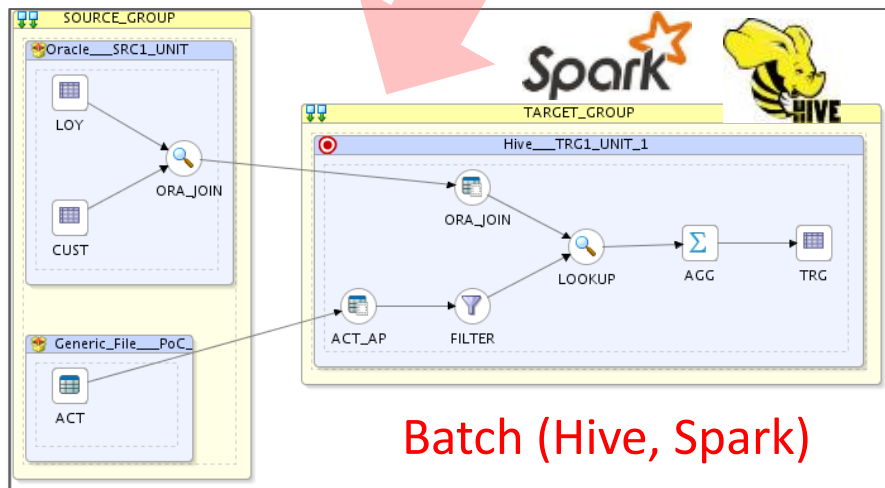


# Spark Streaming: **Batch and Streaming** from one Mapping

**Unified Logical Design**



**Flexible Physical Design**



# Hive Complex Type and Storage Type Support

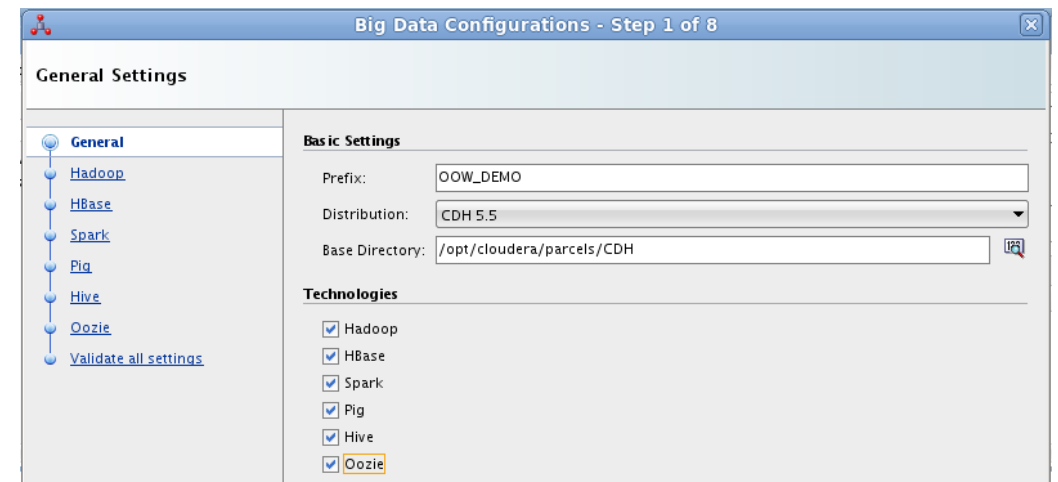
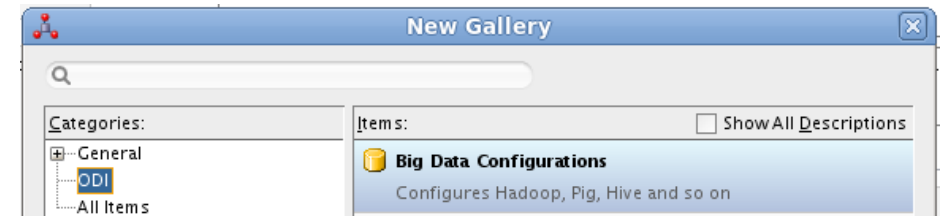
- Native support for **Hive Complex Types** (Arrays, Maps, Structs, etc.)
- Support **additional Hive metadata**
  - Types, Storage (TEXTFILE, RCFILE, SEQUENCEFILE, ORC, Parquet, Avro, JSON) etc.
- Support **Hive DDL generation** with additional metadata
- **Improved Flatten Component** for Complex Types
- **New ODI Tool** to convert between formats

The screenshot displays the Oracle ODI configuration interface for a Hive table. The interface is divided into several sections:

- Definition**: A sidebar menu with options like Attributes, Storage, Journalizing, Services, Markers, Memo, Version, Privileges, and Flexfields.
- Type Definition**:
  - Table Type: Managed
  - Storage Type: Native
  - A table with columns 'Key' and 'Value' is visible below these settings.
- Row Format**:
  - RowFormat: Built-In
- Storage Format**:
  - Predefined File Format: PARQUET
  - Input Format: parquet.hive.ParquetInputFormat
  - Output Format: parquet.hive.ParquetOutputForm
  - Location: (empty field)

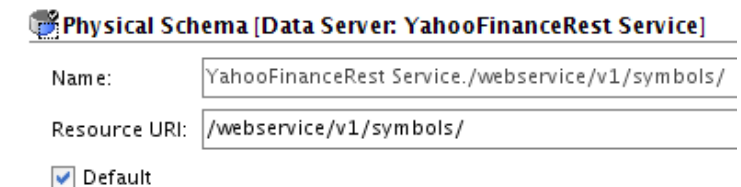
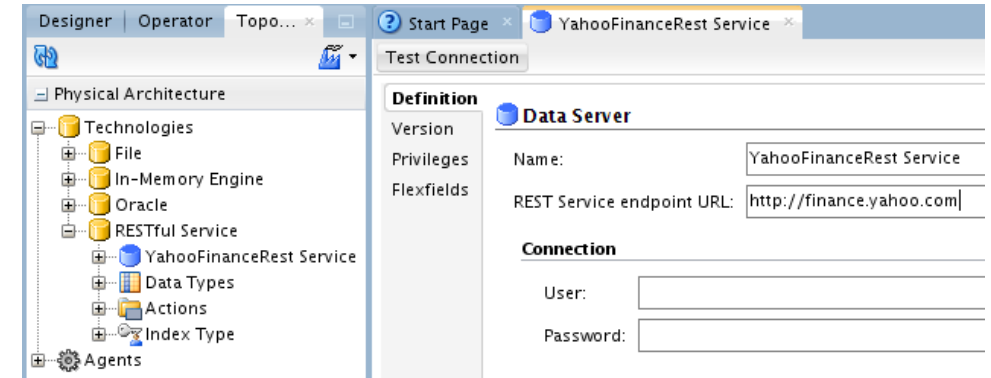
# Hadoop Usability Enhancements

- New templates for latest Cloudera and Hortonworks distributions
- Support for advanced Big Data security (Kerberos, Sentry, etc.)
- Support new ODI 12.2.1 PS2+ Data Servers
  - Kafka and Cassandra



# Expand **Cloud Connectivity**

- **New RESTful Services technology**
  - Data Servers, Physical/Logical Schemas and Models/Datastores
- **ODI Tool to invoke RESTful services from Packages**
  - Tool configuration will use Topology information
  - HTTP Analyzer-like user interface to test RESTful service call
- **Support for Storage Cloud Service**
- **Support for Business Intelligence Cloud Service**
  - New KMs

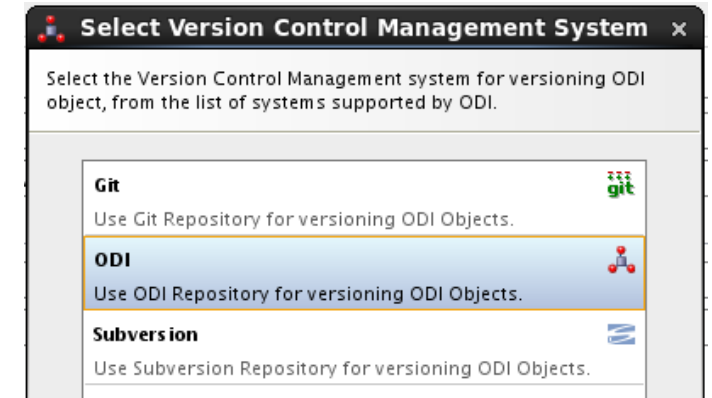


The screenshot shows the 'Operations' table for the Physical Schema. The table has columns for Name, Method, Operation URI, Query Parameter, Header Parameter, and Template Parameter.

Name	Method	Operation URI	Query Parameter	Header Parameter	Template Parameter
getQuote	GET	ORCL/quote	format=json&view=detail		
getQuoteUsingTemplateparams	GET	{symbol}/quote	format=json&view=detail		symbol=ORCL

# Integration with **Git**

- **Expand integration with 3<sup>rd</sup> party Version Control Systems**
  - Subversion (SVN) – Implemented in 12.2.1
  - Git – Coming in 12.2.1 PS2+
- **Integrate ODI with external Version Control Systems (VCS) in order to:**
  - Enable versioning of objects which can be viewed/retrieved from any repository
  - Enable breaking down development repository between project groups/geographical boundaries
  - Enable object sharing across repositories (Distributed Development)
  - Enables parallel development (example: Main vs. released branch)



# Smart Merge

- Enhancements to the Smart Diff and Merge functionality
  - Ability to determine unchanged objects without diffing
  - Apply diff fragments using new import mechanisms
  - Reduce merge conflict cases
    - Source changed, but target not changed
    - 3-way diff / merge support
  - 3-way merge instead of manual editing to resolve conflicts
- For both Git and Subversion

The screenshot displays the Oracle Smart Merge tool interface, showing a comparison of two versions (19643 and 19644) and the results of a merge operation (1046).

**Version Compare Results (Top):**

Version : 19643:	Version : 19644:																																								
<table border="1"><thead><tr><th>Name</th><th>Value</th></tr></thead><tbody><tr><td>Mapping</td><td>SmartMergeMapping</td></tr><tr><td>Properties of Mapping</td><td></td></tr><tr><td>Map Component</td><td>EMPLOYEES</td></tr><tr><td>Map Component</td><td>DEPARTMENTS</td></tr><tr><td>Map Component</td><td>COUNTRIES</td></tr><tr><td>Map Component</td><td>FILTER</td></tr><tr><td>Map Component</td><td>JOBS</td></tr><tr><td>Map Component</td><td>PIVOT_</td></tr><tr><td>Map Component</td><td>EXPRESSION</td></tr></tbody></table>	Name	Value	Mapping	SmartMergeMapping	Properties of Mapping		Map Component	EMPLOYEES	Map Component	DEPARTMENTS	Map Component	COUNTRIES	Map Component	FILTER	Map Component	JOBS	Map Component	PIVOT_	Map Component	EXPRESSION	<table border="1"><thead><tr><th>Name</th><th>Value</th></tr></thead><tbody><tr><td>Mapping</td><td>SmartMergeMapping</td></tr><tr><td>Properties of Mapping</td><td></td></tr><tr><td>Map Component</td><td></td></tr><tr><td>Map Component</td><td>DEPARTMENTS</td></tr><tr><td>Map Component</td><td>COUNTRIES</td></tr><tr><td>Map Component</td><td></td></tr><tr><td>Map Component</td><td></td></tr><tr><td>Map Component</td><td></td></tr><tr><td>Map Component</td><td></td></tr></tbody></table>	Name	Value	Mapping	SmartMergeMapping	Properties of Mapping		Map Component		Map Component	DEPARTMENTS	Map Component	COUNTRIES	Map Component		Map Component		Map Component		Map Component	
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**Base Version (Middle):**

Base Version : 19576:																								
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**Merge Results (Bottom):**

Version : 1046:	Repository Object:	Merge Object:																																																												
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# Knowledge Modules Framework Improvements

## Inheritance and Modularization

- **Problem**

- Template-style KMs miss modern programming languages characteristics
  - No inheritance or modularization
  - Code is duplicated across most KMs: Create flow table, Create target table etc.
- Component-style KMs introduced those new concepts but they are not editable by end users

- **Solution**

- Unified KM Editor supporting both Template-style and Component-style KMs

# Knowledge Modules Framework Improvements

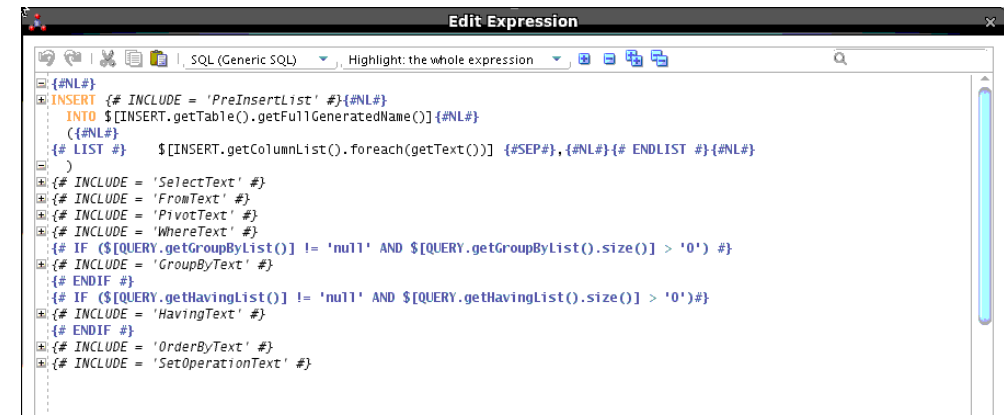
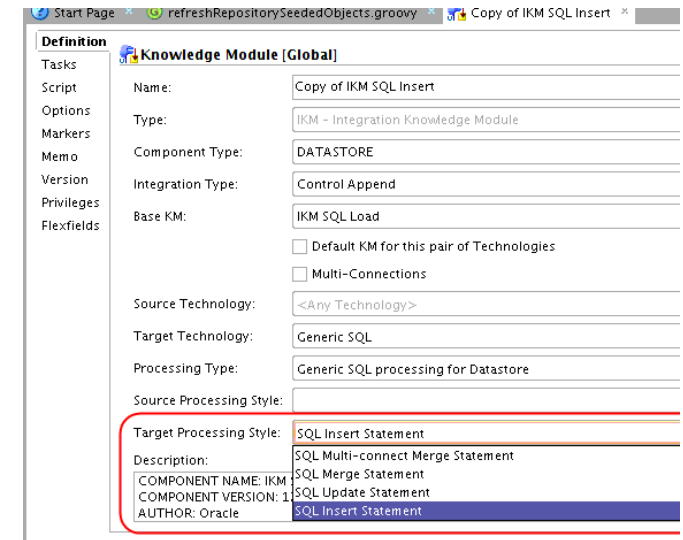
## Requirements

- **Component KMs Extensibility**

- Knowledge Module customization without replication
  - Specialize a KM, override a step via Task inheritance
  - Specialize a KM, add a step
- Knowledge Module composition

- **Component KMs Management**

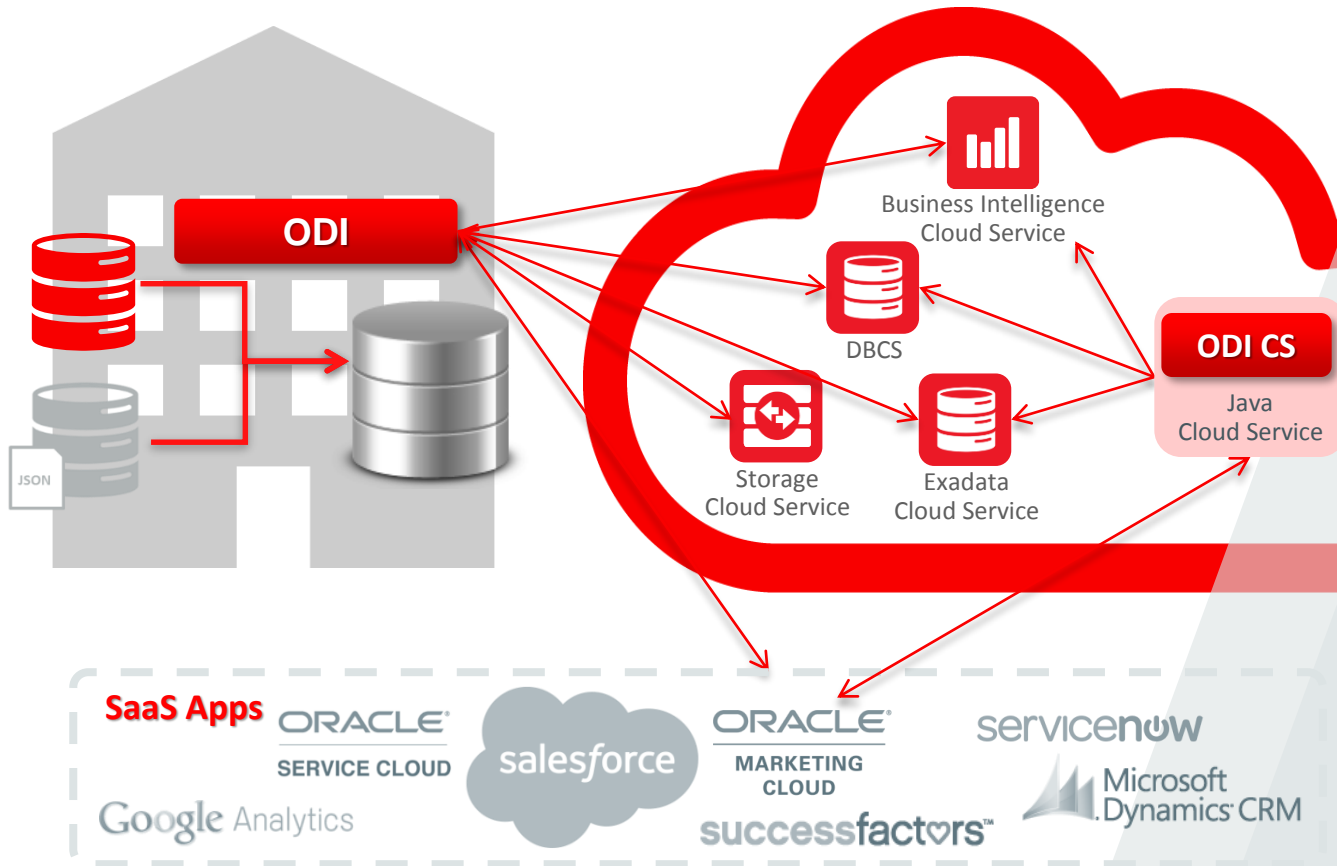
- View and edit any KM
- Import/export any KM





# ODI & CLOUD

# Data Integrator Cloud Service



## Pushdown E-LT in the Cloud

- Deploy ODI anywhere and execute E-LT into PaaS data repositories in any cloud
- Pushdown processing is best for the cloud – high performance ETL with less data movement

## Key Benefits for DBaaS

- Flexible hybrid deployment architecture that can run on-premise, Java Cloud Service, Big Data Cloud service
- Execute data transformations where the data lies, don't copy data unnecessarily to remote locations

## Powerful Hybrid Cloud Solution

- Subscribe to ODI Cloud using monthly subscription
- Leverage hybrid deployments with BYOL and choose to run ODI from any compute resource

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## Helsana – Switzerland's leading health and accident insurer

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Christian Huber, Head of Integration Competence Center, Helsana

David De Prado, Senior Consultant, ipt

# Helsana



**Helsana**

Committed to Life.  
Helsana

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# >100 years

Helsana has more than  
100 years' **experience**  
in the health and accident  
insurance business.



**Premium income**  
70% social insurance  
30% supplementary insurance



Per week  
Helsana **pays out**  
around CHF 100 million.



**3000**

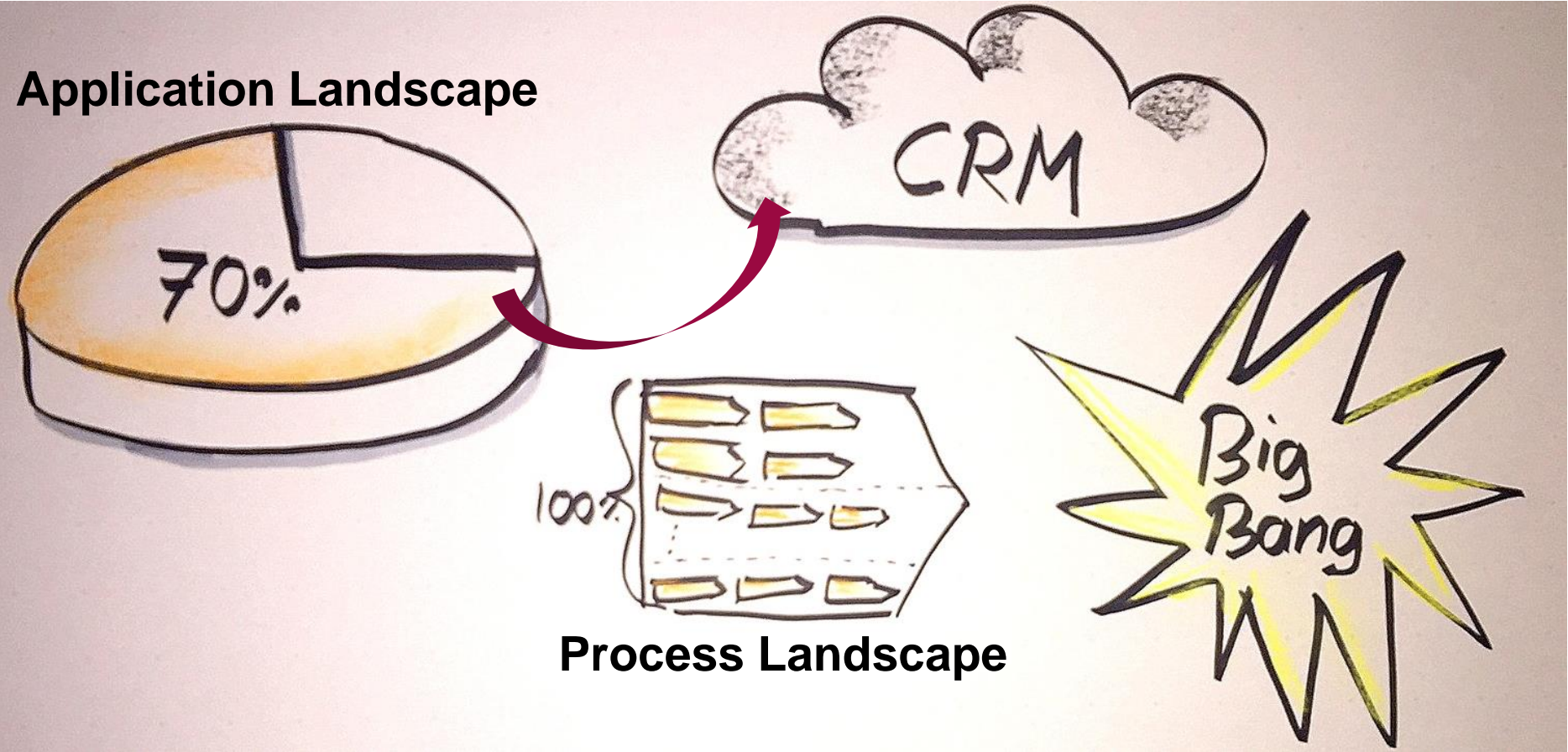
**employees**

Helsana is attractively sized with more than 3,000 **employees**.



Helsana embraces its **social responsibility** and insures 1.9 million people – or one in four people in Switzerland.

# Situation in 2015



**But what about Data INTEGRATION?**

# The 3 Top Accelerators

---

- Technology/Tools
  - Using a feature-rich platform like Oracle Data Integrator and Oracle Golden Gate enables you to focus on business topics instead of technical details
- Mindset
  - Believing and thinking positively goes a long way: a small team with optimistic people achieves much more than a team with naysayers
- People
  - Having the A-Team from Oracle on board gives you efficient tool & issue support
  - A strategic partner allows you to select a team with brilliant talents in short time

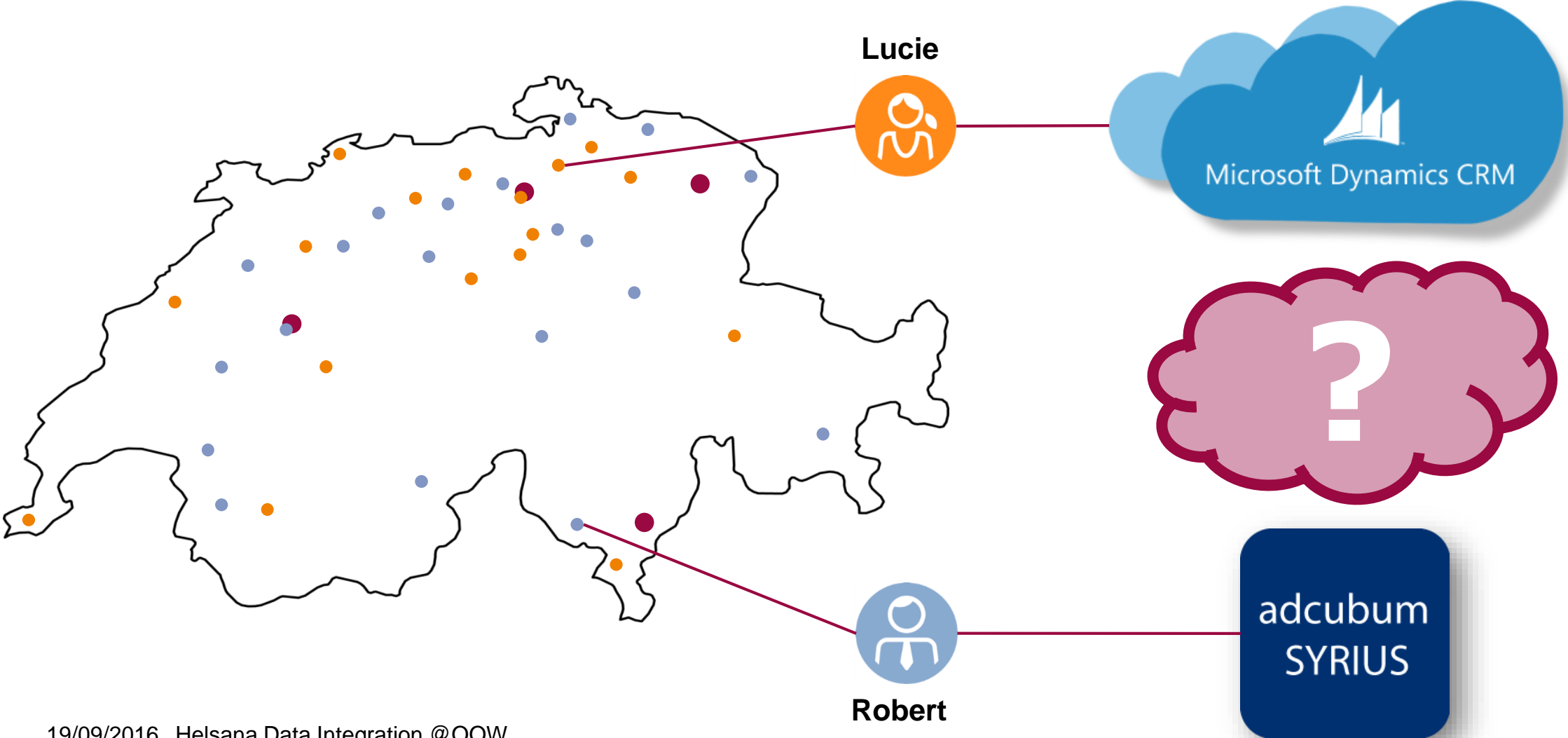


famous for integration



- Main office
- General agency
- Sales office

## Helsana's business case



How will we be able to synchronize the required data in near-realtime to the cloud, while 70% of the IT landscape is being renewed?

## DPF – Project Details

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*Realize a strategic **data integration platform**, to synchronize operational data to supplement the existing service integration platform*

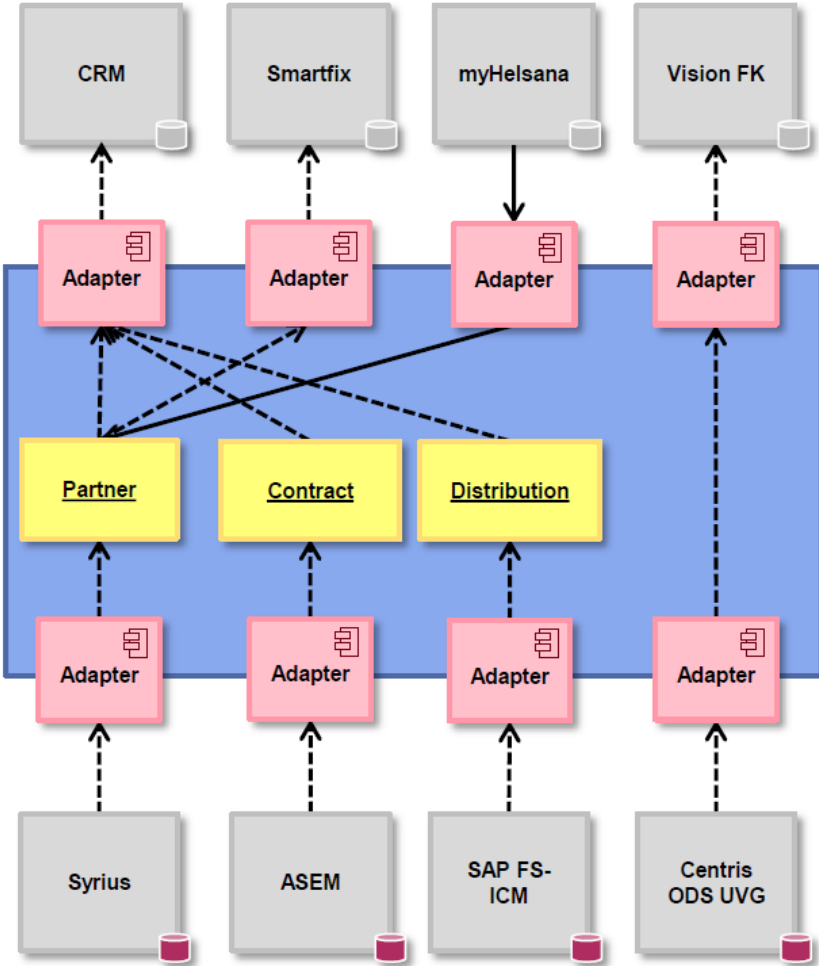
- Small-sized team of **10 integration experts**
- **1 year** from ramp-up to product launch
- Over **1 billion data records** processed in the release weekend
- **15'000 Mapping** executions and **2'500 Package** executions per day
- **1 million data records** processed on a daily basis

# High-level architecture

**ORACLE®**  
**FUSION MIDDLEWARE**  
SOA SUITE

**ORACLE®**  
DATA INTEGRATOR

**ORACLE®**  
**FUSION MIDDLEWARE**  
GOLDENGATE



High level of modularization

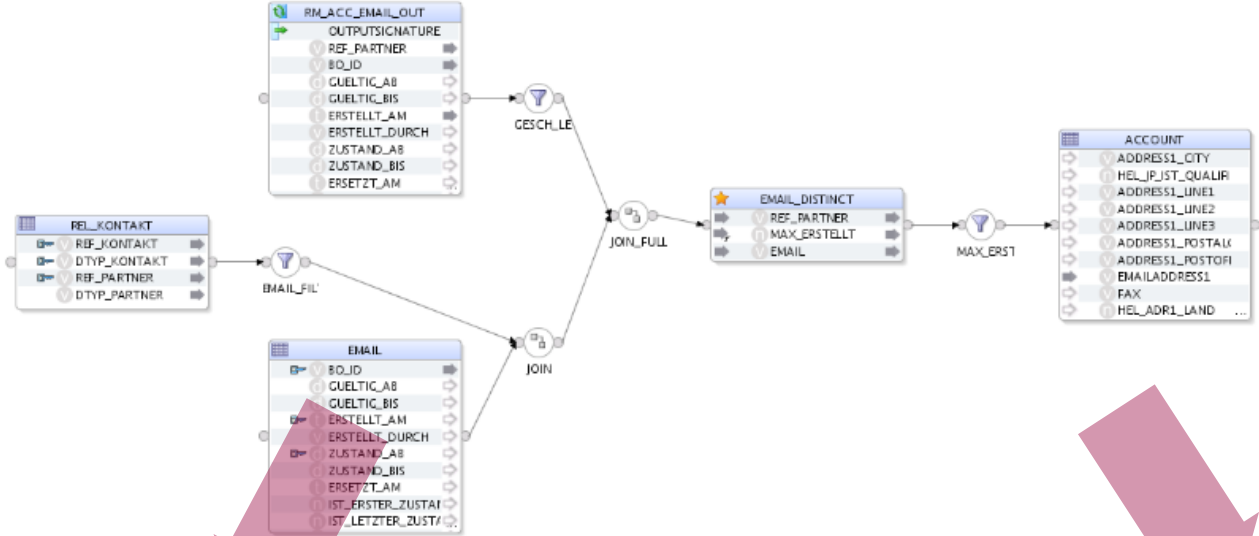
High degree of decoupling between applications

High-volume and low latency processing

# High-volume and low latency processing in ODI

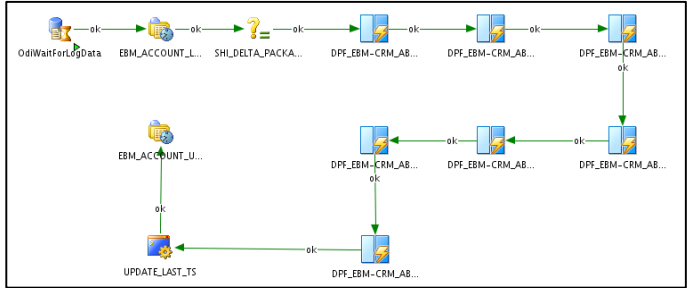
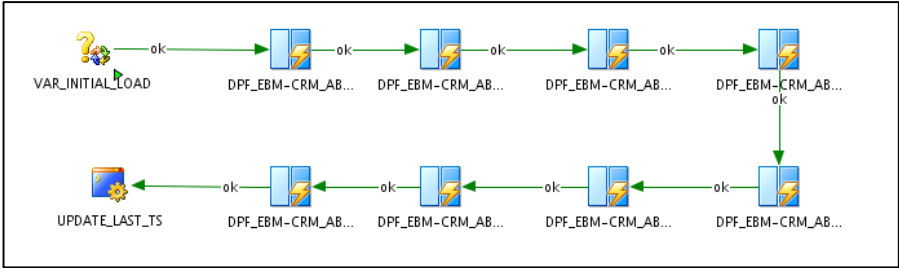
One Logical Design

Flexible Physical Design and Orchestration



INIT

DELTA



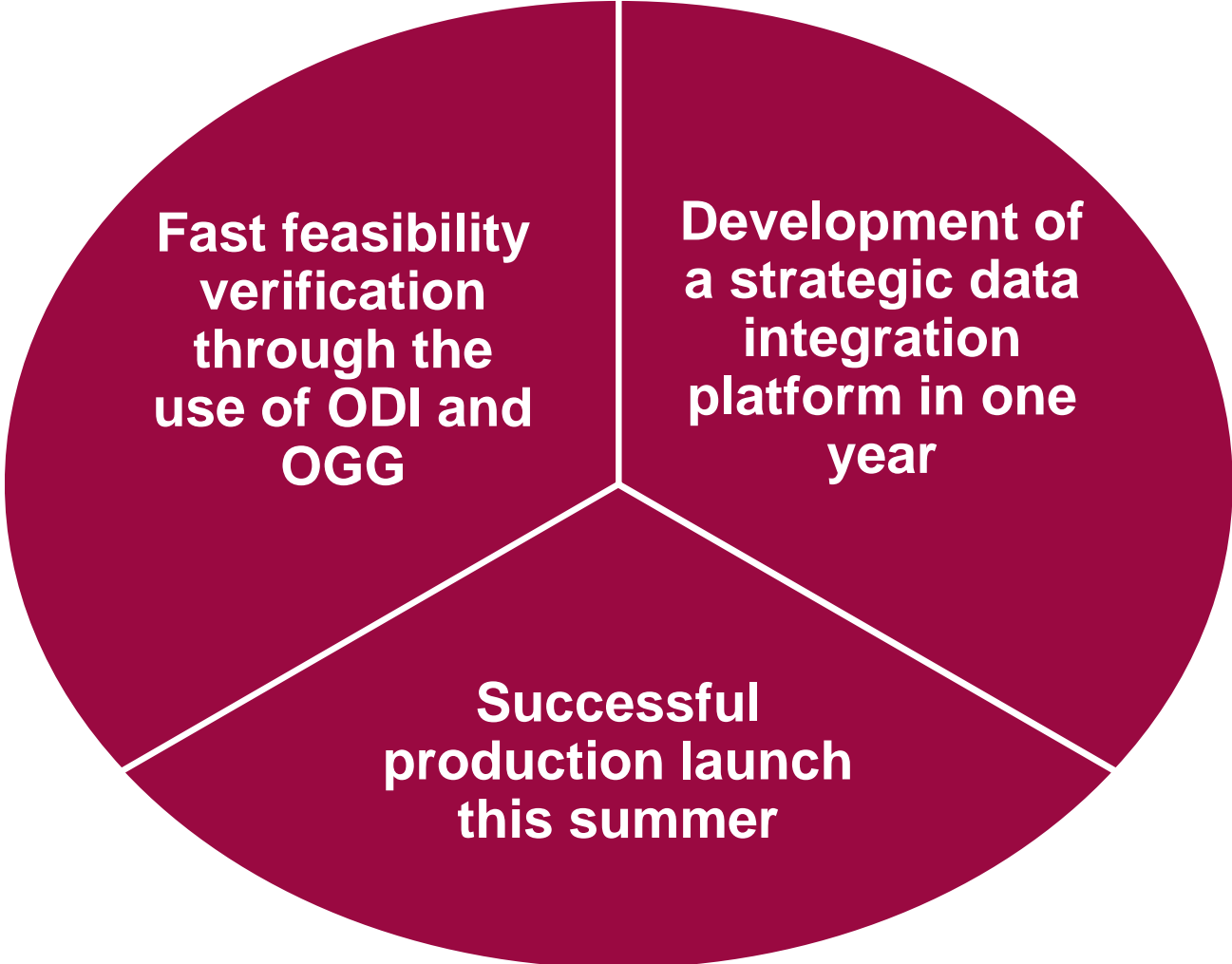
## Lessons learned

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- **Added value of the A-team**
- **Review your physical setup regarding license costs**
- **Monitoring (OEMCC) early adopter**
- **Use ODI API's for integrating the solution in your company environment (CI, Testing, SDLC etc.)**

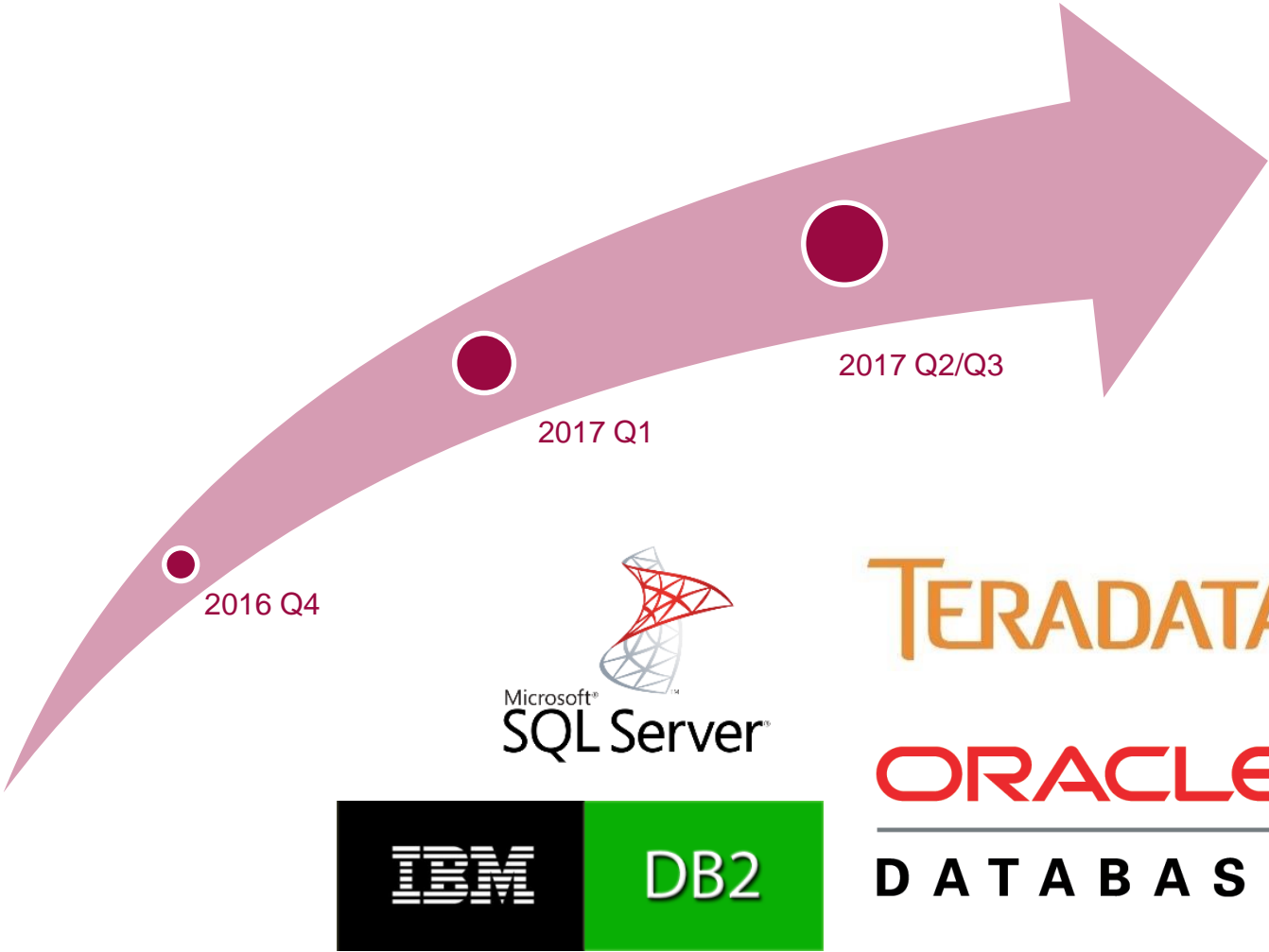
# Successes

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# DPF Roadmap

- **2016 Q4**
  - 7 additional systems
  - Teradata, Oracle
- **2017 Q1**
  - 9 additional systems
  - XML, Oracle
- **2017 Q2/Q3**
  - 10+ additional systems
  - Teradata, MSSQL, DB2 etc.



# Thank you.

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Christian Huber, Head of Integration Competence Center, Helsana

David De Prado, Senior Consultant, ipt

# Data Integration Solutions Program - [tinyurl.com/DISOOW16](http://tinyurl.com/DISOOW16)

## Presentations on:

Oracle  
Data  
Integrator

Oracle  
GoldenGate

Oracle  
Enterprise  
Data Quality

Oracle  
Enterprise  
Metadata  
Management

Oracle  
Big Data  
Preparation  
Cloud Service

## Hands-on labs:

Oracle  
Enterprise  
Data Quality  
HOL7466

Oracle  
GoldenGate  
Deep Dive  
HOL7528

ODI and OGG  
for Big Data  
HOL7434

Oracle Big Data  
Preparation  
Cloud Service  
HOL7432

## Demo Stations:

Middleware  
Demoground  
- Moscone South

Database  
Demoground  
- Moscone South

Big Data  
Showcase  
- Moscone South

# Data Integration Solutions Program - [tinyurl.com/DISOOW16](http://tinyurl.com/DISOOW16)

## Monday, Sept 19

- Oracle Data Integration Solutions – Platform Overview and Roadmap [CON6619]
- Oracle Data Integration: the Foundation for Cloud Integration [CON6620]
- A Practical Path to Enterprise Data Governance with Cummins [CON6621]
- **Oracle Data Integrator Product Update and Strategy [CON6622]**
- Deep Dive into Oracle GoldenGate 12.3 New Features for the Oracle 12.2 Database [CON6555]

## Tuesday, Sept 20

- **Oracle Big Data Integration in the Cloud [CON7472]**
- **Oracle Data Integration Platform: a Cornerstone for Big Data [CON6624]**
- **Oracle Data Integrator and Oracle GoldenGate for Big Data [HOL7434]**
- Oracle Enterprise Data Quality – Product Overview and Roadmap [CON6627]
- Self Service Data Preparation for Domain Experts – No Programming Required [CON6630]
- Oracle Big Data Preparation Cloud Service: Self-Service Data Prep for Business Users [HOL7432]
- Oracle GoldenGate 12.3 Product Update and Strategy [CON6631]
- New GoldenGate 12.3 Services Architecture [CON6551]
- Meet the Experts: Oracle GoldenGate Cloud Service [MTE7119]

## Wednesday, Sept 21

- Data Quality for the Cloud: Enabling Cloud Applications with Trusted Data [CON6629]
- Transforming Streaming Analytical Business Intelligence to Business Advantage [CON7352]
- Oracle Enterprise Data Quality for All Types of Data [HOL7466]
- Oracle GoldenGate for Big Data [CON6632]
- Accelerate Cloud On-Boarding using Oracle GoldenGate Cloud Service [CON6633]
- Oracle GoldenGate Deep Dive and Oracle GoldenGate Cloud Service for Cloud Onboarding [HOL7528]

## Thursday, Sept 22

- **Best Practices for Migrating to Oracle Data Integrator [CON6623]**
- **Best Practices for Oracle Data Integrator: Hear from the Experts [CON6625]**
- Dataflow, Machine Learning and Streaming Big Data Preparation [CON6626]
- Data Governance with Oracle Enterprise Data Quality and Metadata Management [CON6628]
- Faster Design, Development and Deployment with Oracle GoldenGate Studio [CON6634]
- Getting started with Oracle GoldenGate [CON7318]
- Best Practice for High Availability and Performance Tuning for Oracle GoldenGate [CON6558]

# Oracle Cloud Platform Innovation Awards

## Meet the Most Impressive Cloud Platform Innovators

Tuesday, Sep 20, 4:00 p.m. - 6:00 p.m.  
YBCA Theater | 701 Mission St

- Meet peers who implemented cutting-edge solutions with Oracle Cloud Platform
- Learn how you can Transform your Business

**No registration or OpenWorld pass required to attend**

# Oracle PaaS Customer Appreciation Reception

## Meet the Most Impressive Cloud Platform Innovators

Tuesday, Sep 20, 6:00 p.m. - 8:30 p.m.  
YBCA Theater | 701 Mission St

- FREE Appreciation Reception for all Oracle PaaS Customers directly following the Innovation Awards Ceremony

**No OpenWorld pass is required to attend this reception**

# Connect with Oracle Data Integration



**Oracle Data Integration**



**@OracleDI**



**[Blogs.oracle.com/DataIntegration/](https://blogs.oracle.com/DataIntegration/)**



**Oracle Data Integration**

# Agenda

- 1 Oracle Data Integration Overview
- 2 Product Update and Roadmap
- 3 Customer Spotlight - Helsana
- 4 Q & A

Questions?



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## Safe Harbor Statement

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