

TECHNOLOGY TRANSFER PRESENTS

# RICK VAN DER LANS

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**DATA VIRTUALIZATION**

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**TECHNOLOGY AND USE CASES**

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ONLINE LIVE STREAMING

**JUNE 9-10, 2022**



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## **ABOUT THIS SEMINAR**

Data virtualization is the new data integration technology. It allows for more agile data integration through decoupling data consumers from data stores.

But why do we need a new technology? Data is increasingly becoming a crucial asset for organizations to survive in today's fast moving business world. In addition, data becomes more valuable if enriched and/or fused with other data. Unfortunately, enterprise data is dispersed by most organizations over numerous systems all using different technologies. To bring all that data together is and has always been a major technological challenge.

In addition, more and more data is available outside the traditional enterprise systems. It's stored in Big Data platforms, in Cloud applications, spreadsheets, simple file systems, in weblogs, in social media systems, and so on, and stored in traditional databases. For each system that requires data from several systems, different integration solutions are deployed. In other words, integration silos have been developed that over time has led to a complex integration labyrinth. The disadvantages are clear:

- Inconsistent integration specifications
- Inconsistent results
- Decreased time to market
- Increased development costs
- Increased maintenance costs

The bar for integration tools and technology has been raised: the integration labyrinth has to disappear. It must become easier to integrate data from multiple systems, and integration solutions should be easier to design and maintain to keep up with the fast changing business world.

All these new demands are changing the rules of the integration game, they demand that integration solutions are developed in a more agile way. One of the technologies making this possible today is Data Virtualization.

This seminar focuses on Data Virtualization. The technology is explained, advantages and disadvantages are discussed, products are compared, design guidelines are given, and use cases are discussed.

### **LEARNING OBJECTIVES**

- How Data Virtualization could be used to integrate data in a more agile way
- How to embed Data Virtualization in Business Intelligence systems
- How Data Virtualization can be used for integrating on-premised and Cloud applications
- How to migrate to a more agile integration system
- How Data Virtualization products work
- How to avoid well-known pitfalls
- How to learn from real-life experiences with Data Virtualization

# OUTLINE

## 1. Introduction to Data Virtualization

- What is data virtualization?
- Use case of Data Virtualization: Business Intelligence, Data Science, democratizing of data, Master Data Management, distributed data
- Differences between data abstraction, data federation, and data integration
- Open versus closed Data Virtualization servers
- Market overview: AtScale, Cirro Data Hub, Data Virtuality, Denodo Platform, Dremio, FraXses, IBM Data Virtualization Manager for z/OS, RedHat JBoss Data Virtualization, Stone Bond Enterprise Enabler, and Tibco Data Virtualization

## 2. How do Data Virtualization Servers Work?

- The key building block: the virtual table
- Integrating data sources via virtual tables
- Implementing transformation rules in virtual tables
- Stacking virtual tables
- Impact analysis and lineage
- Running transactions - updating data
- Securing access to data in virtual tables
- Importing non-relational data, such as XML and JSON documents, web services, NoSQL, and Hadoop data
- The importance of an integrated business glossary and centralization of metadata specifications

## 3. Performance improving Features

- Caching of a virtual table for improving query performance, creating consistent report results, or minimizing interference on source systems
- Differences styles of refreshing caches: full, incremental, live, query-based, trigger-based, and offline refreshing
- Different query optimization techniques, including query substitution, pushdown, query expansion, sort-merge Joins, statistical data and SQL override

## 4. Use Case 1: The Logical Data Warehouse Architecture

- The limitations of the classic Data Warehouse architecture
- On-demand versus scheduled integration and transformation
- Making a BI system more agile with Data Virtualization
- The advantages of virtual data marts
- Strategies for adopting Data Virtualization
- The need for powerful analytical database servers
- Migrating to a Data Virtualization-based BI system

## 5. Use Case 2: Data Virtualization and Master Data Management

- How can Data Virtualization help with creating a 360° view of business objects
- Developing MDM with a Data Virtualization server - from a stored to a virtual solution
- On-demand data profiling and data cleansing

## 6. Use Case 3: From the Physical Data Lake to the Logical Data Lake

- Practical limitations of developing one physical Data Lake
- Shortening the data preparation phase of Data Science with Data Virtualization
- Sharing metadata specifications between Data Scientists
- Implementing analytical models inside a Data Virtualization server

## 7. Use Case 4: Democratizing Enterprise Data

- Increasing the business value of the data asset by making all the data available to a larger group of users within the organization

- The business value of consistent data integration
- Using lean data integration to make data available for analytics and reporting faster
- One consistent data view for the entire organization
- How the business glossary and search features help business users
- The coming of the data marketplace

#### **8. Use Case 5: Dealing with Big Data**

- Big Data can be too big to move - data can't be transported to the place of integration
- Data virtualization pushes data processing to where the data is produced
- Hiding the physical location of the data
- With Data Virtualization, the network becomes the database

#### **9. Closing Remarks**

- The Future of Data Virtualization
- Data Virtualization as driving force for data integration
- Potential new product features

#### **WHO SHOULD ATTEND**

- IT architects
- Enterprise architects
- Business Intelligence specialists
- Data analysts
- Data Warehouse designers
- Business analysts
- Data scientists
- Technology planners
- Technical architects
- IT consultants
- IT strategists
- Systems analysts
- Database developers
- Database administrators
- Solutions architects
- Data architects

# INFORMATION

<p><b>PARTICIPATION FEE</b></p> <p>€ 1100</p> <p>The fee includes all seminar documentation.</p> <p><b>SEMINAR TIMETABLE</b></p> <p>9.30 am - 1.00 pm 2.00 pm - 5.00 pm</p>	<p><b>HOW TO REGISTER</b></p> <p>You must send the registration form with the receipt of the payment to: info@technologytransfer.it</p> <p>TECHNOLOGY TRANSFER S.r.l. Piazza Cavour, 3 - 00193 Rome (Italy)</p> <p><b>PAYMENT</b></p> <p>Wire transfer to: Technology Transfer S.r.l. Banca: Cariparma Agenzia 1 di Roma IBAN Code: IT 03 W 06230 03202 000057031348 BIC/SWIFT: CRPPIT2P546</p>	<p><b>GENERAL CONDITIONS</b></p> <p><b>DISCOUNT</b></p> <p>The participants who will register 30 days before the seminar are entitled to a 5% discount.</p> <p>If a company registers 5 participants to the same seminar, it will pay only for 4.</p> <p>Those who benefit of this discount are not entitled to other discounts for the same seminar.</p> <p><b>CANCELLATION POLICY</b></p> <p>A full refund is given for any cancellation received more than 15 days before the seminar starts. Cancellations less than 15 days prior the event are liable for 50% of the fee. Cancellations less than one week prior to the event date will be liable for the full fee.</p> <p><b>CANCELLATION LIABILITY</b></p> <p>In the case of cancellation of an event for any reason, Technology Transfer's liability is limited to the return of the registration fee only.</p>
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June 9-10, 2022

Registration fee:  
€ 1100

*If registered participants are unable to attend, or in case of cancellation of the seminar, the general conditions mentioned before are applicable.*

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## **SPEAKER**

**Rick van der Lans** is a highly-respected independent analyst, consultant, author, and internationally acclaimed lecturer specializing in data warehousing, business intelligence, big data, and database technology.

He has presented countless seminars, webinars, and keynotes at industry-leading conferences. He also helps clients worldwide to design their data warehouse, big data, and business intelligence architectures and solutions and assists them with selecting the right products. He has been influential in introducing the new logical data warehouse architecture worldwide which helps organizations to develop more agile business intelligence systems.

Over the years, Rick has written hundreds of articles and blogs for newspapers and websites and has authored many educational and popular white papers for a long list of vendors. He was the author of the first available book on SQL, entitled including Introduction to SQL, which has been translated into several languages with more than 100,000 copies sold. More recently, he published his book **Data Virtualization for Business Intelligence Systems**.

He presents seminars, keynotes, and in-house sessions on Big data and analytics, data virtualization, the logical data warehouse, data warehousing and business intelligence.