

TECHNOLOGY TRANSFER PRESENTS

# CHRISTOPHER BRADLEY

## ADVANCED DATA MODELING INCLUDING BIG DATA

**MAY 24-25, 2018**

RESIDENZA DI RIPETTA - VIA DI RIPETTA, 231  
ROME (ITALY)



info@technologytransfer.it  
www.technologytransfer.it

## ABOUT THIS SEMINAR

In the modern era, the volume of data we deal with has grown significantly. As the volume, variety, velocity and veracity of data keeps growing, the types of data generated by applications become richer than before. As a result, traditional relational databases are challenged to capture, store, search, share, analyse, and visualize data. Many companies attempt to manage Big Data challenges using a NoSQL (“Not only SQL”) database and may employ a distributed computing system such as Hadoop. NoSQL databases are typically key-value stores that are non-relational, distributed, horizontally scalable, and schema-free.

Many organisations ask, “do we still need data modelling today?” Traditional data modelling focuses on resolving the complexity of relationships among schema-enabled data. However, these considerations do not apply to non-relational, schema-less databases. As a result, old ways of Data Modelling no longer apply. This course will show Data Modelling approaches that apply to not only Relational, but also to Big Data, NoSQL, XML, and other formats. In addition, the uses of data models beyond simply development of databases will be explored.

### WHAT YOU WILL LEARN

At the end of the course, delegates would have gained the following:

#### Level set understanding & terminology

- o Learn about the need for and application of Data Models in Big Data and NoSQL environments
- o See the areas where Data modelling adds value to Data Management activities beyond Relational Database design
- o Understand the critical role of Data models in other Data Management disciplines particularly Master Data Management and Data Governance.

#### Pragmatic Learning

- o Learn the best practices for developing Data Models for Big Data and NoSQL environment
- o Understand how to create Data Models that can be easily read by humans
- o Recognise the difference between Enterprise, Conceptual, Logical, Physical and Dimensional Data models
- o Through practical examples, learn how to apply different Data Modelling techniques

### AUDIENCE

Practitioners who will need to read, consume or create data models, particularly for Big Data and non-RDBMS environments. Users who wish to gain a better understanding of data during Information Management initiatives including:

- Business Intelligence & Data Warehouse Developers & Architects
- Data Modellers
- Developers
- Data Architects
- Data Analysts
- Enterprise Architects
- Solution Architects
- Application Architects
- Information Architects
- Business Analysts
- Database Administrators
- Project / Programme Managers
- IT Consultants
- Data Governance Managers
- Data Quality Managers
- Information Quality Practitioners

# OUTLINE

## 1. Data modelling recap

- Data modelling basics, major constructs, identifying entities, model levels and the linkage between them

## 2. Data Modelling – Back to the Future?

- Data Modelling didn't start with relational! This may be a surprise to many people, but the first uses of data models were well before Relational data bases became the norm. The techniques are applicable to many of the modern non-relational formats we see today

## 3. Data Modelling for Big Data & NoSQL

- What has to change when we are developing data models for a Hadoop or other Big Data environment?
- Do modelling tools support Big Data technologies, what are the restrictions and considerations?
- What data modelling techniques are applicable when targeting a Big Data platform?
- Does normalisation still have a place in the Big Data world?
- Where's our metadata in the model now?

## 4. Modelling for hierarchic systems & XML

- What must change when developing data models for XML & Hierarchic systems?

## 5. Services Oriented Architecture (SOA)

- Why data models are essential for success

## 6. Massively denormalised files

- Is modelling needed? How do we create data models?

## 7. Dimensional Data Models

- How do we create a dimensional model?
- Converting an ER model to Dimensional
- Slowly changing dimensions, what types and when are they applicable
- Beyond the basics with conformed dimensions, bridges, junk dimensions & fact less facts

## 8. Application Packages & Data Models

- Do we need to develop data models when implementing a COTS package? Uses and benefits

## 9. Using Data Models for Data Integration & Lineage

- How to exploit data models for design of data integration approaches and in data lineage

## 10. Top down requirements capture

- When is it appropriate, what are the limitations

## 11. Bottom up requirements synthesis

- When this works, where is it appropriate. How do we cope with existing DBMS's and systems

## 12. How to capture requirements for both Data and Process needs

## 13. Checking the Data vs the MetaData; why does it matter?

## 14. Use of standard data model constructs, and pattern models

## 16. Understanding the Bill of materials (BOM) construct.

- Where can it be applied, why it's one of the most powerful modelling constructs

## 17. Party; Role; Relationship

- Why mastering this construct can provide phenomenal flexibility

## 18. Mastering Hierarchies

- Different approaches for modelling hierarchies

## 19. Alternative Data Modelling Notations and tooling

## 20. Normalisation

- Progressing beyond 3NF. 4NF, 5NF Boyce-Codd, and why, and when to use them

# INFORMATION

<p><b>PARTICIPATION FEE</b></p> <p>€ 1300</p> <p>The fee includes all seminar documentation, luncheon and coffee breaks.</p> <p><b>VENUE</b></p> <p>Residenza di Ripetta Via di Ripetta, 231 Rome (Italy)</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: TECHNOLOGY TRANSFER S.r.l. Piazza Cavour, 3 - 00193 Rome (Italy) Fax +39-06-6871102</p> <p><b>within</b> <b>May 9, 2018</b></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>
--	--	--

**CHRISTOPHER BRADLEY**  
**ADVANCED DATA MODELING INCLUDING BIG DATA**

May 24-25, 2018  
Residenza di Ripetta  
Via di Ripetta, 231  
Rome (Italy)

Registration fee:  
€ 1300

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

first name .....

surname .....

job title .....

organisation .....

address .....

postcode .....

city .....

country .....

telephone .....

fax .....

e-mail .....



Stamp and signature

Send your registration form with the receipt of the payment to:  
**Technology Transfer S.r.l.**  
Piazza Cavour, 3 - 00193 Rome (Italy)  
Tel. +39-06-6832227 - Fax +39-06-6871102  
info@technologytransfer.it  
www.technologytransfer.it



## **SPEAKER**

**Christopher Bradley** he has spent 37 years in the forefront of Information Management, working for International organisations in Information Management Strategy, Data Governance, Data Quality, Information Assurance, Master Data Management, Metadata Management, Data Warehouse and Business Intelligence.

Chris is an independent information strategist, author and recognised thought leader. He advises clients including, Alba Leasing, Alinma Bank, American Express, ANZ, Bank of England, BP, Celgene, Cigna Insurance, Emirates NBD Enterprise Oil, GSK, HSBC, NAB, National Grid, SABB, Riyad Bank, Saudi Aramco, Shell, Statoil, TOTAL and Qatar Gas.

Recently he has delivered a comprehensive appraisal of Information Management practices at an Oil & Gas super major, Data Governance strategy for a Life Sciences Company, and Information Management training for a Government Organisation.

Chris guides Global organizations on Information Strategy, Data Governance, Information Management best practice and how organisations can genuinely manage Information as a critical corporate asset. Frequently he is engaged to evangelise the Information Management and Data Governance message to Executive management, introduce data governance and new business processes for Information Management and to deliver training and mentoring.

Chris is Director of the E&P standards committee “DMBoard”, President of DAMA UK, an author of DMBok 2.0, a member of the Meta Data Professionals Organisation (MPO) the founding Fellow of DAMA CDMP, recipient of the DAMA Lifetime Achievement Award for Data Management Excellence, author and examiner for the DAMA CDMP professional certification.

Chris is an acknowledged thought leader in Data Governance, creator of the “Data Governance by Stealth” approach, author of several papers and books including **Data Modelling for the Business**, and is also an expert judge on the annual Data Governance best practice awards.