Rome, June 22-23, 2017
Residenza di Ripetta
Via di Ripetta, 231

INTERNATIONAL
CONFERENCE
2 0 1 7

Data
Business Intelligence
Analytics

Building the Data Driven Smart Enterprise

ABOUT THE CONFERENCE

As companies invest in digitalization the number of operational applications and processes being made available through the Web, Mobile and Social computing channels continues to grow.

In many cases, digitalisation has resulted in new structured, semi-structured and unstructured data being captured in addition to increasing amounts of transaction data. This includes JSON data, sensor data, text and machine data like Web Logs recording every click of a mouse or touch of a mobile device screen. Naturally, when new data is available, business wants to analyse it and so new 'workload optimised' analytical systems have emerged in companies wanting to move beyond traditional Data Warehouses. Big Data and Streaming Analytics platforms have been added to Data Warehouses to create an extended analytical ecosystem. It is not surprising therefore that with all this data that Predictive and Advanced Analytics have risen up the priority list as executives realize the strategic importance of evidence based insights to future business success. Almost everywhere companies are now using or planning to use Analytics to gain a much better understanding of customer behavior and interactions, to reduce risk and to optimize operations.

In addition, with so much data and analytical opportunity around, business is demanding insights be produced quickly for competitive gain. They want to modernize Data Warehouses by introducing Agile Data Modelling techniques that easily accommodate change. They want to reduce Total Cost of Ownership by replacing physical Data Marts with virtual Data Marts all accessible from Self-Service BI tools so they can create insights themselves. They also want to use new modern visualization techniques like infographics for more effective communication. Furthermore, business is demanding that we move beyond basic interactive dashboards on historical transaction data to making use of Predictive and Advanced Analytics on traditional and Big Data to deliver high value insights.

This content rich Conference addresses all these needs by focusing on Data Warehouse modernization, governing Self-Service BI and introducing Analytics. It looks at introducing an Agility data strategy into traditional Data Warehouses by adopting Agile Data Vault Modeling, Data Virtualization and Data Warehouse automation. It also looks at new Data Visualization techniques and Machine Learning including developing Predictive Analytics. It discusses Advanced Analytics such as Text and Graph Analysis, and how these can be used to drive up sales in digital and traditional channels. Just how powerful is Graph Analysis and what would you use it for? Also what happens if you combine Advanced Analytics such as Machine Learning and Text Analysis or Text Analysis and Graph Analysis? How can Text Analysis of Social media data help improve e-commerce sales?

We also introduce Fast Data – also known as Streaming Data and discuss you need to do to get ready for it? We will look at how your architecture needs to change, how to ingest high velocity data at scale and what's involved in introducing a Streaming Analytics platform? We will also look at how Self-Service BI tools integrate with all this and how to integrate it with your traditional Data Warehouses. Finally we look at the impact of the EU General Data Protection Regulation (GDPR) and what it means in terms of governing data in the modern analytical environment. We will answer key questions like what do we have to do to be compliant with GDPR and how do we get started in implementing Data Security and Data Privacy?

This Conference aims to provide an update on all this, how it fits together and how you can use it to maximize business value. It tries to show the latest advances in technology to help improve your understanding of when to use what where and for what business purpose. It tries to help get more out of Analytics while introducing Governance, Flexibility, Agility and Your existing Analytical environment.

Trends and Directions

All the Way from BI to AI

Agility

Data Vault Modeling for the Agile Data Warehouse

Data Warehouse Automation – Time to Stop Hand-Crafting Your Information Environment

Migrating to Virtual Data Marts and Logical Data Warehouse using Data Virtualisation

Analytics

Machine Learning per il Business

Using Text and Graph Analytics to create Business Value

Getting ready for Fast Data – Introducing Streaming Analytics into the Enterprise
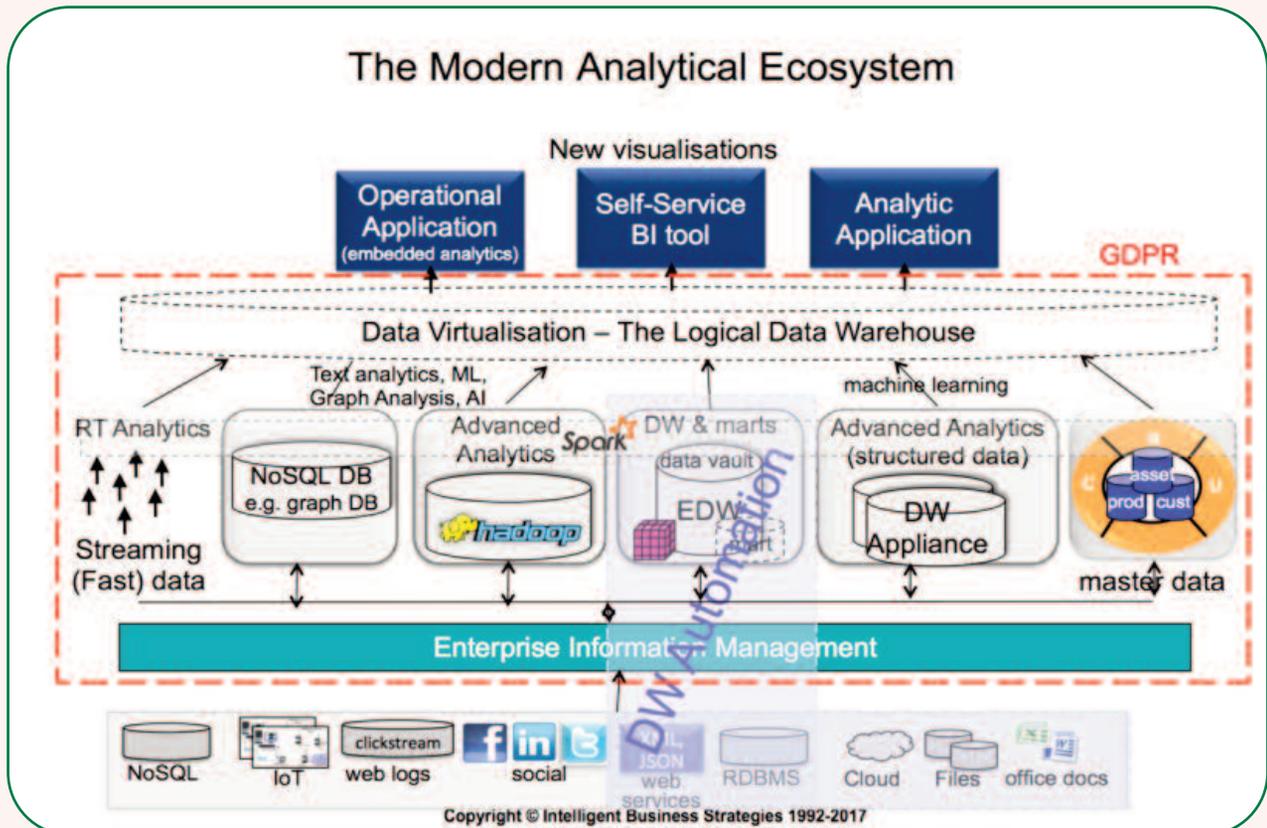
Visualisation

The Power (and Pitfalls) of Modern Data Visualization – New Techniques for Effective Communication

Governance

Governance in the Age of Self-Service Analytics

Getting ready for GDPR - Implementing Data Privacy in a Modern Analytical Ecosystem

The Modern Analytical Ecosystem

Copyright © Intelligent Business Strategies 1992-2017

Day 1

Session 1

All the Way from BI to AI: *Evolving Business Needs, Emerging Information and Technology*

Barry Devlin

From humble beginnings offering consistent monthly reports and ad hoc queries to Managers, Business Intelligence (BI) has evolved significantly over the past 30 years. Operational BI was followed by Analytics on external Big Data, first from Social media and now, increasingly, from the Internet of Things. Over the past few years, the landscape has expanded once again with algorithmic Decision Making and Artificial Intelligence (AI). From intelligent information to deep learning, the world of Decision Making support has blossomed into an environment that encompasses the entire business.

But, how does it all fit together? Can we paint a single picture that positions all the pieces, prioritises the different projects, and moves smoothly to this new world?

• The emergence of Digital Business and its opportunities and challenges
• An inclusive information architecture positioning Warehouses, Lakes, and other modern data stores, and how they can work together for business advantage
• A review of different technologies, traditional and emerging, comparing their pros and cons
• The wider implications of algorithmic Decision Making and Artificial Intelligence on society and how this will impinge on the Digital Business

Session 2

Machine Learning for Business

Jos van Dongen

The power behind autonomous cars, real time facial recognition, and intelligent robots is called 'Machine Learning', a subfield of Artificial Intelligence (AI). The origins of AI date back to the 40's and the first formal AI definition by Arthur Samuel is from 1959: "A field of study that gives computers the ability to learn without being explicitly programmed". Still, it took decades before the available computer power was cheap and powerful enough to learn from historical data and make predictions about future events in real time.

Currently, Machine Learning is not only able to park our cars or win at Jeopardy, but it's also able to beat humans in games as chess and Go, and can learn itself how to play computer games without any instruction about the rules of the game. Although these are all very sexy applications of this technology, the applicability for business purposes is fairly limited. Nevertheless, Machine Learning algorithms can be very useful in a business context. Understanding how they work and how they can be applied in e.g. sales, marketing, finance and HR can help you to drive better decisions and give you a competitive edge. With the help of a Machine Learning algorithm for anomaly detection we can now for instance easily identify fraud or recognize intruders on our computer network. Other algorithms can be used to model and 'predict' behavior which can help us to make personalized offers to our customers and/or prevent customer from churning. And, last but not least, Machine Learning algorithms combined with business rules can help you

build very powerful automated decisioning applications.

- What Machine Learning is and why it should be part of your Analytics toolkit
- How the most widely used algorithms work and how to apply them
- Best Practices and use cases in applying Machine Learning techniques
- How to start applying Machine Learning al gorithms in an automated decisioning framework

Session 3

Using Text and Graph Analytics to create Business Value

Mike Ferguson

Most companies with Data Warehouses have spent the vast majority of their time analysing Structured Data from known transaction processing systems using Self-Service Business Intelligence tools. However, increasingly now new data is being ingested into the enterprise that can vary in data type. Examples include Social media data such as Twitter data or inbound customer email data. Both of these types of data primarily consist of text, which means that Text Analysis is needed to analyse them. In addition Social media data also includes communities, unknown relationships between parties within and across communities and also influencers. Graph Analysis can help identify these and track them over time. It can also help to reduce risk by identifying fraudulent activity and assist logistics organisations in route optimisation. This session take a detailed look at both Text and Graph Analytics and explains what they are, how they work and also popular use cases where they can be really effective in delivering business value.

- New types of data that business now wants to analyse
- New kinds of analytical techniques
- A close look at Text Analytics and how it works
- Popular use cases for Text Analytics
- Sentiment Analysis – a Text Analytics Use Case
- Text Analysis using Search
- What is Graph Analysis
- Types of Graph Analysis and what they are used for
- Analysing Social networks using Graph Analysis
- Graph Analysis in the battle against fraud
- Scaling Text and Graph Analysis to handle large amounts of data

Session 4

Governance in the Age of Self-Service Analytics

Donald Farmer

In recent years, relations between business users and IT have changed dramatically. Users often have simple access to better technology and faster upgrades than IT can provision. Notably, business analysts have embraced Self-Service Business Intelligence "with or without IT's permission."

In this session we will describe a model of governance and compliance, specifically tailored to the needs of organizations enabling Self-Service Analytics. Covering topics ranging from provisioning data to security to enabling collaboration, we'll shed on light on what has often been called the dark side of Self-Service.

Session 5

Data Vault Modeling for the Agile Data Warehouse

Hans Hultgren

Data Vault Modeling is the optimal data modeling approach for the Agile Data Warehouse. Building an Agile Data Warehouse means creating a program that can easily adapt to change. Change in the form of new subject areas, new data sources, new context attributes, new business rules, and new business requirements.Getting there means we need to think differently about the DWBI program. People, processes, tools and techniques are all part of the solution. The data modeling approach we use is among the techniques that need to change. Enter the Data Vault Modeling approach. With the Data Vault Ensemble approach the data structures maintain their key dependency but are split out into component parts. This serves to separate the things that change from the things that don't change. End Result = DW Agility Data Vault Modeling is the basis for over 1400 Data Warehouse models around the globe today. This Data Vault Session is highly interactive. Attendees will receive a Data Vault introduction covering the drivers for choosing Data Vault Modeling, the core fundamentals of the Data Vault Modeling approach, and several practical insights for applying Data Vault Modeling in your organization.

Day 2

Session 6

Data Warehouse Automation – Time to stop Hand-Crafting Your Information Environment

Barry Devlin

Building and maintaining Data Warehouses has long been seen as expensive and time-consuming. Filling and governing Data Lakes and other modern Big Data stores has proven no easier. ETL and data integration tools are common components of Data Warehouse projects, but scripting and coding is still widespread and even more prevalent in Big Data implementations. New tools, such as Data Warehouse automation, data preparation and pipelining, and data wrangling have emerged over the past few years addressing different aspects of reducing the time and cost associated with populating these stores. This session explores the different aspects of these tools, examining their strengths and weaknesses.

- Positioning different tool types
- Agility in the development process
- Role and involvement of business users and/or IT
- Design vs. development vs. maintenance
- Moving from exploration to production

Session 7

Getting Ready for GDPR - Implementing Data Privacy in a Modern Analytical Ecosystem

Daragh O'Brien

The GDPR is a substantial and complicated piece of European Union legislation that has implications for a wide range of Information

Management disciplines in organisations of all sizes. For organisations that were fully complying with all aspects of the now obsolete Directive 95/46/EC, GDPR represents a challenge. Most organisations, however, did not comply fully with all aspects of the outgoing laws, leaving them with potentially significant risks of non-compliance with GDPR and the associated penalties. In this session, Daragh O'Brien will give an overview of key provisions of GDPR and how they relate to tangible aspects of the DAMA DMBOK Wheel. Drawing on a number of actual client case studies, he will help you understand practical steps to pragmatically address the compliance challenge and seize the opportunities that GDPR presents to smart data organisations.

Session 8

The Power (and Pitfalls) of Modern Data Visualization – New Techniques for Effective Communication

Jos van Dongen

For many business users the (management) dashboard is still the most familiar visual representation of corporate data. Ideally it'll show status and progress on a number of key performance indicators helping management to identify exceptions and monitor trends. This has been the case since the early days of the Executive Information Systems that were popular in the 90's. What's changing though is the amount of available information that needs to be translated into easy to consume and understand visualizations, the speed at which this information comes available, and the explanations that ideally are part of the visuals. This relatively new way of communicating performance and exceptions is Visual Storytelling, which guides a user through a narrative based on visual concepts like infographics and annotated charts. Since 70% of the sense receptors in the human body reside in our eyes, it's obvious that the most effective way to explore and present data is to use visualization techniques. Visualization can be used to inform us and drive action, like in a management dashboard. Data Visualization can also be used to entertain and educate us. Or, it can be used to explore data and to keep track of progress, whether in virtual environments like apps or games, or in the real world. Visualization can be used to discover and present patterns in data, and how data changes over time. For analytical purposes, mastering visualization techniques is an indispensable part of a BI professional or data scientist's toolbox. The question is however, do the ancient pie and bar chart still cut it, or are more advanced visual representations of data necessary?

- How to explore and apply modern Data Visualization techniques
- Which of those techniques should be in your analytical toolbox
- How to design visualizations and dash-boards for effective communication
- What Visual Storytelling is and how to apply these principles in a business context
- When and how to use Infographics

Session 9

The Future of The Data Warehouse

Speakers e Vendors

With so much emphasis on Self-Service BI and Analytics and focus shifting to new analytical workloads on other platforms, this panel session discusses the future of the Data Warehouse. Is it dead? Will Self-Service and

Session 10

Getting Ready for Fast Data – Introducing Streaming Analytics into the Enterprise

Mike Ferguson

Increasingly more and more data flowing into the enterprise is streaming in on a continuous basis. It could be markets data, sensor data from production lines or logistics operations. It could be from sensors in products such as smart phones, driverless cars, drilling equipment, assets and much more. The Internet of Things is upon us with products emitting a tsunami of data that organisations want to analyse. Also companies what to analyse click stream data from live on-line Web visitor activity. Everywhere you look, Streaming Data (also known as fast data) is on the increase. We are moving away from batch to the continuous flow of low latency data and the need to ingest and analyse it in real time. But for many companies Fast Data is new. We have little or no experience of processing and analysing this. But we need to know how. We need to plan to start implementing Streaming Analytics to move with the demand to analyse in real-time and be more responsive in every day operations. This session looks at Fast Data and what you need to think about to get ready for it.

- What is Fast Data?
- Popular Streaming Analytical Use Cases to prevent and optimise
- What's different about Streaming Data? – Continuous data flow
- Steps in a Streaming Analytics process
- Types of Streaming Data
- Ingestion techniques
- Enriching Streaming Data with enterprise data
- Describing the schema of Streaming Data for analysis
- Developing and deploying Analytics into streaming environments
- What are Streaming Analytics platforms?
  - o Open Source technology options including Kafka, Storm, Spark Streaming, Flink, Apex
  - o Commercial Streaming Analytics platforms - Amazon, Google, IBM, MapR, Microsoft, SAS and more
- Dealing with scale
- How will your existing architecture need to change?
- Integrating Streaming Data into you existing analytical environment

Session 11

Migrating to Virtual Data Marts and Logical Data Warehouse using Data Virtualisation

Donald Farmer

As data sources and the uses of data in the enterprise become ever more diverse, architects face growing problems providing high-quality, consistent sources for users. Data Virtualisation technology promises a solution to many of these issues and in this session we will look at the potential for building modern, Logical Data Warehouses or marts in complex environments. We'll consider common issues such as security, latency and performance, but we'll also discuss the often-overlooked problems of delivering metadata and an effective User Experience to the consumers of virtualized data.

Mike Ferguson

He is Managing Director of Intelligent Business Strategies Limited. As an analyst and consultant he specialises in Business Intelligence, Analytics, Big Data, and Data Management. With over 35 years of IT experience, Mr. Ferguson has consulted for dozens of companies, spoken at events all over the world and written numerous articles. Formerly he was a Principal and co-Founder of Codd and Date Europe Limited – the inventors of the Relational Model, a Chief Architect at Teradata on the Teradata DBMS and European Managing Director of DataBase Associates.

Barry Devlin

He is among the foremost authorities on Business Insight and one of the founders of Data Warehousing, having published the first architectural paper on the topic in 1988. With over 30 years of IT experience, including 20 years with IBM as a Distinguished Engineer, he is a widely respected analyst, consultant, lecturer and author of the seminal book **Data Warehouse-from Architecture to Implementation** and numerous White Papers. His 2013 book **Business unintelligence - Insight and Innovation beyond Analytics and Big Data** is published by Technics Publications and available in both hardcopy and e-book formats.

Daragh O'Brien

He was recently rated the 24th most influential person in Information Security worldwide on Twitter, FICS, is a leading consultant, educator, and author in the fields of Information Privacy, Governance, Ethics, and Quality. After over a decade in a leading telco, he now works with clients in a range of sectors on a range of Information Management challenges.
Mr. O'Brien is a Fellow of the Irish Computer Society and a Privacy Officer for DAMA-I. He teaches Data Privacy Law and Practice at the Law Society of Ireland. Castlebridge is a commercial partner of the Adapt Centre in Trinity College Dublin and collaborates with the Insight Centre for Digital Analytics, Europe's largest Analytics research group.

SPEAKERS

Hans **Hultgren**

Mike **Ferguson**

Daragh **O'Brien**

Barry **Devlin**

Donald **Farmer**

Jos **van Dongen**

REGISTRATION FORM

The Conference is for IT Managers, IT Professionals and IT Architects who wish to take a detailed and practical look at the latest developments in Data Management, Business Intelligence and Analytics.

Jos Van Dongen

He is a consultant, author, speaker and analyst. Mr. van Donger has been involved in software development, Business Intelligence (BI) and Data Warehousing since 1991 and is the (co)author of three highly acclaimed (Open Source) BI books and numerous magazine articles. Over the past years he has been the lead architect for a wide collection of analytical solutions in a variety of organizations, both profit and non-profit. Mr. van Dongen speaks regularly at national and international conferences about new developments in BI, Analytics and Data Science.

Hans Hultgren

He is President at Genesee Academy and a Principal at Top Of Minds AB. Data Warehousing, Business Intelligence and Big Data educator, author, speaker, and advisor. Currently working on Business Intelligence and Enterprise Data Warehousing (EDW) with a focus on Ensemble Modeling and Data Vault. Primarily in Stockholm, Amsterdam, Denver, Sydney and NYC. He published Data Modeling book Modeling the Agile Data Warehouse with Data Vault which is available on Amazon websites in both print and Kindle e-reader versions.

Specialties: Information Management and Modeling, Ensemble Modeling, Data Vault Modeling, Big Data Modeling, Agile Data Warehousing, Education, e-Learning, Entrepreneurship and Business Development.

PARTICIPATION FEE

Euro 1500

The fee includes all seminar documentation, luncheon and coffee breaks.

HOW TO REGISTER

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

PAYMENT

Wire transfer to: Technology Transfer S.r.l.
Banca: Cariparma
Agenzia 1 di Roma
Iban Code:
IT 03 W 06230 03202 000057031348

Whitin June 7, 2017

ROME

June 22-23 2017
Residenza di Ripetta
Via di Ripetta, 231

Registration Fee
Euro 1500

CANCELLATION POLICY

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.

GROUP DISCOUNT

If a company registers 5 participants to the same seminar, it will pay only for 4. Those who benefit of this discount are not entitled to other discounts for the same seminar.

EARLY REGISTRATION

The participants who will register 30 days before the seminar are entitled to a 5% discount.

CANCELLATION LIABILITY

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.

SEMINAR TIMETABLE

2 days 9.30 am - 1.00 pm

2.00 pm - 5.00 pm

International Conference 2017

First name _____

surname _____

job title _____

organisation _____

address _____

postcode _____

city _____

country _____

telephone _____

fax _____

e-mail _____

Stamp and Signature _____

Donald Farmer

He is an internationally respected thinker in the fields of Aata Analysis and Innovation, with over 30 years of deeply practical experience. His background is very diverse, having applied Data Analysis techniques in scenarios ranging from fish-farming to archaeology to advanced manufacturing. He has worked in award-winning startups in the UK and Iceland, and spent 15 years at Microsoft and at Qlik leading teams designing and developing new enterprise capabilities in Data Integration, Data Mining, Self-Service Analytics and Visualization.

Mr. Farmer is now an advisor to globally diverse academic boards, government agencies and investment funds on Data and Innovation Strategy. He also advises several startups worldwide, developing products and services ranging from restaurant management in the Philippines to graph database analytics in Silicon Valley. He mentors individuals from junior inside sales reps to globally-focussed executives.