

## HOW STRONG ARE YOUR DATA MODELLING AND DESIGN SKILLS?

**Data models are the main medium for communicating data and information requirements from business to IT, and within IT from analysts, modelers, and architects, to database designers and developers.**

Data Modeling Zone (DMZ) is the only training environment that focuses on developing data modeling skills for all levels of expertise. It's the reputable, international training event scheduled each year in the US and Europe and in Canberra in March 2018.

### WHO SHOULD ATTEND

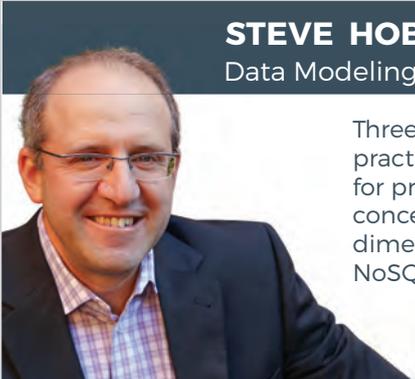
Data Modelling Zone is for anyone in IT or business who works with data or is involved in the development of data capability within an organisation.

Whether an analyst, developer, or project manager - everyone needs to understand for developing information solutions.

Data modeling and related disciplines are not static. In future there will be increasing demand for strategic analytical skills to guide organisations in meeting their information challenges. These skills include the ability to:

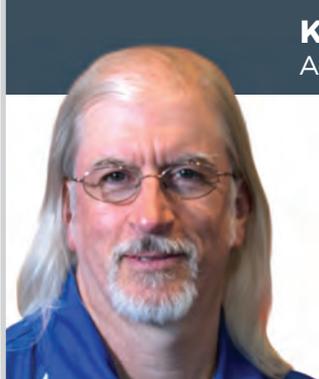
- 1. Manage information complexity** - deal with increasing needs, sources and types of data
- 2. Work with technology change** - Agile, Cloud, Big Data and Artificial Intelligence are technology-driven changes that will impact on data architectures
- 3. Work with new data structures** - learn how to model Graph, NoSQL and document data
- 4. Gather more complex requirements** - understand fact-based modeling techniques and how they work well with schema-less data
- 5. Build and maintain enterprise models** - illustrating the future information architectures of an organisation and support change.

### PRE-CONFERENCE WORKSHOPS



**STEVE HOBERMAN**  
Data Modeling Master Class

Three days of practical techniques for producing conceptual, logical, dimensional and NoSQL data models



**KENT GRAZIANO**  
Agile Data Warehousing

How to build Data Warehouse as a Service (DWaaS), using agile methodologies in the cloud

## DESIGNING INFORMATION

for a **DIGITAL ENTERPRISE**

[www.datamodelingzone.com](http://www.datamodelingzone.com)

DAY 1 THURSDAY, MARCH 7
<b>REGISTRATION - 8 AM</b>
Registration and Robinson Ryan Coffee Run Open from 8 am (Networking)
<b>EARLY MORNING SESSIONS - 8.30 AM</b>
Data Modeling Fundamentals, <b>STEVE HOBERMAN</b> , Steve Hoberman & Associates, LLC (Innovations)
Using DMBok to Bootstrap your Data Management and Governance, <b>ANDY PEYTON</b> , IP Australia (Case Studies)
Document Data Modeling, <b>MATTHEW SMITH</b> , MarkLogic (Tools)
<b>MID MORNING SESSIONS - 10.30 AM</b>
Formal Language Theory: Solving the Data Modelling Conundrum with Linguistics, <b>LLOYD ROBINSON</b> , Robinson Ryan (Innovations)
Business-friendly data models, <b>GRAHAM WITT</b> , Ajilon (Case Studies)
Introduction to Graph Modeling and Graph Databases, <b>JOSHUA YU</b> , Neo4j (Tools)
<b>KEYNOTE - 1.15 PM</b>
The Mapmaker's Guide to the Galaxy, <b>JON ALEXANDER</b>
Beyond the Model <b>SAM BENEDICT</b> , erwin
<b>AFTERNOON SESSIONS - 3 PM</b>
Introduction to Data Vault: A data practitioner's view, <b>JOHN GILES</b> , Country Endeavours (Case Studies)
Fact-Based Data Integration: Matching and Transformation, <b>DR. GRAEME PORT</b> , Factil (Tools)
<b>NETWORKING SESSIONS - 4.30 - 7 PM</b>
Data Modeling Hackathon, music and refreshments

DAY 2 FRIDAY, MARCH 8
<b>EARLY MORNING SESSIONS - 8.30 AM</b>
Data catalogue may be the new black, but metadata is not cabbage, <b>DR JONATHAN GRAY</b> Catapult BI (Case Studies) w
Making Sense of Scema-On-Read, <b>KENT GRAZIANO</b> , Snowflake Computing (Tools)
<b>MID MORNING SESSIONS - 10.30 AM</b>
Layering Business Logic on your Data Vault, <b>ROELANT VOS</b> , Allianz Worldwide Partners (Innovations)
Modern Data Management Practices, <b>SELVA MURUGESAN</b> , ACT Government, Australia (Case Studies)
Data Modeling with Machine Learning in the Real World, <b>PETER AVENANT</b> , Varigence (Tools)
<b>KEYNOTE - 1.15 PM</b>
Getting it Right, <b>KENT GRAZIANO</b> , Snowflake Computing
<b>AFTERNOON SESSIONS - 3 PM</b>
Dynamic Data Modelling, <b>GRAHAM WITT</b> , Ajilon (Innovations)
The devil's in the details, or the devil is the details: <b>JOHN GILES</b> , Country Endeavours (Case Studies)
Neo4j Graph Database Hands-on Workshop, <b>JOSHUA YU</b> , Neo4j (Tools)

## OUR PROGRAM SPONSORS



For more information, see  
[www.datamodelingzone.com](http://www.datamodelingzone.com)

For further information contact:  
[info@DMZAsiaPacific.com](mailto:info@DMZAsiaPacific.com)

# PRECONFERENCE WOKSHOPS & KEYNOTES



Steve Hoberman has trained more than 10,000 people in data modeling since 1992. Steve is known for his entertaining and interactive teaching style (watch out for flyingcandy!),

Organisations around the globe have brought Steve in to teach the Data Modeling Master Class as it is recognised as the most comprehensive of its kind. Steve is the author of nine books on data modeling, including the bestseller Data Modeling Made Simple. Steve's frequent data modeling consulting assignments include review data models using his Data Model Scorecard@technique.

He is the founder of the Design Challenges group and recipient of the Data Administration Management Association (DAMA) International Professional

## DATA MODELING MASTERCLASS

The Master Class is a complete data modeling course, containing three days of practical techniques for producing conceptual, logical, and physical relational and dimensional and NoSQL data models. After learning the styles and steps incapturing and modeling requirements, you will apply a best practices approach to building and validating data models through the Data ModelScorecard@.

You will know not just how to build a data model, but how to build a data model well Two case studies and many exercises reinforce the material and enable you to apply these techniques in your current projects.

### Top 10 Course Objectives:

- Explain data modeling components and use a question driven approach for identification.
- Reading a data model of any size and compexity.
- Validate any data model with key settings (scope, abstraction, timeframe, function, and format) and with the Data Model Scorecard@.
- Apply requirements elicitation techniques.
- Build relational and dimensional conceptual and logical data models.
- Practice finding structural soundness issues and standard variations.
- Recognise when to use abstraction and where patterns and industry models give a head start.
- Use templates for requirements and data profiling.
- valuate definitions for clarity, completeness and correctness.
- Leverage the Data Vault and enterprise data model for a successful enterprise architecture.



## PRICING

DMZ Conference (March 7-8)	<b>\$1,980</b>
Data Modeling Master Class (4-6)	<b>\$2,904</b>
Data Modeling Master Class and DMZ (March 4-8)	<b>\$3,674</b> *Discount @ Checkout
Agile Data Warehousing Today (March 6)	<b>\$1,089</b>
Agile Data Warehousing Today and DMZ (March 6-8)	<b>\$2,673</b> *Discount @ Checkout
DMZ Conference <u>4 Person</u> Group Booking (March 7-8)	<b>\$5,718</b> * Contact Us
Agile Data Warehousing Today <u>4 Person</u> Group Booking (Mar 6)	<b>\$3,267</b> * Contact Us

There is a 10% discount for DAMA members.

For information on discounts, please contact [info@dmzasiapacific.com](mailto:info@dmzasiapacific.com)

# PRECONFERENCE WOKSHOPS & KEYNOTES



Kent Graziano is the Chief Technical Evangelist and Sr Director Customer Advisory Solutions for Snowflake Computing. His is an award winning author, speaker, and trainer, in the areas of data modeling, data architecture, and data warehousing. He is an Oracle ACE Director -Alumni, member of the OakTable Network, a certified Data Vault Master and Data Vault 2.0 Practitioner (CDVP2), expert data modeler and solution architect with more than 30 years of experience, including two decades doing data warehousing and business intelligence (in multiple industries). He is an internationally recognized expert in Oracle SQL Developer Data Modeler and Agile Data Warehousing.

Mr. Graziano has developed and led many successful software and data warehouse implementation teams, including multiple agile DW/BI teams.

He has written numerous articles, authored three books, co-authored four books (including the 1st Edition of The Data Model Resource Book), and has given hundreds of presentations, internationally. He was a co-author on the first book on Data Vault, and the technical editor for Super Charge Your Data Warehouse. In 2014, he was voted one of the best presenters at OUGF14 in Helsinki, Finland.

## AGILE DATA WAREHOUSING TODAY

This all day workshop will provide you the background and principles to use agile in your data warehouse and business intelligence projects. It will introduce you to a modern method for agile data modeling, Data Vault 2.0, and provide you with a detailed, real world case study. At the end we will talk about how the cloud has changed everything and how you can enable your agile data warehouse by using a modern data warehouse as a service (DWaaS) built in the cloud, for the cloud. We will cover these four topics:

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**Agile Methods and Data Warehousing: How to Deliver Faster.** Most people will agree that data warehousing and business intelligence projects take too long to deliver tangible results. Often by the time a solution is in place, the business needs have changed. With all the talk about Agile development methods like SCRUM and Extreme Programming, the question arises as to how these approaches can be used to deliver data warehouse and business intelligence projects faster. This presentation will look at the 12 principles behind the Agile Manifesto and see how they might be applied in the context of a data warehouse project. The goal is to determine a method or methods to get a more rapid (2-4 weeks) delivery of portions of an enterprise data warehouse architecture. Real world examples with metrics will be discussed.

**Agile Data Engineering: Introduction to Data Vault 2.0.** As we move more and more towards the need for everyone to do Agile Data Warehousing, we need a data modeling method that can be agile with us. Data Vault Data Modeling is an agile data modeling technique for designing highly flexible, scalable, and adaptable data structures for enterprise data warehouse repositories. It is a hybrid approach using the best of 3NF and dimensional modeling. It is not a replacement for star schema data marts (and should not be used as such). This approach has been used in projects around the world (Europe, Australia, USA) for over 15 years but is still not widely known or understood. The purpose of this presentation is to provide attendees with an introduction to the components of the Data Vault Data Model, what they are for and how to build them.

**Case Study: Hybrid Data Vault -Data Warehousing in the Real World.** At a former health-care client, we were not able to implement a pure Data Vault 2.0 architecture. Instead, we had to evolve a hybrid solution that uses Type 2 persistent stage tables that we tie together using standard Hub and Link structures along with a Key Map table. While we were able to utilize DV 2.0 concepts such as MD5 hash keys, in order to avoid joins in loading the stage tables we had to come up with a way to resolve the Business Keys further into the process. In addition, we were able to build a BI reporting layer using virtual dimensions that were hybrid type 1 and 2 combined. I will show you our solution with examples of real working code.

**Demystifying Data Warehousing as a Service (DWaaS).** We all know that data warehouses and best practices for them are changing dramatically today. As organisations build new data warehouses and modernize established ones, they are turning to DWaaS in the cloud, in hopes of taking advantage of the performance, concurrency, simplicity, and lower cost of a SaaS solution or simply to reduce their data center footprint (and the maintenance that goes with that). But what is a DWaaS really? How is it different from traditional on-premises data warehousing? How can a cloud-native data warehouse help enable your agile data warehouse practice?

# PRESENTATIONS



Innovations  
Day 1 - 8.30 am

**STEVE HOBERMAN**  
Steve Hoberman &  
Associates

Steve Hoberman has trained more than 10,000 people in data modeling since 1992. Steve is known for his entertaining and interactive teaching style (watch out for flying candy!).

Organisations around the globe have brought Steve in to teach the Data Modeling Master Class as it is recognised as the most comprehensive of its kind. Steve is the author of nine books on data modeling, including the bestseller Data Modeling Made Simple. Steve's frequent data modeling consulting assignments include review data models using his Data Model Scorecard® technique.

He is the founder of the Design Challenges group and recipient of the Data Administration Management Association (DAMA) International Professional Achievement Award.

## DATA MODELING FUNDAMENTALS

Assuming no prior knowledge of data modeling, we start off with an exercise that will illustrate why data models are essential to understanding business processes and business requirements.

Next, we will explain data modeling concepts and terminology, and provide you with a set of questions you can ask to quickly and precisely identify entities (including both weak and strong entities), data elements (including keys), and relationships (including subtyping).

We will discuss the three different levels of modeling (conceptual, logical, and physical), and for each explain both relational and dimensional mindsets.

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the data governance company



Tools  
Day 1 - 8.30 am

**MATTHEW SMITH**  
MarkLogic

With studies in Information Systems and Strategic Foresight, Matt Smith has over 20 years' experience designing and developing software solutions for the enterprise. Matt has filled internal and external delivery, consulting and advisor roles across almost all industries and public sector organisations.

As the chief technologist for MarkLogic in Australia, Matt assists large finance, media, government and defence customers to meet their data integration and analysis challenges.

To satisfy the demand for his services, Matt travels frequently around the region and worldwide, finding time to taste the local beer, wine and whisky.

## DOCUMENT DATA MODELING

Learn how to use the document data model to fast track your ability break down data silos. We'll explore how to achieve this through the lens of a common use case: delivering a 360-degree view of entities so you can more effectively run your business operationally and see your business analytically.

In this session we'll discuss:

- Hierarchical document data modeling best practices for JSON and XML.
- Using the envelope pattern.
- Modeling entities with documents.
- Modeling relationships with RDF triples.

You'll see these concepts in action through a demonstration of a framework that enables you to quickly load, curate, and access data using an Operational Data Hub.

Case Study  
Day 1 - 8.30 am



**ANDY PEYTON**  
IP Australia

## USING DMBOK TO BOOTSTRAP YOUR DATAMANAGEMENT

Over the past 15 years there has been a move away from the concept of "corporate" data management to a model based on "project" data management. Project data management has usually meant doing only what was necessary to get a project over-the-line without a lot of consideration of the longer-term needs of the enterprise. This model is driven by project cost, resources, and deliverable timeframes.

The result of this change has been a loss of standardised processes to ensure that data is managed as a corporate asset. We may now have situations where projects have done their own thing and there is no centralised data dictionary explaining our data and perhaps little knowledge of where our data actually is. We may also have unknown data quality even though this drives customer interactions and business insight. Recreating corporate data management and governance processes is a daunting task in a new world where there is little desire for expensive documentation and bureaucratic processes. However, the DAMA Body of Knowledge gives us a way of:

- Explaining the data management and governance problem to senior management,
- prioritising problem areas,
- identifying roles and accountability,
- progressively building capability,
- re-using existing material, and
- approaching the problem using industry standards.

This presentation will give an overview of the DAMA Body of Knowledge (DMBoK) and how to kick-start a lean corporate data management and governance process. Lessons learnt from going through this process at IP Australia will be used as examples.

Andy Peyton is a Senior Solutions Architect for IP Australia. IP Australia is responsible for the issue and management of Patents, Trade Marks, Designs, and Plant Breeder Rights within Australia. Andy has worked for many years in data management roles for different government departments such as Centrelink, Defence, Health & Ageing, Defence Housing Authority, Immigration, and the ATO.

He is currently leading the team in the design and development of the new database environment that will underpin IPA's systems for the next 20 years. As a result he has a keen understanding of the need for designing databases that meet the long-term needs of government departments where "applications come and go, but the data goes on forever".

Andy has a Bachelor of Science degree from the University of Sydney and a Master of Management Economics from the University of NSW. He is a senior member of the Australian Computer Society and a member of DAMA Canberra.

## data modeling zone Asia Pacific

## ORGANISATIONS ATTENDING IN 2018



**Case Study**  
Day 1 - 10.30 am



**GRAHAM WITT**  
Ajilon

**Innovations**  
Day 1 - 10.30 am



**LLOYD ROBINSON**  
Robinson Ryan

Graham has over 30 years of experience in delivering effective data solutions to the government, transportation, finance and utility sectors. He has specialist expertise in business requirements, architectures, information management, user interface design, data modeling, database design, data quality and business rules.

He has spoken at conferences in Australia, the US and UK and delivered data modeling and business rules training in Australia, Canada and the US. He has written two textbooks published by Morgan Kaufmann: "Data Modeling Essentials" (with Graeme Simson) and "Writing Effective Business Rules", and has written two series of articles for the Business Rule Community ([www.brcommunity.com](http://www.brcommunity.com)).

### BUSINESS FRIENDLY DATA MODELS

If a system is to support an enterprise's business information requirements, a necessary part of the design process is effective review of the design by appropriate business stakeholders. For such review to be effective, the design documentation provided to those stakeholders ("the business model") must:

- be understandable
- be complete, i.e. depict all information in which business stakeholders are interested
- not depict any information in which business stakeholders have no interest ("noise") which distracts or confuses reviewers, reducing review effectiveness.

This presentation provides an overview of the Dynamic Data Modeling toolkit, with which experienced data modelers can effectively support projects delivering BI or operational data resources with a significant time-variant component.

Lloyd is a principal of Robinson Ryan, a contributor to great successes and participant in extraordinary failures. He is a highly experienced data management expert and has been teaching for almost three decades in university and professional training organisations. In addition, Lloyd has practical experience in:

- Leading enterprise architecture teams in multiple initiatives up to \$300M
- Consulting in data management in organisations as a data specialist
- Leadership as CIO of a team of 500 IT professionals

Lloyd is certified at the mastery level in both the Data Management Profession (CDMP) and Business Intelligence (CBIP).

### FORMAL LANGUAGE THEORY: DATA MODELING WITH MACHINE LEARNING IN THE REAL WORLD:

#### *Solving the Data Modeling Conundrum with Linguistics*

Only when a data model is well-defined does it become a model about which true and false things may be said. By looking to the Linguistic area of Semantics, we have developed a new approach to data modeling that uses a precise model of the business that specifies fully

those relations between expressions of the business language.

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**JOSHUA YU**  
Neo4j

Joshua has almost 20 years of experiences in IT, and has been working as architect, designer, and developer in various industries like finance, manufacturing, retail and government. Joshua has a passion in anything about data, esp. data mining and visualization. He is also very active in children's education in STEM related subjects esp. programming. Joshua now lives in Sydney, Australia.

## INTRODUCTION TO GRAPH MODELING AND GRAPH DATABASES

**Tools:** Day 1 - 10.30 am

We start off with an overview to graph modeling, followed by an explanation of graph databases and their roles within our organizations. Learn the top use cases for graph databases, along with best practices in graph modeling.

## NEO4J GRAPH DATABASE HANDS-ON WORKSHOP

**Tools:** Day 2 - 3 pm

Bring your laptop and practice building graph databases with Neo4j. After covering installation and configuration, we will build a graph database and use the Cypher graph query language to manipulate and access data. Learn how to traverse graphs via relationships, aggregate results, leverage the meta graph model, apply indexes and constraints, and import data.



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Day 1 - 1.15 am

**KEYNOTE SPEAKER**  
**JOHN ALEXANDER**

## THE MAP MAKERS GUIDE TO THE GALAXY

### *A Top-down View of Enterprise Architecture*

The idea that developing an Enterprise Architecture (EA) for an organisation can provide predictive capabilities with respect to IT investment and deployment, as well as business efficiencies and effectiveness, is one of the core ambitions of the EA disciplines. However, because EA traditionally looks almost exclusively at the internals of an organisation, it is almost bound to be limited or even to fail in its predictive ambitions. Why is this so?

The key lies in understanding that all organisations environments, and their internals need to support and make them thrive in that environment. Thus if something in their environment changes, their internals will be impacted and need to change accordingly to deal with the environmental change.

Most EA's are like a full-body MRI scan – they provide lots of information about the internals, but tell us nothing about the environment the organisation has to operate in. Crucially, they can't tell us that if something in the environment changes, which parts of the internals are going to be affected and how.

What we need is for EA practitioners to take a step back and map the organisation AND its operating environment, linking the various external parts of that environment to the internal bits which need to deal with it – we need a high-level map of the environment, as well as the details provided by the MRI scan. We need to be able to say that if this external thing changes, then this or these internal things will need to change. We need to also be able to say in which way this internal thing needs to change.

This presentation will try to provide a quick overview of how to arrive at that high-level map before driving down into all the details we traditionally include in an EA. As change is a constant factor, this will make EA's both more cost effective as a planning tool, and more valuable to all organisations.

Day 1 - 1:15 am

KEYNOTE SPEAKER



**SAM BENEDICT**  
erwin

Sam Benedict is a Data Warehousing and Data Governance professional who draws from his extensive experience in Data Warehousing and BI. He has helped strategic customers understand the value of the Erwin EDGE Platform in Accelerating and Automating delivery, and Creating Sustainable Data Governance Programs – the integration industry’s first and most connected enterprise solution to the ‘Source-to-Target’ mapping and Data Governance problem.

With more than 25 years in technology, Sam is a strategic planner around enterprise data strategy and system development lifecycle improvement. Sam has worked in Telecommunications, Healthcare, and Manufacturing industries, globally and understand the challenges faced by IT resources, as well as business stakeholders in the information management space.

### BEYOND THE MOBEL

Today’s regulatory requirements across a multitude of industries require a detailed understanding of how our models are physicalized and modified through the System Development Life Cycle. Today’s discussion will focus on the importance of knowing the full path of your data, from inception to consumption, providing the capability to “tell the story” from start to finish. We will discuss the many avenues to achieve this end-to-end capability and other benefits associated with best practices in data management ‘beyond the model’.



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Tools:  
Day 1 - 3 pm



**DR GRAEME PORT**  
FACTIL

Dr. Graeme Port has been an innovator and leader in data architecture and enterprise software product development for over 30 years.

Graeme was co-founder, head of engineering and CTO at ManageSoft, which built market-leading products in business intelligence, application development and application deployment. Graeme has consulted extensively in data architecture in government and commercial sectors. Graeme received his PhD from the University of Melbourne in the field of Logic Programming.

### FACT-BASED DATA INTEGRATION: MATCHING AND TRANSFORMATION

Fact-Based Modeling is an effective approach for defining the structure and semantics of stored data. Data integration involves combining data residing in disparate sources into meaningful and valuable information. Data integration faces two key challenges:

1. matching records from different sources corresponding to the same real-world entity, and
2. transforming the associated data so that the combined information is meaningful.

We show that a fact-based integration language can be tightly coupled with a data matching system and compiled to data transformation code for data integration.

We will apply this approach in two scenarios:

- a Data Vault data warehouse environment, and
- a project for sharing information nationally for child safety

We will show that automated integration code generation from a fact-based integration language reduces cost, contains fewer errors, and supports change and agility. Our approach can be used to generate code directly, or as a conceptual front-end to traditional data management tools.



**JOHN GILES**  
Country Endeavours

John Giles is an independent consultant, with a passion for seeing ideas taken to fruition. For 2 decades his focus has been on enterprise information modeling, enterprise information integration and enterprise information architecture. Over the last few years he has also gained international recognition in Data Vault modeling.

John is primarily a practitioner, having been responsible for leading teams to successful delivery of IT solutions across a wide diversity of industries. However, his pragmatic focus is backed up by a solid appreciation of the underlying theory, having presented internationally, and published widely, including in his book titled *The Nimble Elephant: Agile delivery of data models using a pattern-based approach*.

## INTRODUCTION TO DATA VAULT: A DATA PRACTITIONER'S VIEW

### Case Study: Day 1 - 3pm

This session is intended to be a primer for those who haven't yet encountered the wonderful world of Data Vault. Topics covered are to include:

1. The "sales pitch" for Data Vault
  - The why, where, when of using Data Vault
  - Positioning Data Vault with regard to Inmon and Kimball data warehouses
2. The Data Vault building blocks: Hubs, Links & Satellites
3. There's more than Raw Data Vault
  - Business Data Vault
    - Why the distinction is important
    - Point In Time Tables
    - Bridge tables
  - Virtual data marts
  - Operational Data Vault
4. Common data modeling challenges, including
  - Transactions
  - Reference tables
  - Duplicates and Same-As-Links
  - Hierarchical links
  - The Flip-Flop effect
5. Data Vault 2.0
6. Where to next?

## THE DEVIL'S IN THE DETAILS, OR THE DEVIL IS THE DETAILS

### Case Study: Day 2 - 3pm

*Why, when & how top-down, big-picture modeling may save the day (and also improve your Data Vault journey)*

Models are only ever a means to an end. Sometimes car designs are modeled in clay –you can't drive the models, but you can get valuable feedback on the visual impression of the proposed concept.

Sometimes scale models of aircraft are tested in wind tunnels –you can't fly them, but you can evaluate their aerodynamics. Models are cheaper to build than the real things, and serious consideration of design alternatives can be debated without breaking the bank.

Likewise, data models are only ever a means to an end, but if they drive open discussion on design alternatives, and contribute to better solutions that meet real business needs, they will be highly valued. And, unlike clay models of cars or scale models of aircraft, given the right environment, you might be able to press what I call the "big green

Go button" and turn the data model into a real software deliverable.

Data modeling used to be seen by many as a strictly technical exercise, aimed at physical implementation. Increasingly people are referring to information modeling, and that's all about the business. So here's the warning –if data modelers can't or won't engage with the business

to deliver value in a timely manner, at best they will be undervalued, and at worst shunned.

There are times big-picture top-down models may not only be sufficient for today's urgent needs, but in some cases are preferable to a more detailed, rigorous bottom-up model. We will:

- Look at why, when and where top-down model scan be developed to deliver business value, then, more controversially, challenge questionable reasons given as to why some data modelers may still be developing bottom-up, detailed models.
- Briefly touch on how top-down models can be developed in a timely manner, then introduce some free, "open" resources to help you.
- Note some of the many ways a top-down model can be changed from worthless shelf-ware into applied business value, then dive into one such application – Data Vault design.

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*Asia Pacific*

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DATA AUTOMAGICATION



## MAKING SENSE OF SCHEMA-ON-READ

**Tools:** Day 2 - 8.30 am

With the increasing prevalence of semi-structured data from IoT devices, web logs, and other sources, data architects and modelers have to learn how to interpret and project data from things like JSON.

While the concept of loading data without upfront modeling is appealing to many, ultimately, in order to make sense of the data and use it to drive business value, we have to turn that schema-on-read data into a real schema! That means data modeling!

I will walk through both simple and complex JSON documents, decompose them, then turn them into a representative data model using Oracle SQL Developer Data Modeler. I will show you how they might look using both traditional 3NF and data vault styles of modeling. In this session you will:

1. See what a JSON document looks like.
2. Understand how to read it.
3. Learn how to convert it to a standard data model.

## GETTING IT RIGHT

**Keynote:** Day 2 - 1.15 pm

Yes, we still need data models and data modelers! A good data model, done right the first time, can save you time and money. We have all seen the charts on the increasing cost of finding a mistake/bug/error late in a software development cycle. Would you like to reduce, or even eliminate, your risk of finding one of those errors late in the game? Of course you would! Who wouldn't?

Nobody plans to miss a requirement or make a bad design decision (well nobody sane anyway. No data modeler or database designer worth their salt wants to leave a model incomplete or incorrect. So what can you do to minimize the risk and improve the quality and usefulness of your models and designs?

I will give you my top tips for a simple, repeatable process for reviewing your data models that I have been using for over 20 years. It is one that even a non-modeler could follow. I will share my checklist of what to look for and what to ask the data modeler (or yourself to make sure you get the best possible data model while avoiding analysis paralysis.

Selvaraju Murugesan is currently working as Senior Manager, Innovation and Data Analytics at Transport Canberra and City Service Directorate, ACT Government.

He received his PhD degree in computational mathematics from LaTrobe University, Melbourne in 2014. His interests are in data management practices and data analytics. He is a committee member of DAMA Canberra Chapter looking after membership and marketing.

## MODERN DATA MANAGEMENT PRACTICES

Many organisations are investing heavily to maximise the value of their data assets. Data analytics is touted as a golden key to unlock the potential of the organisational data assets. Organisations tend to invest in new technology tools (data lake, cloud services), data analytics platforms (machine learning, AI), and people capabilities. These initiatives tend to focus on data science projects that have high value and impact.

Digital transformation and artificial intelligence are now emphasising the need to make it easy for people to deal with organisations by making services to be simple, clear and fast. Many consulting firms cited that many data initiatives fail as the underlying data does not have the quality and integrity to support automated processes. Now, organisations are realising that having consistent data management practices across the organisation, and with external stakeholders, is essential to improving the level of trust in the data.

Thus data management practices need to evolve to build greater organisational trust when sharing data. This talk covers:

- Why is data sharing so important?
- What are the principles that sharing should be based upon?
- What is the appropriate data governance framework?
- How to implement data management principles?
- How technology platforms can be leveraged for implementation?

**data modeling zone**  
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Case Study  
Day 2 - 8.30 am

**DR JONATHAN GRAY**  
Catapult BI

Dr Jon Gray has 30 years of computing experience in industry and academia both in Australia and the UK. Jon's research interests have encompassed parallel and distributed systems design, database technologies, information modelling, software engineering methods and tools, organisational capability development, and business process improvement.

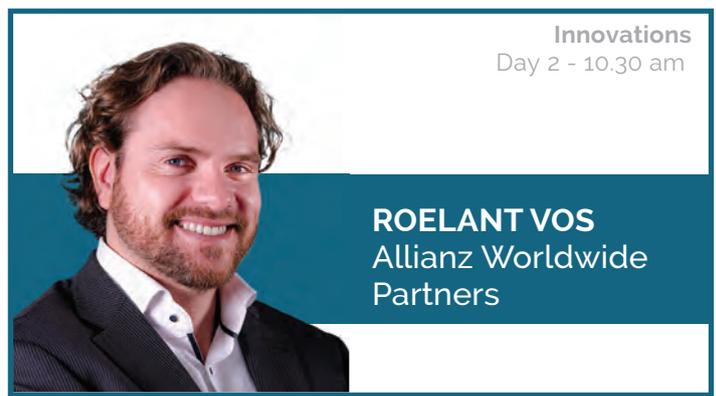
From 2006-2013, Jon led a research initiative for National ICT Australia Limited (NICTA) in Canberra focused on software methods and tools for the improvement of business processes in government.

From 2013-2017, Jon ran Performance Assurance, a spin-out company from NICTA, specialising in predictive modeling and risk management. Jon is currently working as CEO & Chief Data Scientist for Catapult BI, a Dialog Group company.

**DATA CATALOGS MAY BE THE NEW BLACK, BUT METADATA IS NOT CABBAGE**

The rise of big data, and the soaring growth in information holdings, is out-stripping the ability of many organisations to manage this information. Self-service analytics has the potential to streamline processes and boost analytics capability in many businesses, but you can't do analytics on data you can't find. Gartner have reported that 80% of Data Lake projects do not make it into production. Improved metadata management practice and the deployment of an enterprise data catalog are now recognised as the key improvements needed to leverage value from big data and analytics investments. However, simply purchasing metadata tools is not sufficient, a carefully thought-out business approach and deployment methodology is required in order to successfully improve organisational metadata practice.

Dr Gray has extensive experience in the fields of data modelling and metadata management extending over a period of more than 30 years. Recently, he has worked with several clients in government agencies, assisting them on their data catalog and metadata improvement journey. In this presentation, Dr Gray describes an approach to the metadata improvement journey that has been instantiated with these clients. The traps, pitfalls, and obstacles to be avoided, as well as the tips to success are discussed. Lessons learned from these journeys will be shared with the conference audience.



Innovations  
Day 2 - 10.30 am

**ROELANT VOS**  
Allianz Worldwide  
Partners

During the day I work as General Manager - Enterprise Data Management (which roughly covers Data Governance, BI and Analytics) and at night I try to improve the status quo in the data community through open source development and framework collaboration to contribute to fast, flexible, future proof, easy to manage enterprise wide-data management

To me, working with data is endlessly varied and finding more ways to further simplify ('automate') data management continues to be a source of inspiration. Because of its automation potential and clearly defined patterns I have been a fan of Data Vault and similar hybrid approaches for Data Warehouse design for almost 15 years. I have written many articles around this theme and also delivery my own Data Vault implementation and automation classroom training.

**LAYERING BUSINESS LOGIC ON YOUR DATA VAULT**

The Data Vault methodology provides elegant concepts to develop your Data Warehouse -the various required Data Warehouse mechanics are organised in a way that allows for a flexible solution. By and large, it is fair to say the pattern archetypes such as Hubs, Links and Satellites are sufficiently understood by the broader community.

Indeed, there have been many great examples of how metadata (model) driven approaches simplify delivery. These approaches, both open-source and commercial, leverage the templates and insert the required information from repositories or domain-specific languages.

When this foundation is in place and a baseline for rapid development, deterministic refactoring and deployment has been established, the dynamic shifts to aligning the data with the business'expectations.

This session discusses the concepts that are available to apply business logic on a Data Vault (and where to do this), as well as examples how this can be implemented,including:

- Separation of concerns approach for Data Vault
- What is already in place 'out of the box'?
- Different approaches towards capturing transformation business logic/metadata
- Incorporating business logic in ETL generation
- Abstracting levels of design; how far can we go?
- Tips to keep your solution manageable
- The role of 'time' in delivering outputs the business can work with



**Tools**  
Day 2 - 10.30 am

**PETER AVENANT**  
Varigence



**Innovations**  
Day 2 - 3 pm

**GRAHAM WITT**  
Ajilon

Peter Avenant is a Director at Varigence specialising in Data Warehouse automation with BimlFlex. Reduce the complexity of your data projects by using a single comprehensive solution instead of multiple tools. Accelerated data modeling enables automated metadata-driven data integration to maximise productivity and get solutions up and running quickly.

### DATA MODELING WITH MACHINE LEARNING IN THE REAL WORLD

From Insurance and Sales to Health Care all data models are different, but what if we combine source to target data models around the world together with AI and Machine Learning. During this session, we demonstrate how we have used the latest trends in how machine learning and artificial intelligence enable better data modeling. We will also cover the complexities involved when organizations are trying to implement a data warehouse with changing resources and how to overcome them with assisted model-driven

### DYNAMIC DATA MODELLING

Most data models are static, in that they represent the properties of, and relationships between, business entities at a point in time. However, for a system to properly function over time, its data model must be designed to support data update in response to changes in the real world. Dynamic Data Modelling covers not only static data structures but update policies, by considering issues such as:

- What real-world changes must be captured in the database?
- What are the requirements for preserving a record of the historic state of the attributes and relationships of any entity?
- Why must changes in attributes and changes in relationships be dealt with differently?
- Do we also need to record changes in our state of knowledge of the real world?
- What aspects of the time dimension need to be taken into account?

This presentation provides an overview of the Dynamic Data Modeling toolkit, with which experienced data modelers can effectively support projects delivering BI or operational data resources with a significant time-variant component.

## data modeling zone *Asia Pacific*

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<b>There is a 10% discount for DAMA members.</b>	

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erwin remains the most trusted name in data modeling while expanding its expertise to include solutions for data intelligence and governance. The erwin EDGE delivers an "enterprise data governance experience" that accelerates the transformation of enterprise data into accurate, actionable insights. As a role-based platform with integrated data preparation, enterprise modeling and data governance, IT and business stakeholders can collaborate in discovering, understanding and unlocking the value of data both at rest and in motion. The result is an accurate, high-quality and real-time data pipeline that fuels regulatory compliance, innovation and transformation.'

Visit us at [www.erwin.com](http://www.erwin.com) or contact us at [apj@erwin.com](mailto:apj@erwin.com) for more information.



Robinson Ryan is a specialist data management consultancy that helps organisations protect and enhance the value of their data assets. Their focus is on uplifting data management capabilities by offering consulting and training.

Their independence enables them to speak frankly without any 'hidden agendas'. Robinson Ryan consultants are pragmatic and understand the 'real world'. They are outcome focussed and engage fully with business and IT to avoid the 'remote expert' syndrome that can undermine important data management exercises.

Find out more at [robinsonryan.com](http://robinsonryan.com).



Snowflake started with a clear vision: Make modern data warehousing effective, affordable and accessible to all data users. Snowflake enables the data-driven enterprise with instant elasticity, secure data sharing and per-second pricing, across multiple clouds. Because traditional on-premises and cloud solutions struggle at this, Snowflake developed a new product with a new built-for-the-cloud architecture that combines the power of data warehousing, the flexibility of big data platforms and the elasticity of the cloud at a fraction of the cost of traditional solutions. Snowflake: Your data, no limits.

Find out more at [snowflake.com](http://snowflake.com).



BimlFlex helps organisations leverage automation to deliver data faster. Reduce the complexity of your data projects by using a single comprehensive solution instead of multiple tools. Accelerated data modelling enables automated metadata-driven data integration to maximise productivity and get solutions up and running quickly.

Find out more at [varigence.com](http://varigence.com).



We are committed to helping organisations with their complex data integration challenges. Factil is a software and consulting business providing tools to model your unique business information and data integration requirements. Our platform automatically generates schema and data transform code across the gamut of database and data warehouse environments.

Find out more at [factil.io](http://factil.io)



## DAMA: THE ASSOCIATION FOR DATA PROFESSIONALS

DAMA Australia represents the Australian Chapters of DAMA International, the non-profit industry association dedicated to advancing the profession of data management. Our chapters in Perth, Adelaide, Brisbane, Canberra, Melbourne and Sydney provide a forum for members to exchange information, ideas and experiences.

We help data management practitioners become more knowledgeable and skilled in their profession and stay up-to-date with the latest developments in managing data.

We help everyone gain an understanding of data and the role it plays in their organisation.

Find out more at [www.dama.org.au](http://www.dama.org.au).