

# Dimensional Modelling

Learn via: **Classroom / Virtual Classroom / Online**

Duration: **3 Day**

<https://bilginc.com/en/training/dimensional-modelling-654-training/>

## **Overview**

Dimensional modelling is an integral part of any BI (Business Intelligence) system and can be used within the data warehouse and/or the data marts. This 3 day course assumes no prior knowledge of dimensional modelling. It starts by discussing what a data warehouse is, how they are designed and the part that dimensional modelling plays.

The vitally important process of requirement gathering is covered and delegates are shown how to:

- Collect the analytical requirements of the business users
- Create a logical model of these requirements
- Create a star schema from those requirements

The relational and dimensional models are compared and contrasted, with particular reference to the current Kimball/Inmon debate.

The course then looks in great detail at dimensional modelling itself and finally ends with a summary of possible BI architectures.

## **Target Audience**

This course is aimed at people who work in the BI area. It is suitable for business analysts who need to understand the analytical requirements and turn those requirements into a model. It is also suitable for the IT professional who will turn those models into working OLAP (On-Line Analytical Processing) structures. Please note, delegates who have previously attended QADMBIS - Developing A Modern Business Intelligence System should not attend this course.

## **Prerequisites**

There are no specific pre-requisites for this course but delegates who have previously attended QADMBIS - 'Developing A Modern Business Intelligence System' should not attend this course due to the duplication of content.

## **What You Will Learn**

At the end of this course you will be able to:

- Understand the pros and cons of relational and dimensional modelling
- Design dimensional models from analytical business requirements
- Produce effective star schemas that deliver the analytical capabilities that the business requires

## **Outline**

- Introduction to designing dimensional data warehouses
- Gathering analytical requirements
- Measures and dimensions
- Logical (Sun) modelling
- Physical modelling - the star schema
- Facts and dimensions
- Attributes and hierarchies
- Time dimensions
- Synonym dimensions
- Surrogate keys
- Additive, semi-additive and non-additive measures
- Degenerate dimensions
- Slowly changing dimensions

- Bridge tables
- Mini dimensions
- Hot-swappable dimensions
- Multi-valued dimensions
- Parent child dimensions
- Bitmap dimensions
- Ragged hierarchies
- Unbalanced hierarchies
- Step dimensions
- First and last analysis
- Optimizing fact table performance
- Indexing in star schema
- Aggregation
- MOLAP
- HOLAP
- ROLAP