

**BI Solution Proposal**

**Mercedes-Benz Dealers**

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**CONTENTS**

Overview ………………………………………………..……………………………………………………………………………… 2

Business Background ………………………………………………………………………………………………….… 2

Benefit ……………………………………………………………………………………………………………………….… 2

Requirements ………………………………………………………………………………………………………………………… 3

Business Requirements ……………………………………………………………………………………………….. 3

Technical Requirements ………………………………………………………………………………………………. 3

Solution Sketch ……………………………………………………………………………………………………………….……… 4

Source Tables structure ……………………………………………………………………………………………….. 4

Summarize Data Plan …………………………………………………………………………………………………… 6

**1. OVERWIEW**

For improve the quality of service and meet all modern requirements, it was decided to create Data Warehouse (DWH). The main purpose of creating a Data Warehouse is multidimensional analysis of dealer network. Data Warehouse will contain all data from all dealerships of the world.

**1.1 BUSINESS BACKGROUND**

Mercedes-Benz has an extensive dealer network throughout the world. Mercedes-Benz Cars has once again posted an annual record in 2012 as well as the highest December sales to date. Over the past twelve months, 1,423,835 customers chose a vehicle of the brands Mercedes-Benz, smart and Maybach. The previous year's sales volumes were thus exceeded by 4.5% or 60,901 units. Also Mercedes-Benz achieved a new sales record in 2012. From January through December, a total of 1,320,097 vehicles of the core brand were sold.

Overview of Sales by Mercedes-Benz Cars:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Dec. 2012** | **Change in %** | **As of Dec. 2012** | **Change in %** |
| Mercedes-Benz | 125,234 | +0.7 | 1,320,097 | +4.7 |
| smart | 7,355 | -4.0 | 103,738 | +1.7 |
| Mercedes-Benz Cars | 132,589 | +0.4 | 1,423,835 | +4.5 |

**1.2 BENEFIT**

* Identification of priority areas for the development of dealer network.
* Obtaining sales statistics by type of vehicle and price segment.
* Obtaining sales trends for various lengths of time.
* Prediction of periods of growth/decline in sales activity.

**2. REQUIREMENTS**

**2.1 BUSINESS REQUIREMENTS**

|  |  |
| --- | --- |
| № | Business Requirements |
| 1 | Mercedes-Benz concern provides for the sale only a passenger cars |
| 2 | Each dealer may sell any type of passenger vehicle regardless of region |
| 3 | At the end of each day should be calculated statistics about sales for all type of vehicle for each dealer. |
| 4 | Dealers buy cars from the manufacturer for one-time 100% payment |

**2.2 TECHICAL REQUIREMENTS**

|  |  |
| --- | --- |
| № | Technical Requirements |
| 1 | DWH must provide Multilanguage |
| 2 | Time granularity must be one-day (24 hours) |
| 3 | Reserve copy must be at the end of each day |

**3. Solution Sketch**

**3.1 SOURCE TABLES STRUCTURE**

Sources data include \*.xlsx (Excel) files which have the form shown below.

 dealers.xlsx

|  |  |  |
| --- | --- | --- |
| Name | Type | Description |
| DEALER\_ID | NUMBER(22) | Dealer unique code |
| DEALER\_COUNTRY | VARCHAR2(30) | Dealer country location |
| DEALER\_CITY | VARCHAR2(30) | Dealer city location |
| DEALER\_ADDRESS | VARCHAR2(30) | Dealer address in city |

 vehicle.xlsx

|  |  |  |
| --- | --- | --- |
| Name | Type | Description |
| VEHICLE\_ID | NUMBER(22) | Vehicle unique code |
| VEHICLE\_TYPE | VARCHAR2(20) | Vehicle type (SUV, Van, Cabriolet, etc.) |
| VEHICLE\_DESC | VARCHAR2(200) | Additional information about vehicle |
| VEHICLE\_PRICE | NUMBER(7,2) | Unit price |

 locations.xlsx

|  |  |  |
| --- | --- | --- |
| Name | Type | Description |
| GEO\_COUNTRY\_ID | NUMBER(22) | Country unique code |
| GEO\_COUNTRY\_CODE\_A2 | VARCHAR2(30) | Country code in A2 format |
| GEO\_COUNTRY\_CODE\_A3 | VARCHAR2(30) | Country code in A3 format |
| GEO\_CONTRY\_DESC | VARCHAR2(200) | Description of the country |
| GEO\_REGION\_ID | NUMBER(22) | Region unique code |
| GEO\_REGION\_CODE | VARCHAR2(30) | Region code |
| GEO\_REGION\_DESC | VARCHAR2(200) | Description of the region |
| GEO\_PART\_ID | NUMBER(22) | Part unique code |
| GEO\_PART\_CODE | VARCHAR2(30) | Part code |
| GEO\_PART\_DESC | VARCHAR2(200) | Description of the part |

**3.2 SUMMARIZE DATA PLAN**

Summarize based on use of the data in the data marts. In DWH will used Summaries for Period of Time Data. At the end of the day will calculate statistic about sales for each type of vehicle for each dealer.









Locations

Times

Dealers

Vehicles

**CLEANSING**

Summaries for Period of Time Data

FCT\_TRANSACTIONS

Cleansing