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 **Loader**

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Gold Business Intelligence
Gold Data Platform



**SSAS
MAESTRO**
by Microsoft

Alberto Ferrari

alberto.ferrari@sqlbi.com

twitter @FerrariAlberto

Power BI in Action

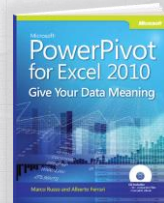
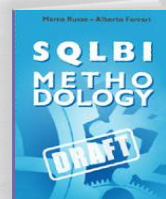
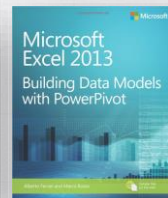
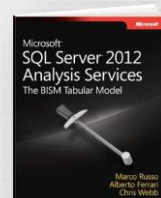


Who's Speaking?

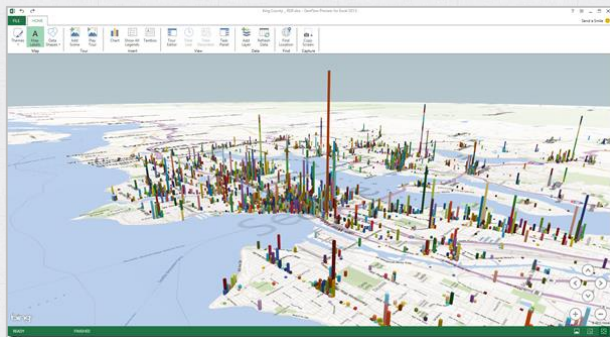
- BI Expert and Consultant
- Founder of www.sqlbi.com
 - Problem Solving
 - Complex Project Assistance
 - Data Warehouse Assessments and Development
 - Courses, Trainings and Workshops
- Book Writer
- Microsoft Business Intelligence Partner



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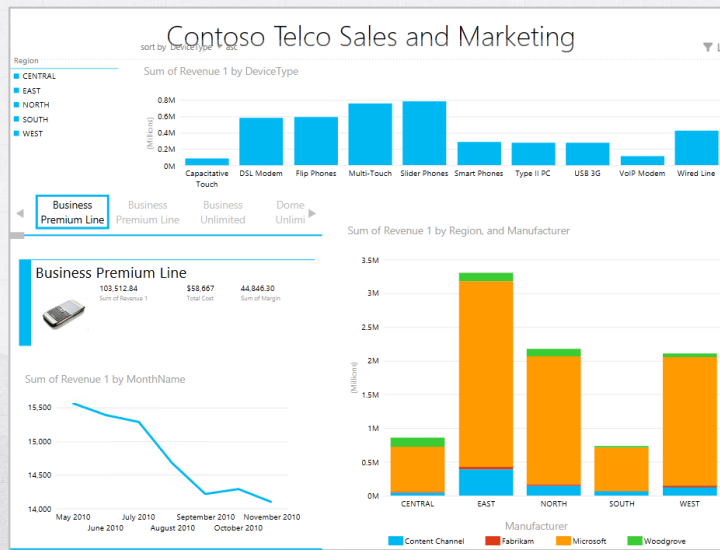
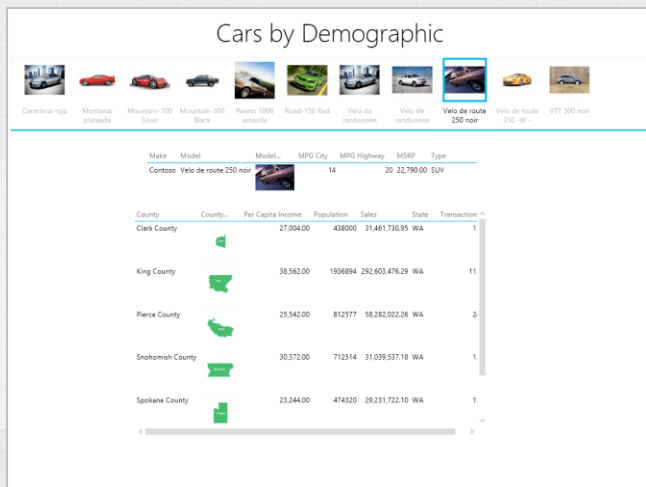
Power BI for Office 365



BI Demo - AdventureWorks Demo.xlsx Administrator ?

FILE OPEN IN EXCEL DATA FIND

1	A	B	C	D	E	F	G	H	I
2									
3									
4									
5									
6									
7									
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27									



Power BI for Office 365

- Complete self-service BI solution
- Not a single product
- Excel and Power Pivot are the core



Products and Services

- Power Query
- Power Pivot
- Power Map
- Power View
- Power BI Sites
- Data Management Gateway
- Power BI App (Windows Store)
- Q & A - Natural Language Query

The self-service ETL integrated in Excel

Power Query in Action



What is Power Query

- Excel Add-In for Excel 2010 and Excel 2013
 - Free download
- Features:
 - Data Discovery
 - Data Transformation
- Hidden feature:
 - The “M” Language

Power Query Elements

- Connectors
- Transformations (UI)
- The “M” Language
- Sharing Queries and Functions

Connectors

This screenshot shows the 'From File' connector menu. It includes options for Excel, CSV, XML, Text, and Folder, each with a brief description of the data source.

- From File**
- From Database**
- From Other Sources**
- From Table**

- From Excel**
Import data from a Microsoft Excel workbook.
- From CSV**
Import data from a comma-separated value file.
- From XML**
Import data from an XML file.
- From Text**
Import data from a text file.
- From Folder**
Import metadata and links about files in a folder.

This screenshot shows the 'From Database' connector menu. It lists various database sources including SQL Server, Windows Azure SQL, Access, Oracle, IBM DB2, MySQL, PostgreSQL, Sybase, and Teradata, each with a brief description.

- From Database**
- From Other Sources**
- From Table**
- Merge Append**

- From SQL Server Database**
Import data from a Microsoft SQL Server database.
- From Windows Azure SQL Database**
Import data from a Microsoft Windows Azure SQL database.
- From Access Database**
Import data from a Microsoft Access database.
- From Oracle Database**
Import data from an Oracle database.
- From IBM DB2 Database**
Import data from a DB2 database.
- From MySQL Database**
Import data from a MySQL database.
- From PostgreSQL Database**
Import data from a PostgreSQL database.
- From Sybase Database**
Import data from a Sybase database.
- From Teradata Database**
Import data from a Teradata database.

This screenshot shows the 'From Other Sources' connector menu. It lists various non-database data sources including SharePoint, OData, Windows Azure Marketplace, Hadoop, Windows Azure HDInsight, Windows Azure Blob Storage, Windows Azure Table Storage, Active Directory, Microsoft Exchange, Facebook, and a Blank Query, each with a brief description.

- From Other Sources**
- From Table**
- Merge Append**
- Workbooks**

- From SharePoint List**
Import data from a Microsoft SharePoint site.
- From OData Feed**
Import data from an OData feed.
- From Windows Azure Marketplace**
Import data from the Microsoft Windows Azure Marketplace.
- From Hadoop File (HDFS)**
Import data from a Hadoop Distributed File System.
- From Windows Azure HDInsight**
Import data from Microsoft Windows Azure HDInsight.
- From Windows Azure Blob Storage**
Import data from Microsoft Windows Azure Blob Storage.
- From Windows Azure Table Storage**
Import data from Microsoft Windows Azure Table Storage.
- From Active Directory**
Import data from Active Directory.
- From Microsoft Exchange**
Import data from Microsoft Exchange.
- From Facebook**
Import data from Facebook.
- Blank Query**
Write a query from scratch.

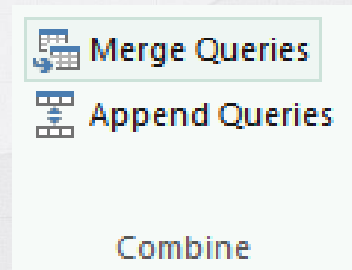
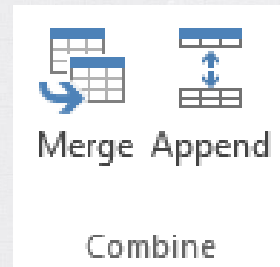
Combine – Table Operations

- Merge

- Like a LEFT JOIN
- Only include matching Rows
= INNER JOIN

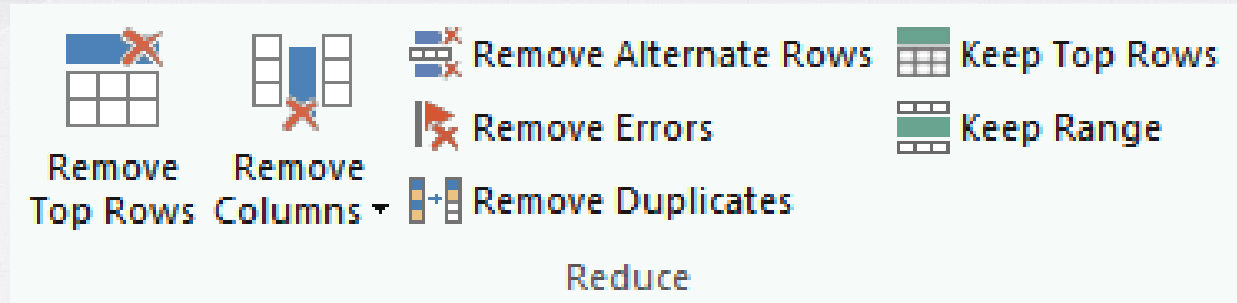
- Append

- Like a UNION
- Matches columns with the same name



Reduce – Filter Rows

- Filters useful to import from reports
- Remove Duplicates – at column level
 - First value found on other columns



Sort – Order by

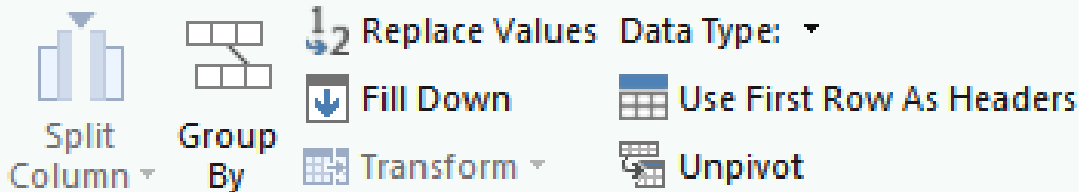
- Applied to one column at a time
- Every step in a query keeps data order
- If undefined, sort order depends on data source

A ↓
Z ↓
Z ↓
A ↓

Sort

Transform

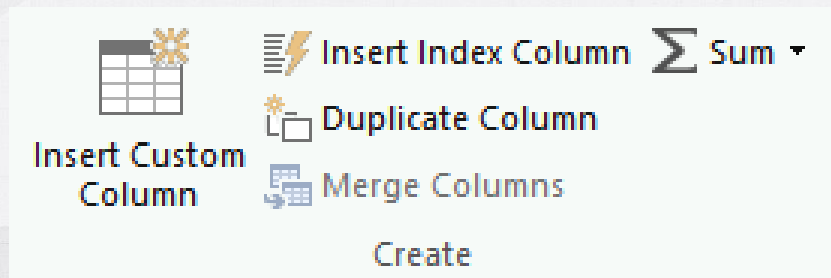
- Data Type: type cast
- Split Column: fixed length or separator
- Unpivot: normalize N column in N rows



Transform

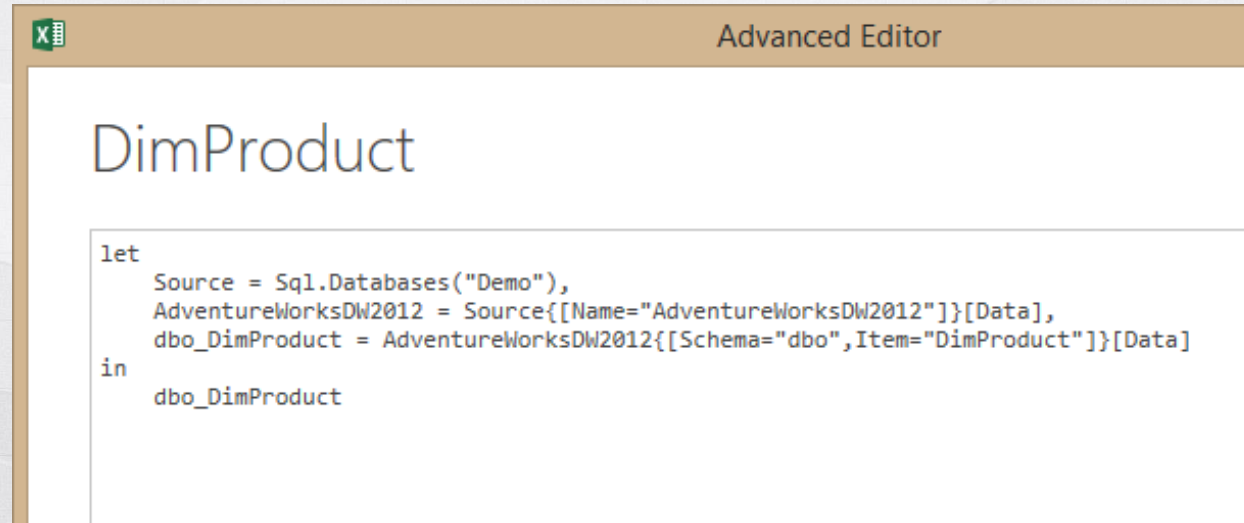
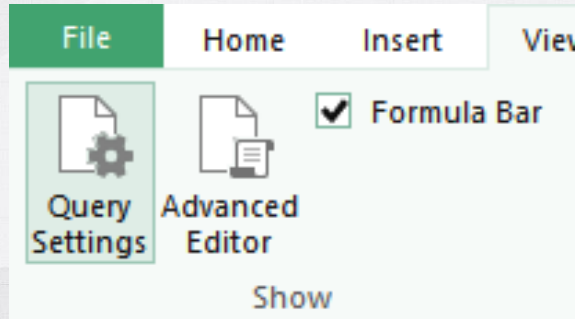
Create – Insert Columns

- Merge Columns – concatenate values with a separator
- Insert Index Column – row number
- Sum/Product – sum or multiply by row



Advanced Editor

- A query is an expression written in “M” language
- Query text can be edited (and copied)



Explore data in an interactive way

Power View in Action



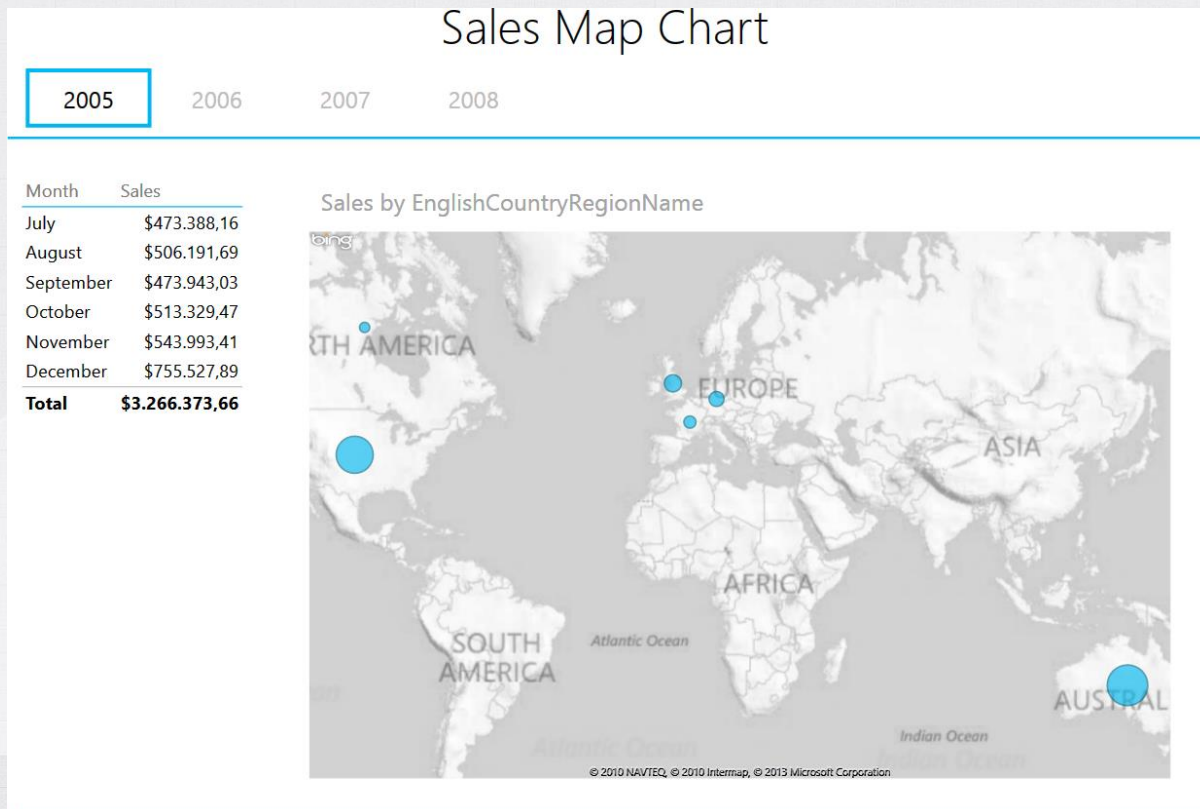
What is Power View

- Interactive Data Exploration
- Data Visualization
- Presentation Experience
- Intuitive Ad-Hoc Reporting
- (Today) it is not:
 - A replacement for Reporting Services
 - A dashboard oriented product
 - But evolution is in progress

Technical Details of Power View

- Currently implemented in Silverlight 5
- Under development:
 - Native Windows 8 Modern UI App
 - Native iOS App
 - HTML5 rendering
 - For any Internet Browser
 - For any other Mobile OS

Power View - Demo



A new feature in Office 365

Power BI Sites



What are Power BI Sites

- Specialization of SharePoint Online site
- Share and Find Excel workbooks
 - With Power View reports embedded in Excel
- Visual and Interactive View Tailored for BI
- Choice for Power View reports rendering:
 - HTML5
 - Silverlight

Other Features

- Featured Reports
- Scheduled Refresh
- Enable Q&A

Refresh Data

- Direct Refresh
 - SQL Azure
 - SQL Server on IaaS
- Scheduled Refresh
 - Data Management Gateway
 - SQL Azure
 - SQL Server on IaaS
 - OData

A new app for Mobile BI

Power BI App



What is Power BI App

- Native Windows 8 Modern UI App
 - Native iOS App will be released later
- Improve display and navigation of Excel and Power View reports
 - Better than HTML5
 - Does not require Silverlight

Native Code

- Completely rebuilt from scratch
 - Not all features and visualizations available
 - Monthly updates improving features

Ask questions, get instant answers with charts and graphs

Q & A Natural Language Query



What is Q&A Feature

- Natural Language Query
- Writing a sentence you get a report as a result
 - English supported at the beginning
 - Other languages will follow
- Report created in Power View
 - Rendering on Power BI Sites and Power BI App

Optimize Model in Power Pivot

- Synonyms
 - Alternative names for tables, columns, and measures
- Hidden objects are ignored
- Normalization is good
- Relationships are meaningful

Current Limitations I

- Hybrid Solutions
 - Excel published on Power BI cannot connect to Analysis Services
 - Hopefully this will change soon!
- You need all data in Power Pivot model
 - Cannot connect to data in other PP workbooks, like SharePoint

Current Limitations II

- Power Query does not refresh data on the cloud
 - Works only on local desktop
 - This will change, but no dates by now

Self-Service BI Solution

- ETL with Power Query
- Data Model in Power Pivot
- Presentation
 - Excel, Power View
- Discovery
 - Q & A

Thank you!

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