

Querying SSAS 2012 Tabular

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pluralsight 
hardcore dev and IT training

Objectives

- Understanding Language Options and Editors
- Querying Tabular With Excel

Language Options ... and Editors

The screenshot displays the SQL Server Data Tools (SSDT) interface. On the left, the 'Model' tree shows a cube structure with measures like 'Sum of Net Profit' and dimensions like 'Product Category'. The main editor area contains two queries: a DAX query and an MDX query. The DAX query is highlighted with a red box and a red arrow pointing to the 'Data Analysis eXpressions (DAX)' label. The MDX query is also highlighted with a red box and a red arrow pointing to the 'MultiDimensional eXpressions (DAX)' label. The Results pane at the bottom shows the output of the MDX query, displaying a table with columns 'Accessories', 'Bikes', and 'Clothing' and their corresponding 'Sum of Net Profit' values.

```
-- #1 DAX --  
EVALUATE  
SUMMARIZE(  
    'Internet Sales',  
    'Product Category'[EnglishProductCategoryName],  
    "Sum of Net Profit", 'Internet Sales'[Sum of Net Profit]  
)  
ORDER BY  
    'Product Category' [EnglishProductCategoryName] ASC
```

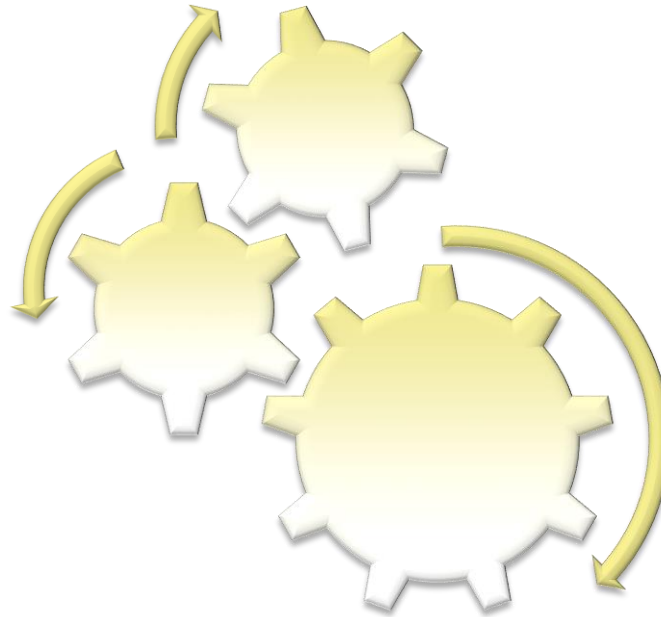
```
-- #2 MDX --  
SELECT  
    [Measures].[Sum of Net Profit] ON COLUMNS,  
    NON EMPTY [Product Category].[EnglishProductCategoryName].[EnglishProductCategoryName] ON ROWS  
FROM  
    [MODEL]
```

	Sum of Net Profit
Accessories	\$366,093.22
Bikes	\$8,532,390.57
Clothing	\$100,736.03

Data Analysis eXpressions (DAX)

MultiDimensional eXpressions (DAX)

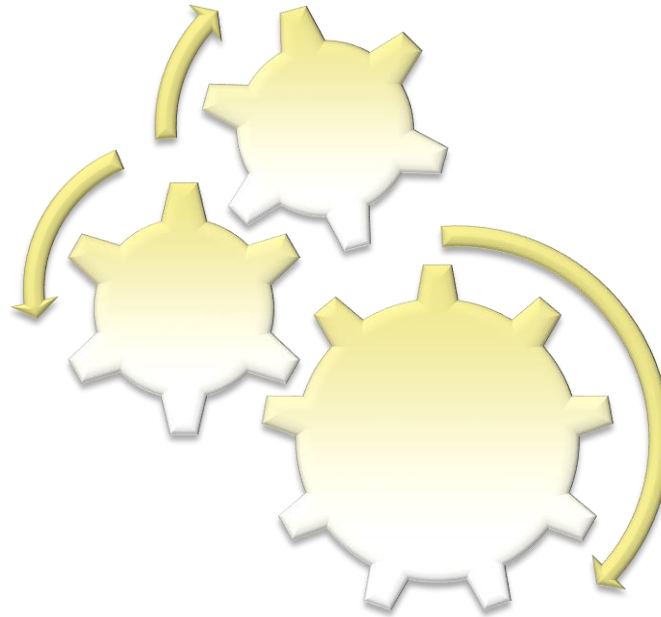
Querying SSAS 2012 Tabular



Let's Take a Look ...

Perform a Basic DAX Query of SSAS Tabular

Querying SSAS 2012 Tabular



Let's Take a Look ...

Perform a Basic MDX Query of SSAS Tabular

Language Options: DAX

Example: Power View

A table is the natural output

Tabular - DAX Query (Simple Table)

2005 2006 **2007** 2008

EnglishCountryRegionName	EnglishProductCategoryName	EnglishProductSubcategoryName	SalesAmount
Australia	Accessories	Bike Racks	\$1,800.00
Australia	Accessories	Bike Stands	\$5,247.00
Australia	Accessories	Bottles and Cages	\$4,635.53
Australia	Accessories	Cleaners	\$739.35
Australia	Accessories	Fenders	\$3,077.20
Australia	Accessories	Helmets	\$18,229.79
Australia	Accessories	Hydration Packs	\$4,399.20
Australia	Accessories	Tires and Tubes	\$19,253.40
Australia	Bikes	Mountain Bikes	\$1,155,979.53
Australia	Bikes	Road Bikes	\$1,435,419.37
Australia	Bikes	Touring Bikes	\$356,390.58
Australia	Clothing	Caps	\$1,519.21

Language Options: MDX

Example: Excel PivotTable

Tabular model via exposed Multidimensional Model

The screenshot shows an Excel spreadsheet with a PivotTable. The PivotTable has 'Row Labels' (Clothing items), 'Column Labels' (Years 2007 and 2008), and 'Grand Total'. The data is as follows:

Row Labels	2007	2008	Grand Total
Clothing			
Jerseys	\$70,370.46	\$102,580.22	\$172,950.68
Gloves	\$14,228.69	\$20,792.01	\$35,020.70
Vests	\$13,017.50	\$22,669.50	\$35,687.00

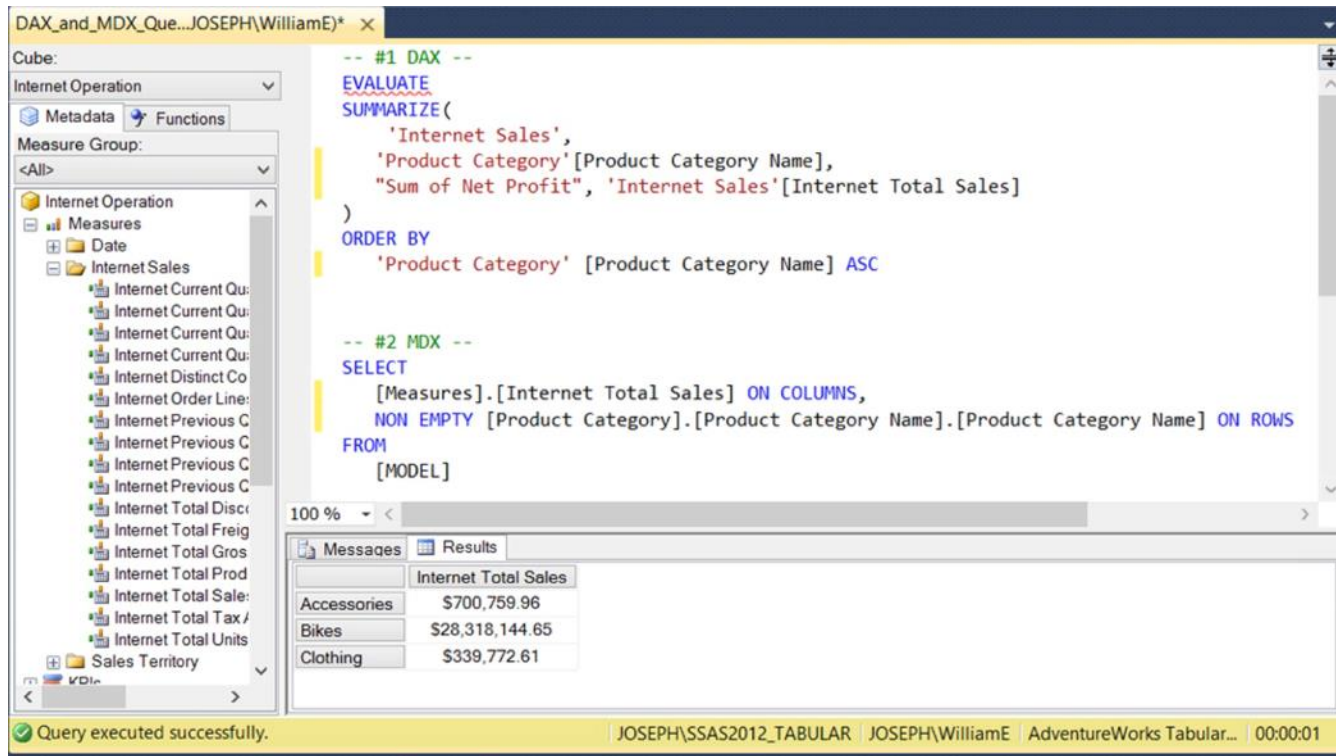
The PivotTable Fields task pane on the right shows the following configuration:

- Filters: (Empty)
- Columns: Calendar
- Rows: Outsourced Clothing It...
- Values: Internet Total Sales

The status bar at the bottom indicates 'READY' and '100%' zoom.

Language Options ... and Editors

Query Editor: SQL Server Management Studio (SSMS)



The screenshot displays the SQL Server Management Studio (SSMS) Query Editor interface. The left pane shows the 'Internet Operation' cube structure, including 'Measures' and 'Sales Territory'. The main editor area contains two queries: a DAX query and an MDX query. The DAX query uses the 'EVALUATE' and 'SUMMARIZE' functions to calculate 'Internet Total Sales' by 'Product Category Name'. The MDX query uses the 'SELECT' statement to retrieve 'Internet Total Sales' from the 'AdventureWorks' cube, ordered by 'Product Category Name'.

```
-- #1 DAX --  
EVALUATE  
SUMMARIZE(  
    'Internet Sales',  
    'Product Category'[Product Category Name],  
    "Sum of Net Profit", 'Internet Sales'[Internet Total Sales]  
)  
ORDER BY  
    'Product Category'[Product Category Name] ASC  
  
-- #2 MDX --  
SELECT  
    [Measures].[Internet Total Sales] ON COLUMNS,  
    NON EMPTY [Product Category].[Product Category Name] ON ROWS  
FROM  
    [MODEL]
```

The bottom pane shows the 'Results' tab with the following data:

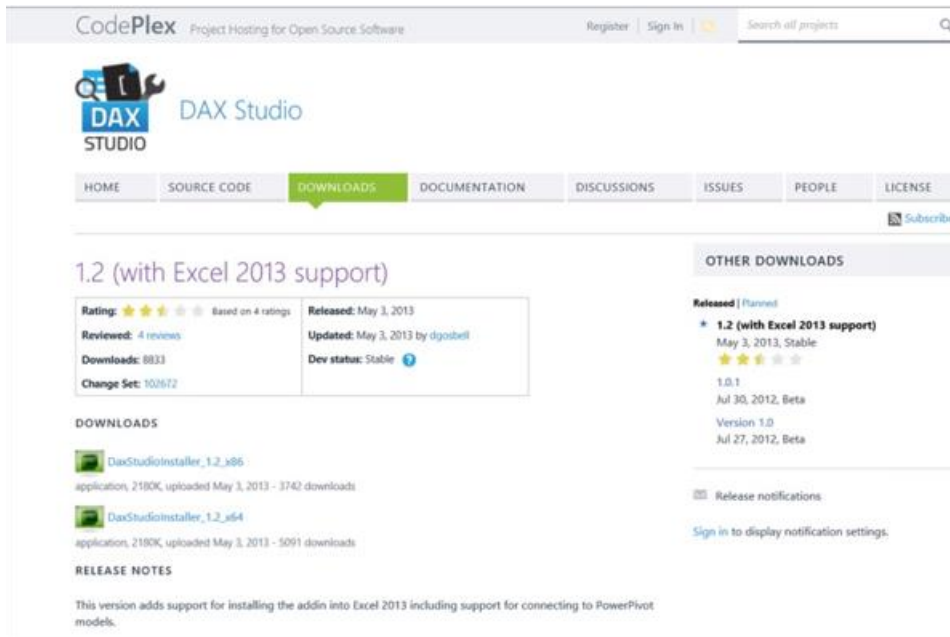
Internet Total Sales	
Accessories	\$700,759.96
Bikes	\$28,318,144.65
Clothing	\$339,772.61

The status bar at the bottom indicates 'Query executed successfully.' and shows the connection details: 'JOSEPH\\SSAS2012_TABULAR | JOSEPH\\WilliamE | AdventureWorks Tabular... | 00:00:01'.

- Can query with both DAX and MDX
- Query Results appear as cellsets

Language Options ... and Editors

Query Editor: DAX Studio



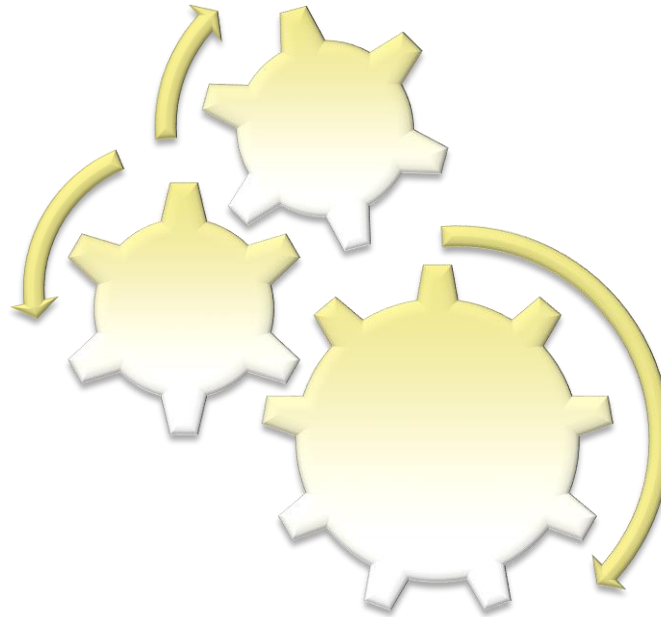
The screenshot shows the CodePlex project page for DAX Studio. The page has a header with the CodePlex logo and navigation links. The main content area displays the project name 'DAX Studio' and a navigation menu. The 'DOWNLOADS' tab is selected, showing the current version '1.2 (with Excel 2013 support)'. This version has a rating of 4 stars based on 4 reviews, 8833 downloads, and was released on May 3, 2013. The 'OTHER DOWNLOADS' section lists previous versions: '1.0.1' (released Jul 30, 2012) and 'Version 1.0' (released Jul 27, 2012). The 'RELEASE NOTES' section at the bottom states: 'This version adds support for installing the addin into Excel 2013 including support for connecting to PowerPivot models.'

- **CodePlex Freeware**

<http://daxstudio.codeplex.com/releases/view/105827>

- **Can be used against both Tabular and PowerPivot Models**
- **Excellent learning environment for DAX**

Querying SSAS 2012 Tabular

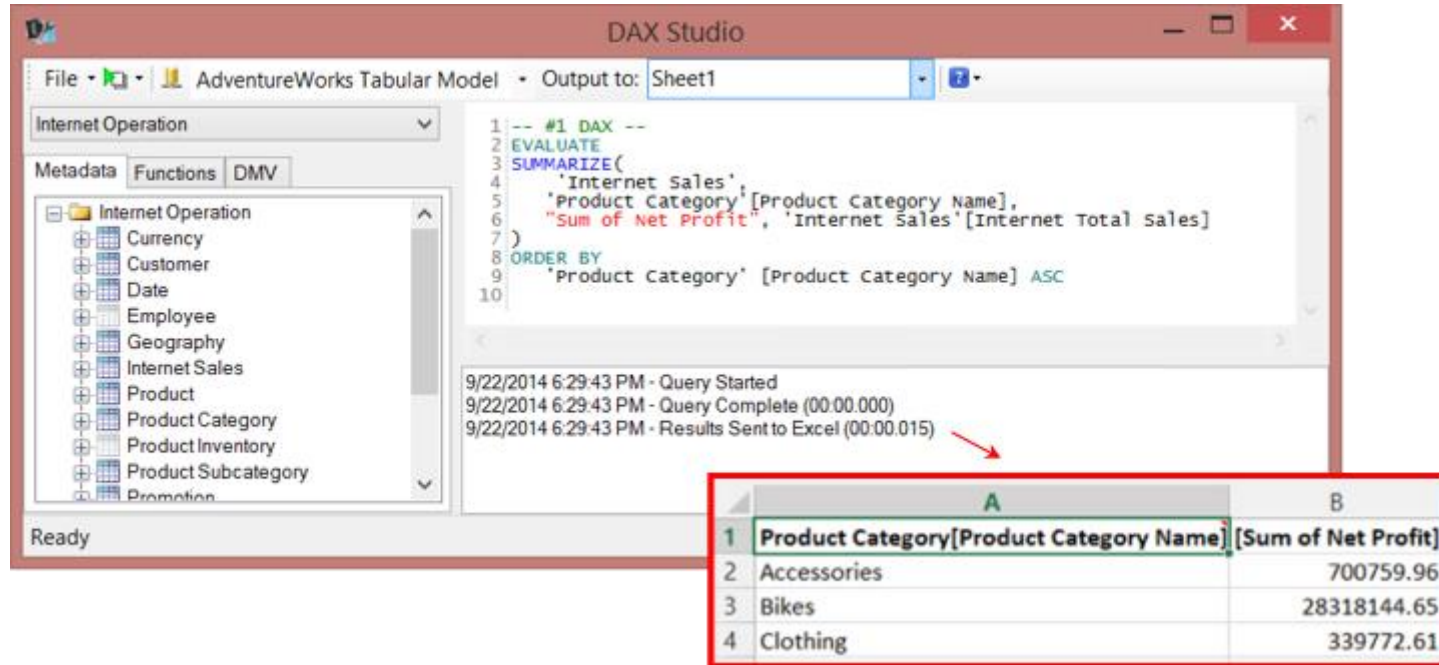


Let's Take a Look ...

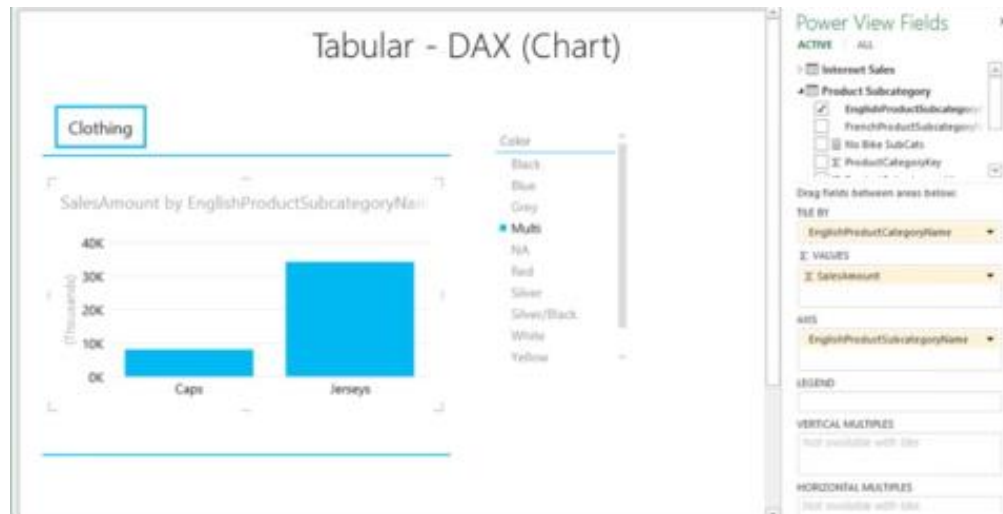
Perform a Basic DAX Query with DAX Studio in Excel

Querying Tabular (DAX) With Excel

- With Excel (DAX Studio)



- With Excel (Power View)



Querying Tabular With Excel

Query a Tabular Model with Excel: Two Most Basic Ways to Launch

- **“Browse” from SQL Server Data Tools (“SSDT”)**
- **From Excel**

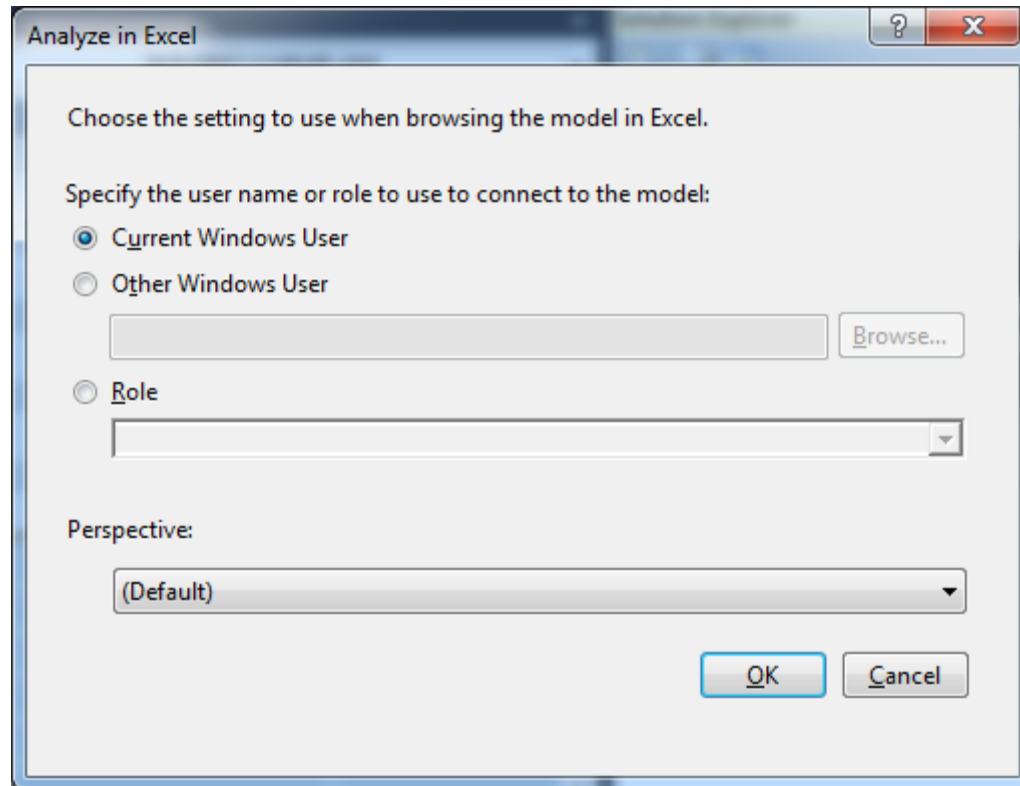
Query ("Browse") a Tabular Model with Excel, from SSDT:

-
- The screenshot shows the Microsoft Visual Studio interface. The title bar reads 'TabularDemo_01_FromScratch_02 - Microsoft Visual Studio'. The menu bar includes File, Edit, View, Project, Build, Debug, Model, Table, Column, Tools, Window, and Help. The 'Model' menu is open, displaying the following options: 'Import From Data Source...', 'Analyze in Excel' (highlighted with a red circle), 'Process', 'Existing Connections...', 'Perspectives', 'Roles...', 'Model View', 'Show Hidden', 'Find Metadata ...', 'Calculate Now', and 'Calculation Options'. In the background, the 'Server Explorer' pane on the left shows a project named 'TabularDemo_01_FromScratch_02' with a table named 'Model.bim'. The table has columns 'OrderDate', 'Amt', 'Freight', and 'CarrierTracking'. The 'Table' pane on the right shows the same table structure.

Querying Tabular With Excel ...

Query (“Browse”) a Tabular Model with Excel, from SSDT:

- Provide Authentication



Querying Tabular With Excel ...

Query (“Browse”) a Tabular Model with Excel, from SSDT:

- Excel Opens
- Automatically creates PivotTable with connection

The screenshot shows an Excel workbook with a PivotTable. The PivotTable Fields task pane is open on the right, showing the data source and field placement. The PivotTable is structured as follows:

Internet Total Sales	Column Labels	2005	2006	2007	2008	
Row Labels						
Australia		\$1,309,047.20	\$2,154,284.88	\$3,033,784.21	\$391,605.50	\$405,324.41
Canada		\$146,829.81	\$621,602.38	\$535,784.46	\$110,451.11	\$88,117.02
France		\$180,571.69	\$514,942.01	\$1,026,324.97	\$105,919.61	\$164,354.44
Germany		\$237,784.99	\$521,230.85	\$1,058,405.73	\$154,522.56	\$141,841.63
United Kingdom		\$291,590.52	\$591,586.85	\$1,298,248.57	\$158,726.17	\$186,843.54
United States		\$1,100,549.45	\$2,126,696.55	\$2,838,512.36	\$419,020.00	\$475,998.79
Grand Total		\$3,266,373.66	\$6,530,343.53	\$9,791,060.30	\$1,340,244.95	\$1,462,479.83

The PivotTable Fields task pane on the right shows the following configuration:

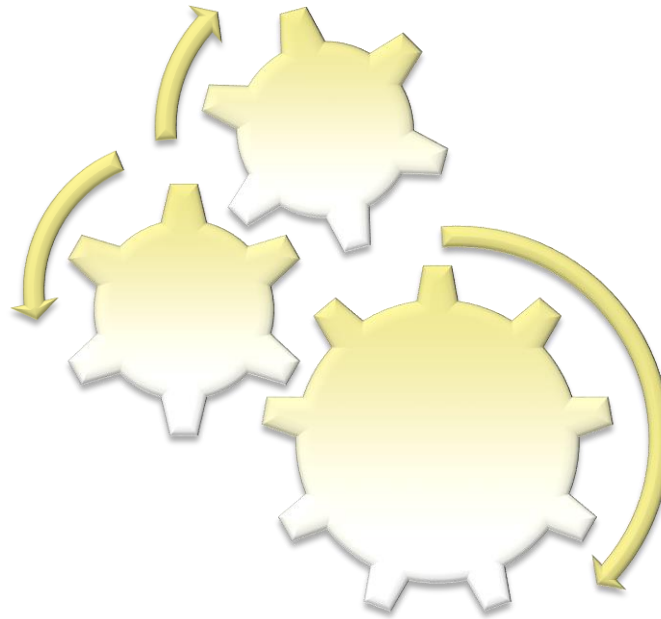
- Internet Total Discount Amount
- Internet Total Freight
- Internet Total Gross Profit
- Internet Total Product Cost
- ☒ Internet Total Sales
- Internet Total Tax Amount
- Internet Total Units

Drag fields between areas below:

- FILTERS: Geography
- COLUMNS: Calendar
- ROWS: (empty)
- VALUES: Internet Total Sales

Defer Layout Update: ☐ UPDATE

Querying Tabular With Excel ...



Let's Take a Look:

Query a Tabular Model with Excel – SSDT Browse ...

Querying Tabular With Excel ...

Query a Tabular Model with Excel, from Excel:

- Connect to the Deployed Database
- Work with PivotTables

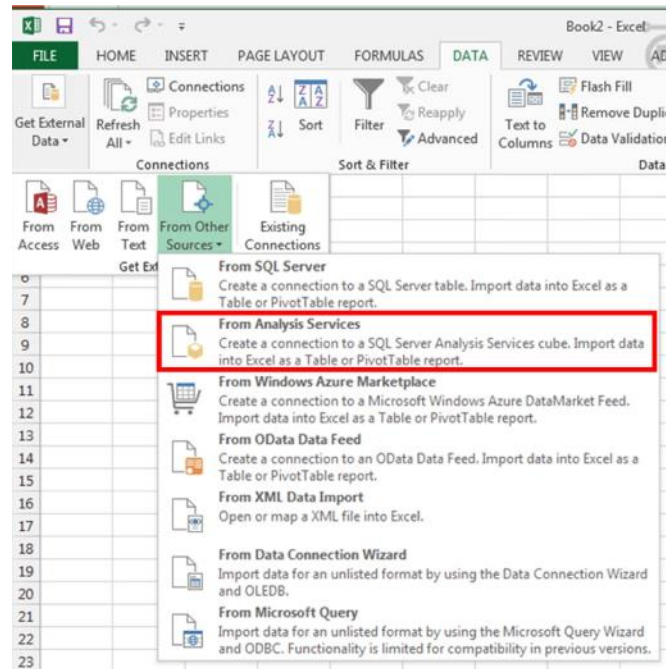
Querying Tabular With Excel - From Excel ...

Connect to the Deployed Database ...

- From new worksheet, Data tab:

From Get External Data → From Other Sources

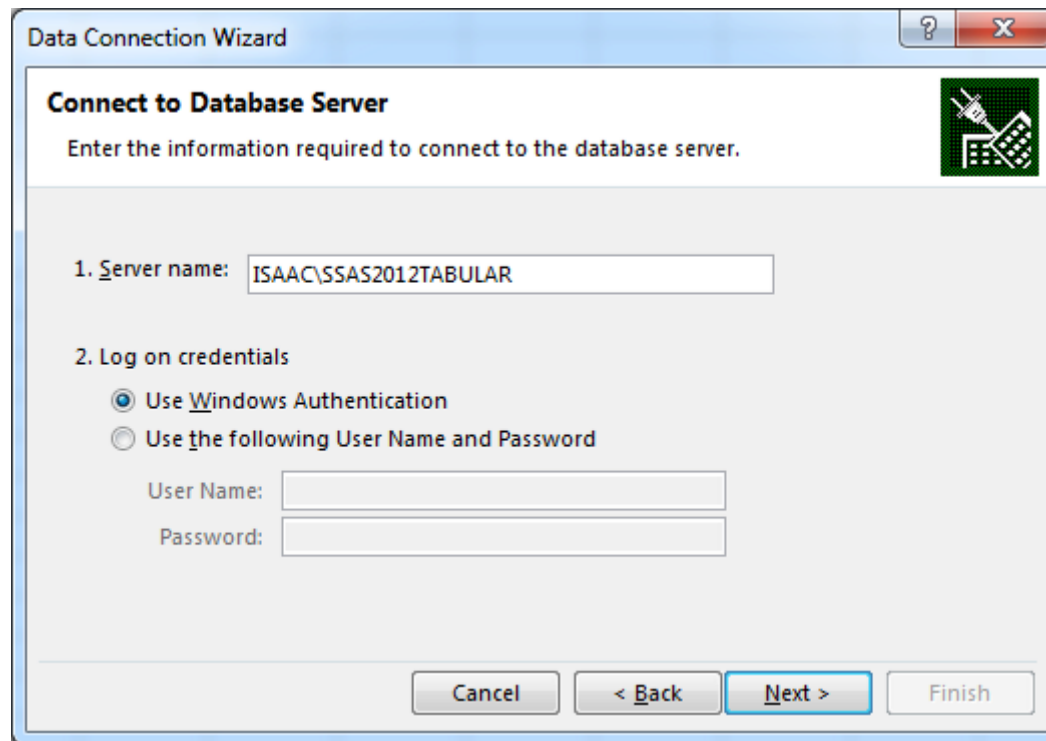
From Other Sources → From Analysis Services



Querying Tabular With Excel - From Excel ...

Connect to the Deployed Database ...

- Connect to Database Server



The image shows a 'Data Connection Wizard' dialog box with a blue title bar and standard Windows window controls. The main title is 'Connect to Database Server' in bold. Below it, a subtitle reads 'Enter the information required to connect to the database server.' To the right of the subtitle is a green icon depicting a database structure. The dialog is divided into two sections. The first section, labeled '1. Server name:', contains a text box with the value 'ISAAC\SSAS2012TABULAR'. The second section, labeled '2. Log on credentials', contains two radio buttons. The first radio button is selected and is labeled 'Use Windows Authentication'. The second radio button is labeled 'Use the following User Name and Password'. Below these radio buttons are two text boxes: 'User Name:' and 'Password:'. At the bottom of the dialog, there are four buttons: 'Cancel', '< Back', 'Next >', and 'Finish'. The 'Next >' button is highlighted with a blue border.

Data Connection Wizard

Connect to Database Server

Enter the information required to connect to the database server.

1. Server name: ISAAC\SSAS2012TABULAR

2. Log on credentials

☒ Use Windows Authentication

☐ Use the following User Name and Password

User Name:

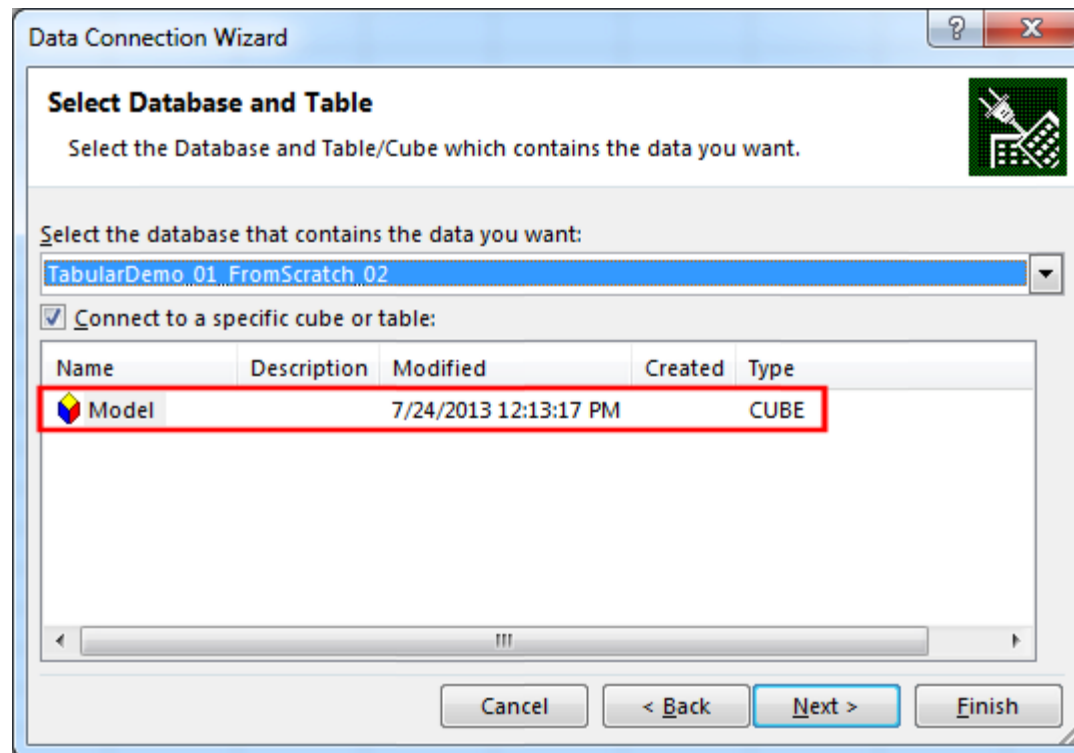
Password:

Cancel < Back Next > Finish

Querying Tabular With Excel - From Excel ...

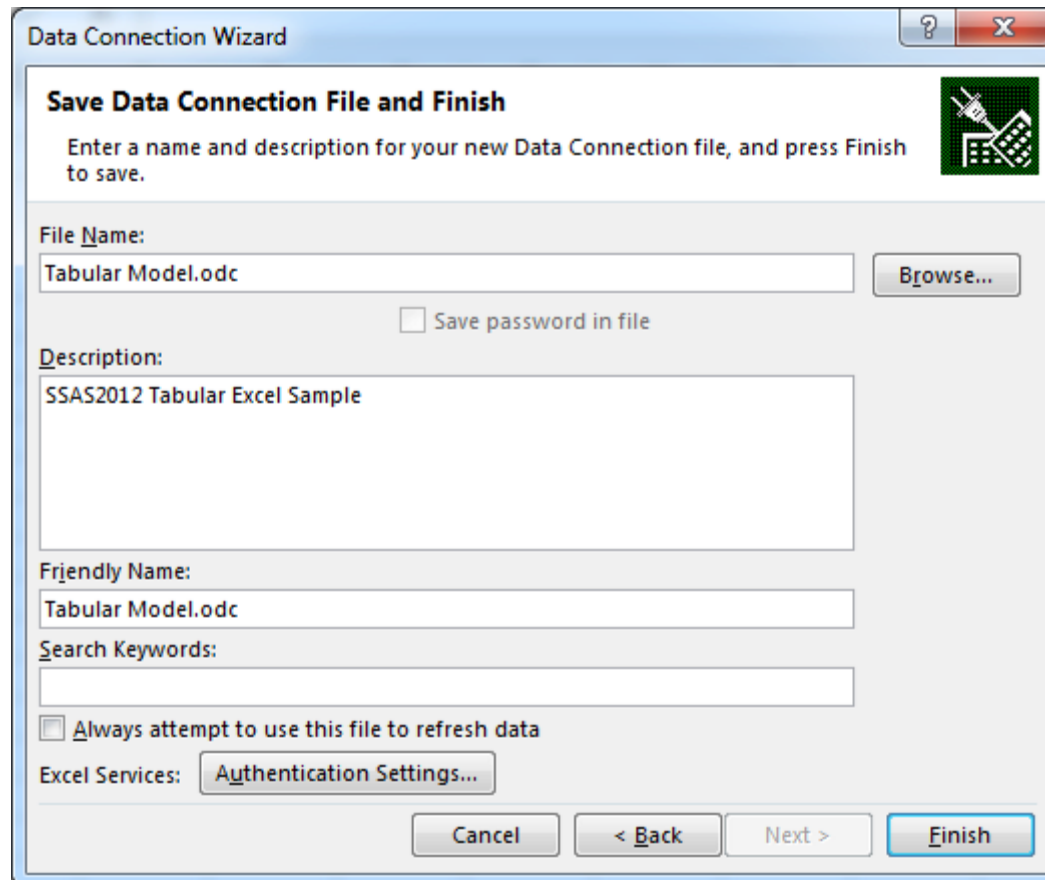
Connect to the Deployed Database ...

- Select Database and Tables



Querying Tabular With Excel - From Excel ...

Save Data Connection File and Finish ...



The image shows a 'Data Connection Wizard' dialog box with a blue title bar and standard Windows window controls. The main area is white with a light gray border. At the top right of the main area is a green icon of a plug connected to a grid. The text 'Save Data Connection File and Finish' is in bold. Below it, instructions say 'Enter a name and description for your new Data Connection file, and press Finish to save.' The 'File Name:' section has a text box containing 'Tabular Model.odc' and a 'Browse...' button. A checkbox 'Save password in file' is unchecked. The 'Description:' section has a text box containing 'SSAS2012 Tabular Excel Sample'. The 'Friendly Name:' section has a text box containing 'Tabular Model.odc'. The 'Search Keywords:' section has an empty text box. A checkbox 'Always attempt to use this file to refresh data' is unchecked. The 'Excel Services:' section has a button 'Authentication Settings...'. At the bottom are four buttons: 'Cancel', '< Back', 'Next >', and 'Finish'.

Data Connection Wizard

Save Data Connection File and Finish

Enter a name and description for your new Data Connection file, and press Finish to save.

File Name:
Tabular Model.odc Browse...

☐ Save password in file

Description:
SSAS2012 Tabular Excel Sample

Friendly Name:
Tabular Model.odc

Search Keywords:

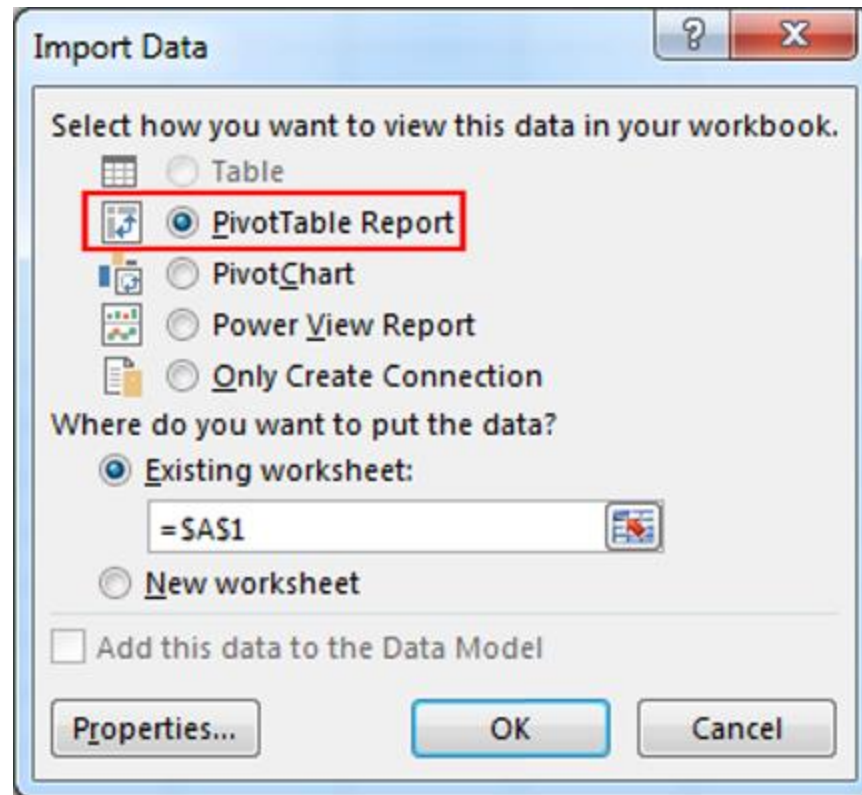
☐ Always attempt to use this file to refresh data

Excel Services: Authentication Settings...

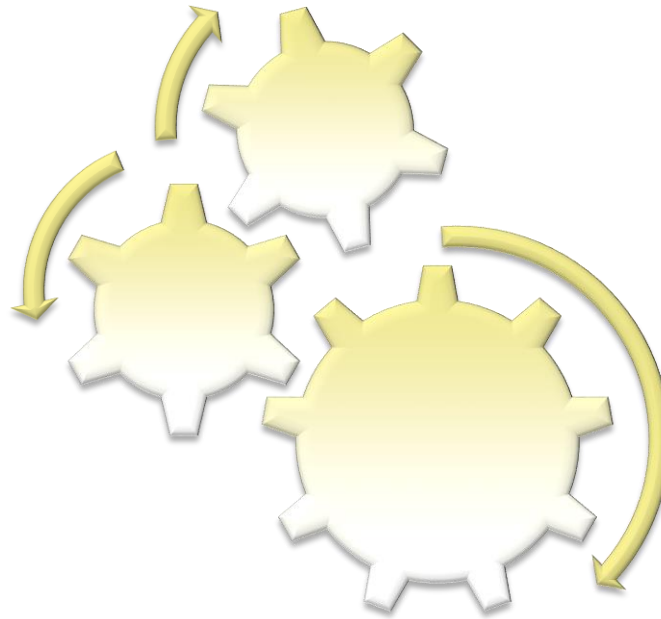
Cancel < Back Next > Finish

Querying Tabular With Excel - From Excel ...

Designate as "PivotTable Report" ...



Querying Tabular With Excel - From Excel ...



Let's Take a Look:

Connect from Freestanding Excel to a Tabular Model ...

Querying Tabular With Excel - From Excel ...

Work with PivotTables

- Create a basic PivotTable
- Employ Slicers
- Sort and Filter Rows and Columns
- Work with Named Sets
- Use Excel Cube Formulas

Querying Tabular With Excel - From Excel ...

Create a Basic PivotTable ...

The screenshot displays an Excel spreadsheet with a PivotTable and the PivotTable Fields task pane. The PivotTable is titled "Internet Total Sales" and is located in the range A1:F23. The task pane is titled "PivotTable Fields" and shows the following fields:

- Product Subcategory (checked)
- Product Subcategory Name (checked)
- Promotion (unchecked)
- DiscountPct (unchecked)
- Max Quantity (unchecked)
- Min Quantity (unchecked)
- Promotion Category (unchecked)

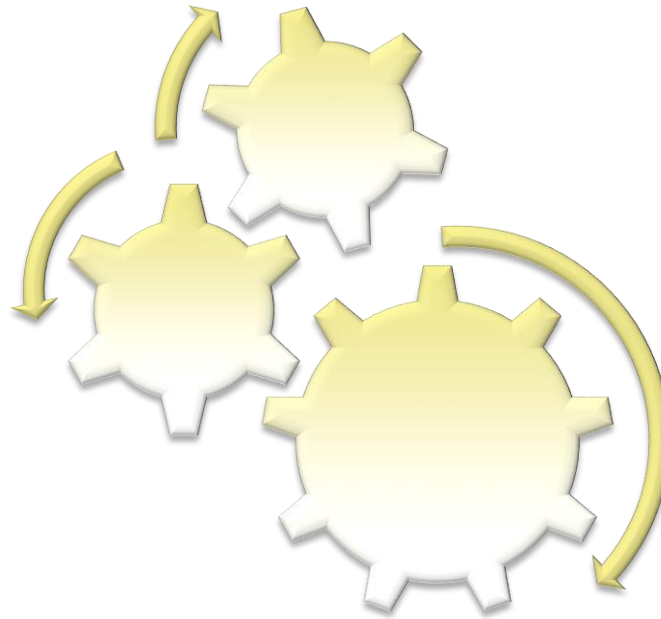
The task pane also shows the following areas:

- FILTERS: Calendar
- ROWS: Product Category Name, Product Subcategory Name
- VALUES: Internet Total Sales

The PivotTable data is as follows:

Row Labels	2005	2006	2007	2008	Grand Total
Accessories			\$293,709.71	\$407,050.25	\$700,759.96
Bike Racks			\$16,440.00	\$22,920.00	\$39,360.00
Bike Stands			\$18,921.00	\$20,670.00	\$39,591.00
Bottles and Cages			\$23,280.27	\$33,517.92	\$56,798.19
Cleaners			\$3,044.85	\$4,173.75	\$7,218.60
Fenders			\$19,408.34	\$27,211.24	\$46,619.58
Helmets			\$92,583.54	\$132,752.06	\$225,335.60
Hydration Packs			\$16,771.95	\$23,535.72	\$40,307.67
Tires and Tubes			\$103,259.76	\$142,269.56	\$245,529.32
Bikes	\$3,266,373.66	\$6,530,343.53	\$9,359,102.62	\$9,162,324.85	\$28,318,144.65
Mountain Bikes	\$585,973.27	\$1,562,456.76	\$3,989,638.48	\$3,814,691.06	\$9,952,759.56
Road Bikes	\$2,680,400.39	\$4,967,886.77	\$3,952,029.21	\$2,920,267.67	\$14,520,584.04
Touring Bikes			\$1,417,434.93	\$2,427,366.12	\$3,844,801.05
Clothing			\$138,247.97	\$201,524.64	\$339,772.61
Caps			\$7,956.15	\$11,731.95	\$19,688.10
Gloves			\$14,228.69	\$20,792.01	\$35,020.70
Jerseys			\$70,370.46	\$102,580.22	\$172,950.68
Shorts			\$30,445.65	\$40,874.16	\$71,319.81
Socks			\$2,229.52	\$2,876.80	\$5,106.32
Vests			\$13,017.50	\$22,669.50	\$35,687.00
Grand Total	\$3,266,373.66	\$6,530,343.53	\$9,791,060.30	\$9,770,899.74	\$29,358,677.22

Querying Tabular With Excel - From Excel ...



Let's Take a Look:

Create Basic PivotTable – with the Following Steps ...

Querying Tabular With Excel - From Excel ...

Create a Basic PivotTable ...

ADD:

TO:

Internet Sales.Internet Total Sales

Values

Date.Calendar → Year (Hierarchy)

Columns

Product Category.Product Category Name

Rows

Product Subcategory.Product Subcategory Name

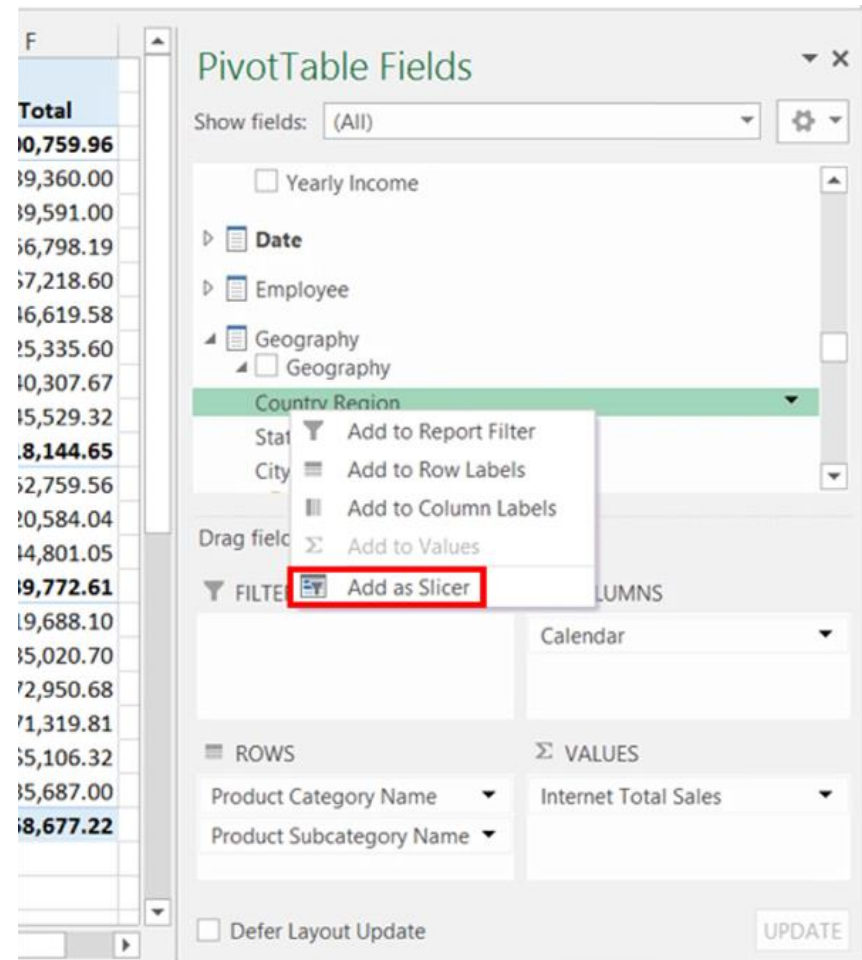
Rows

Querying Tabular With Excel - From Excel ...

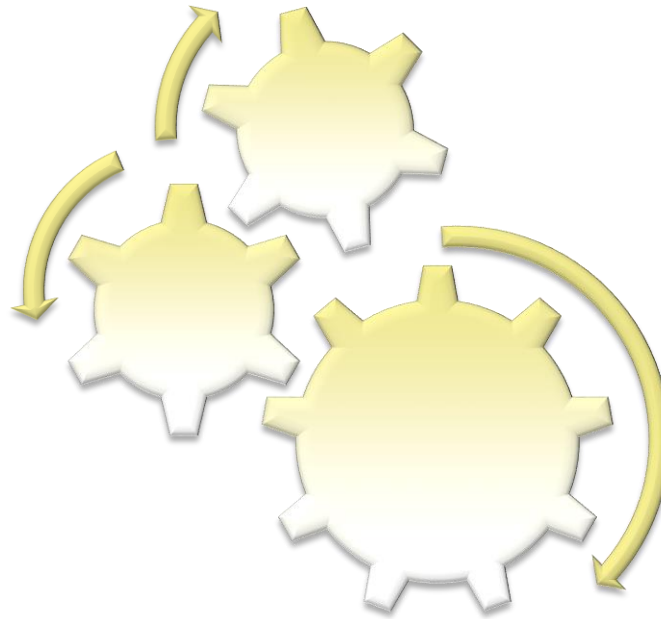
Employ Slicers ...

TO SLICERS:

- Geography.Country Region Name
- Geography.State Province Name



Querying Tabular With Excel - From Excel ...



Let's Take a Look:

Employ Slicers ...

Querying Tabular With Excel - From Excel ...

Sort and Filter Rows and Columns

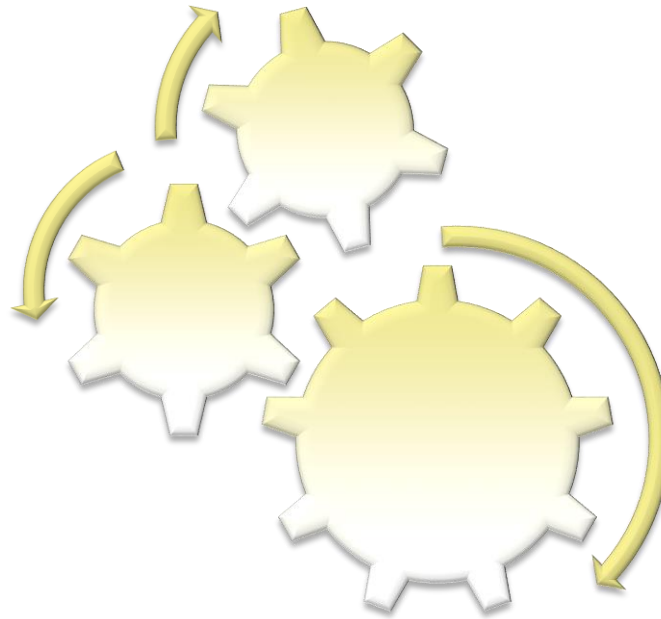
The screenshot displays an Excel PivotTable titled "Internet Total Sales" with the following data:

Country Region	2006	2007	2008	Grand Total
Australia	\$293,709.71	\$407,050.25	\$700,759.96	
Canada	\$16,440.00	\$22,920.00	\$39,360.00	
United Kingdom	\$18,921.00	\$20,111.24	\$39,032.24	
United States	\$23,280.27	\$33,044.85	\$56,325.12	
Other	\$3,044.85	\$4,194.08	\$7,238.93	
Grand Total	\$3,266,373.66	\$6,530,343.53	\$9,791,060.30	\$9,777,777.49

The context menu is open, showing the following options:

- Sort A to Z
- Sort Z to A
- More Sort Options...
- Sort Smallest to Largest
- Sort Largest to Smallest
- More Sort Options...

Querying Tabular With Excel - From Excel ...



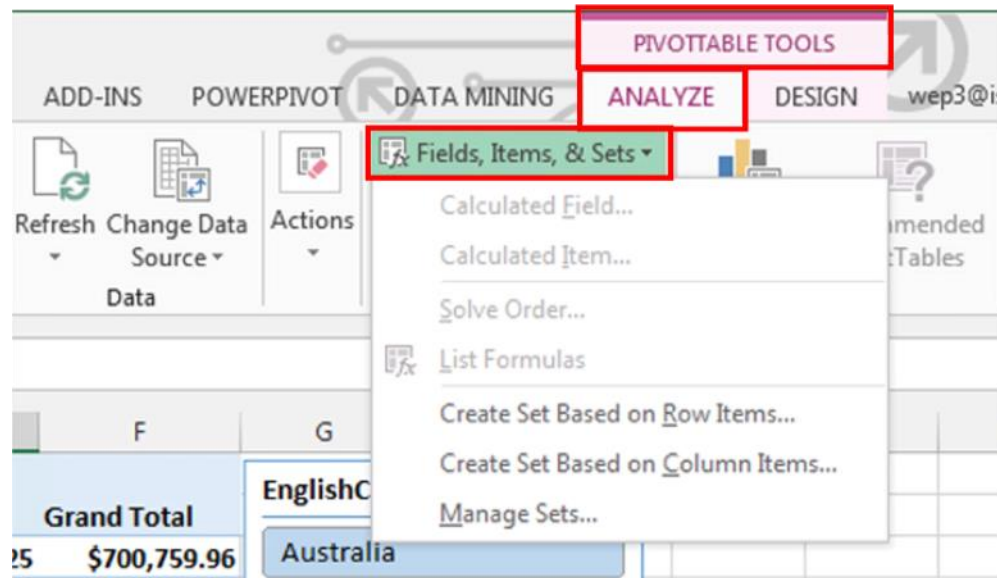
Let's Take a Look:

Sort and Filter Rows and Columns ...

Querying Tabular With Excel - From Excel ...

Work with Named Sets ...

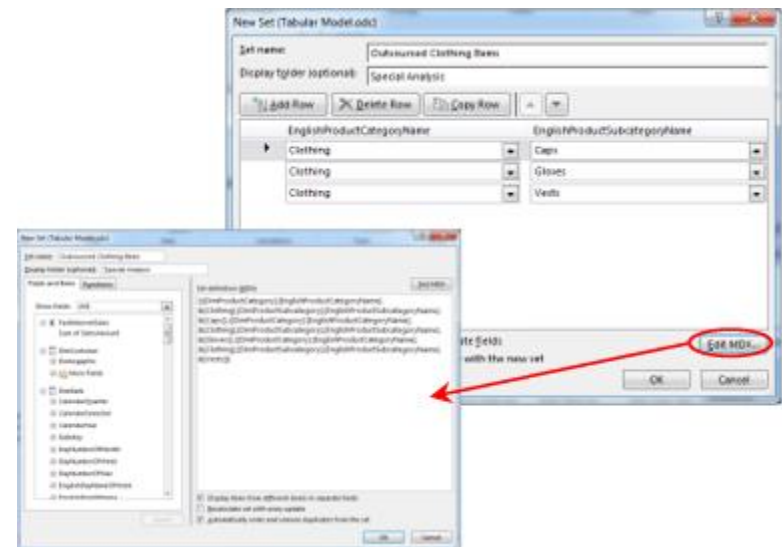
- From PivotTables tab, PivotTable Tools → Analyze
- Select Fields, Items, & Sets dropdown selector ...
- Select Create Set Based on Row / Column Items ...



Querying Tabular With Excel - From Excel ...

Work with Named Sets ...

- Select Set Membership via “Add / Delete” or
- Shift to direct MDX if need more sophistication ...



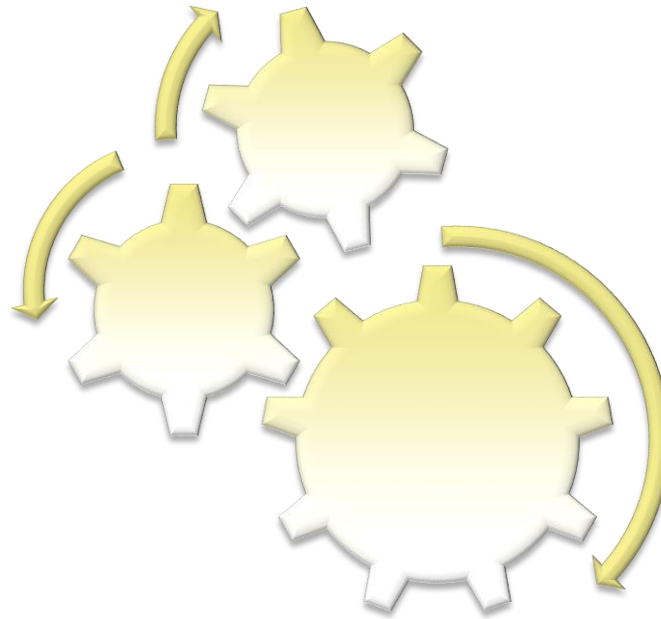
Querying Tabular With Excel - From Excel ...

Work with Named Sets ...

The screenshot shows an Excel workbook with a PivotTable and the PivotTable Fields task pane. The PivotTable is titled 'Sum of SalesAmount' and has 'Column Labels' as 2007, 2008, and Grand Total. The 'Row Labels' are categorized by 'Clothing' items: Caps, Gloves, and Vests. The data shows sales for these items across the years 2007 and 2008, with a Grand Total for each category. The task pane on the right shows the 'PivotTable Fields' list, where 'Outsourced Clothing Items' is selected under the 'Sets' section. A red arrow points from the 'Outsourced Clothing Items' set in the task pane to the 'Gloves' row in the PivotTable.

Row Labels	2007	2008	Grand Total
Clothing			
Caps	\$7,956.15	\$11,731.95	\$19,688.10
Gloves	\$14,228.69	\$20,792.01	\$35,020.70
Vests	\$13,017.50	\$22,669.50	\$35,687.00

Querying Tabular With Excel - From Excel ...



Let's Take a Look:
Named Set in a PivotTable ...

Querying Tabular With Excel - From Excel ...

Use Excel Cube Formulas to extract single cell data from a cube

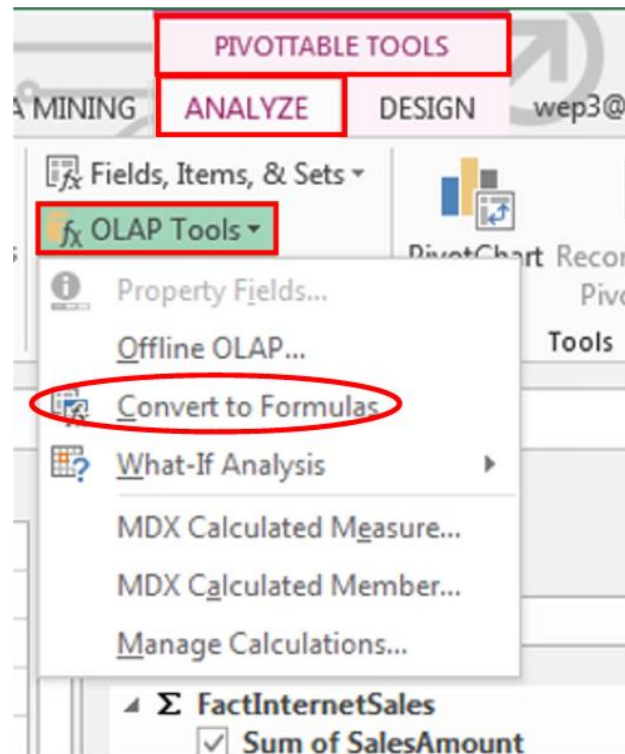
To gain an understanding of how a Cube Formula works:

Convert a PivotTable to formula-containing cells:

PivotTable Tools → Analyze →

OLAP Tools →

Convert to Formulas



Querying Tabular With Excel - From Excel ...

Use Excel Cube Formulas ...

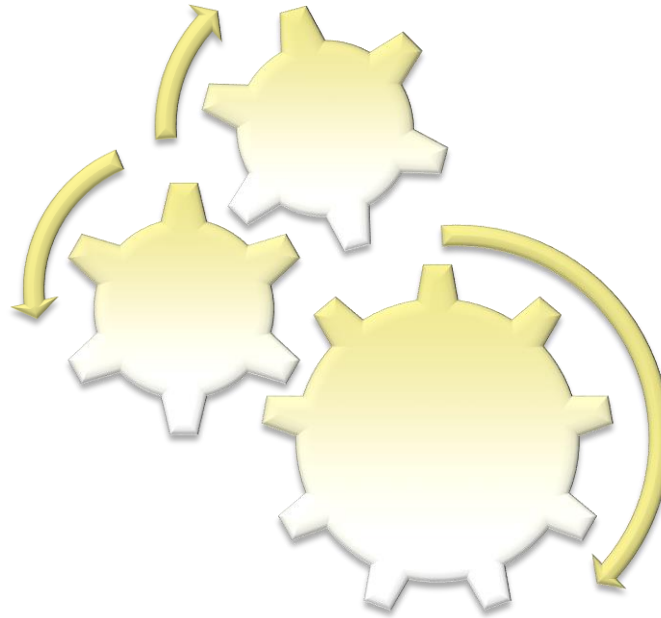
- PivotTable cells are converted to underlying formulas – no longer a standard PivotTable ...

The screenshot shows the Microsoft Excel interface with the following details:

- File Name:** 02_Excel_PivotTable_w_NamedSet.xlsx - Excel
- Formulas Bar:** The formula bar contains the formula `=CUBEVALUE("Tabular Model.odc", A3, A7, D$4, Slicer_EnglishCountryRegionName, Slicer_StateProvinceName)`, which is highlighted with a red box. A red arrow points from this formula bar to the PivotTable below.
- PivotTable:** The PivotTable is located in the lower-left area of the worksheet. It has the following structure:

Sum of SalesAmount	Column Labels		
Row Labels	2007	2008	Grand Total
Clothing			
Caps	\$7,956.15	\$11,731.95	\$19,688.10
Gloves	\$14,228.69	\$20,792.01	\$35,020.70
Vests	\$13,017.50	\$22,669.50	\$35,687.00
- Filter:** A filter dropdown menu is open for the 'EnglishCountryRegion...' field. It lists the following options: Australia, Canada, France, Germany, United Kingdom, and United States. The cell containing the value '\$35,020.70' in the PivotTable is also highlighted with a red box.

Querying Tabular With Excel - From Excel ...



Let's Take a Look:

Generate Excel Cube Formulas ...

Querying Tabular With Excel - From Excel ...

Use Excel Cube Formulas ...

- Cube Formulas advantages
- Cube Formulas disadvantages:

Querying Tabular With Excel - From Power View ...

Query a Tabular Model with Power View

- Connect to a Deployed Tabular Database
- Build a Basic Power View Report
- Add Charts and Slicers

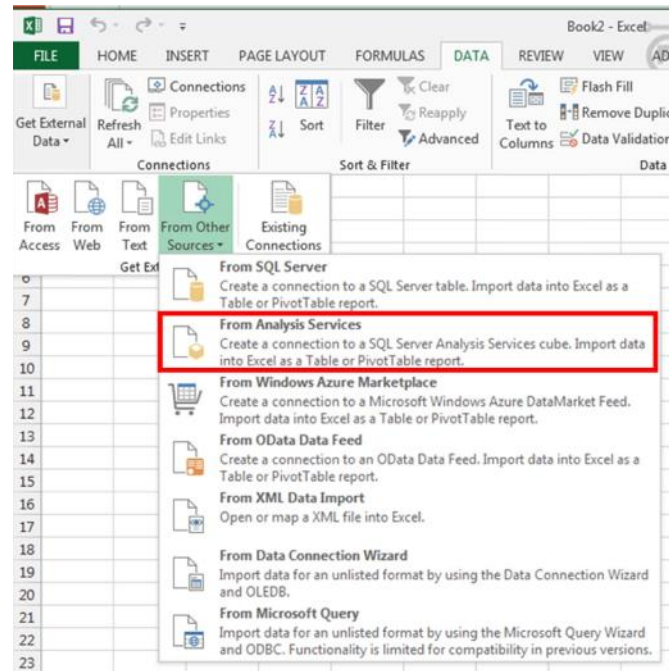
Querying Tabular With Excel - From Power View ...

Connect to the Deployed Tabular Database ...

- From new worksheet, Data Tab:

From Other Data Sources →

From Analysis Services

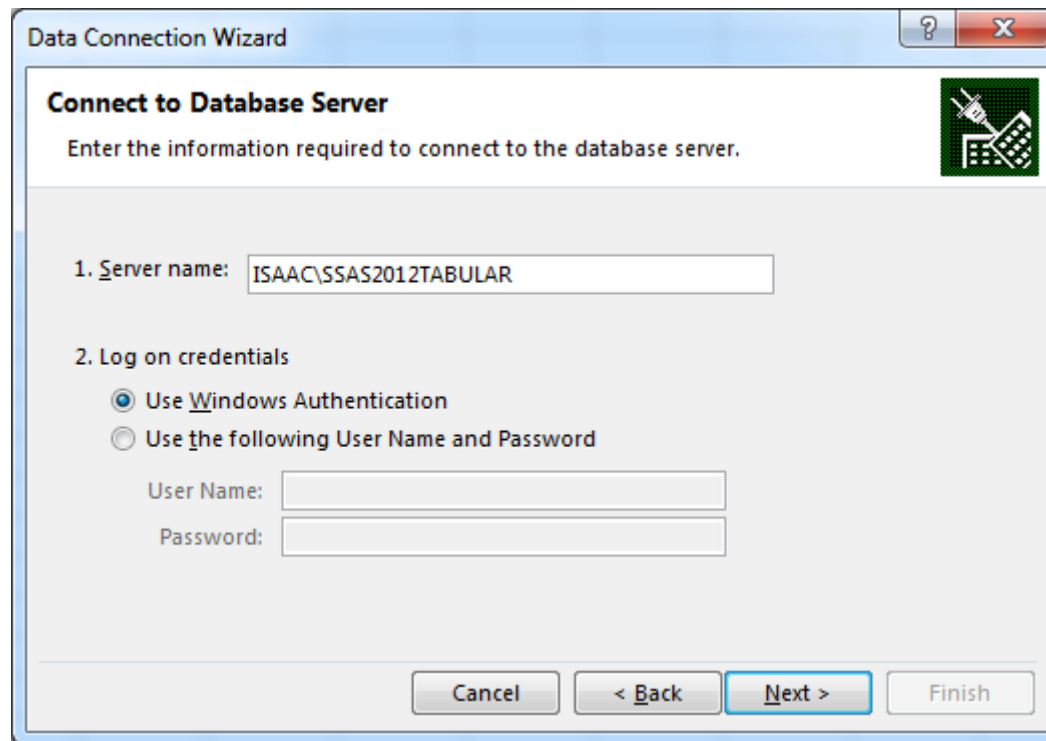


Querying Tabular With Excel - From Power View ...

Connect to the Deployed Tabular Database ...

■ Connect to Database Server

- Server Name
- Input Credentials



The image shows a 'Data Connection Wizard' dialog box with a blue title bar and standard Windows window controls. The main area is titled 'Connect to Database Server' and contains the instruction 'Enter the information required to connect to the database server.' Below this, there are two steps: '1. Server name:' with a text box containing 'ISAAC\SSAS2012TABULAR', and '2. Log on credentials' with two radio button options. The first option, 'Use Windows Authentication', is selected. The second option, 'Use the following User Name and Password', has associated text boxes for 'User Name:' and 'Password:'. At the bottom, there are four buttons: 'Cancel', '< Back', 'Next >', and 'Finish'.

Data Connection Wizard

Connect to Database Server

Enter the information required to connect to the database server.

1. Server name: ISAAC\SSAS2012TABULAR

2. Log on credentials

☒ Use Windows Authentication

☐ Use the following User Name and Password

User Name:

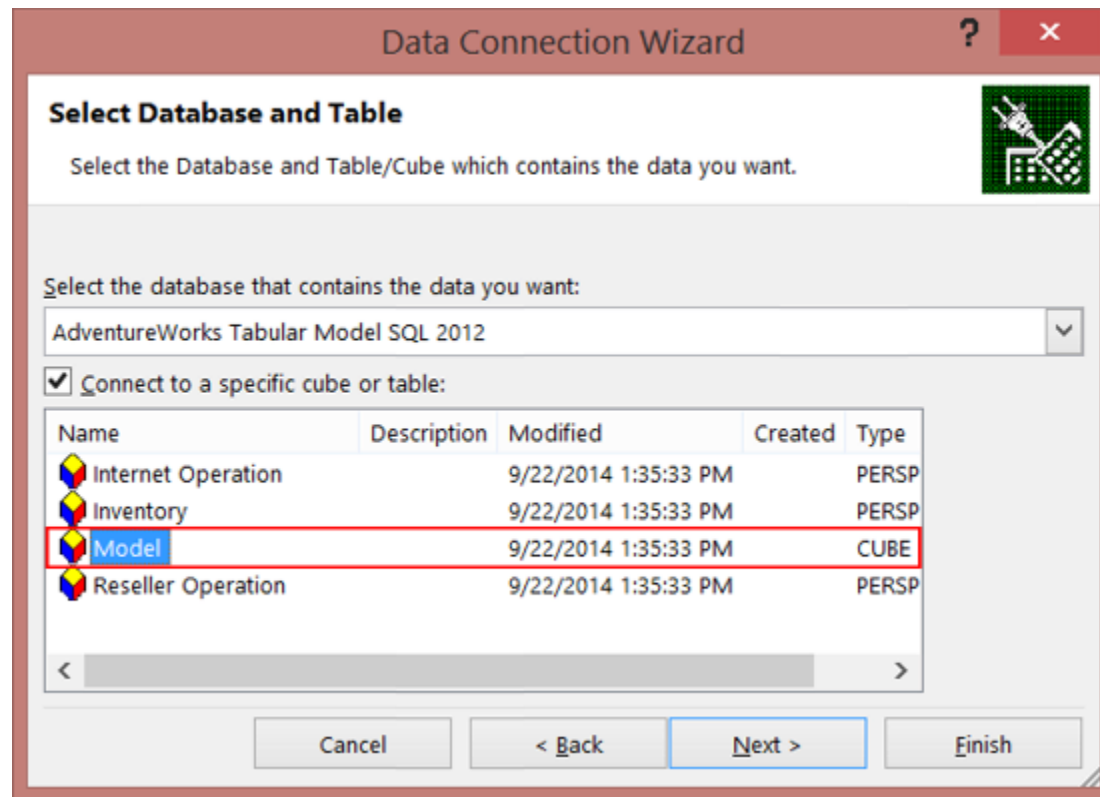
Password:

Cancel < Back Next > Finish

Querying Tabular With Excel - From Power View ...

Connect to the Deployed Tabular Database ...

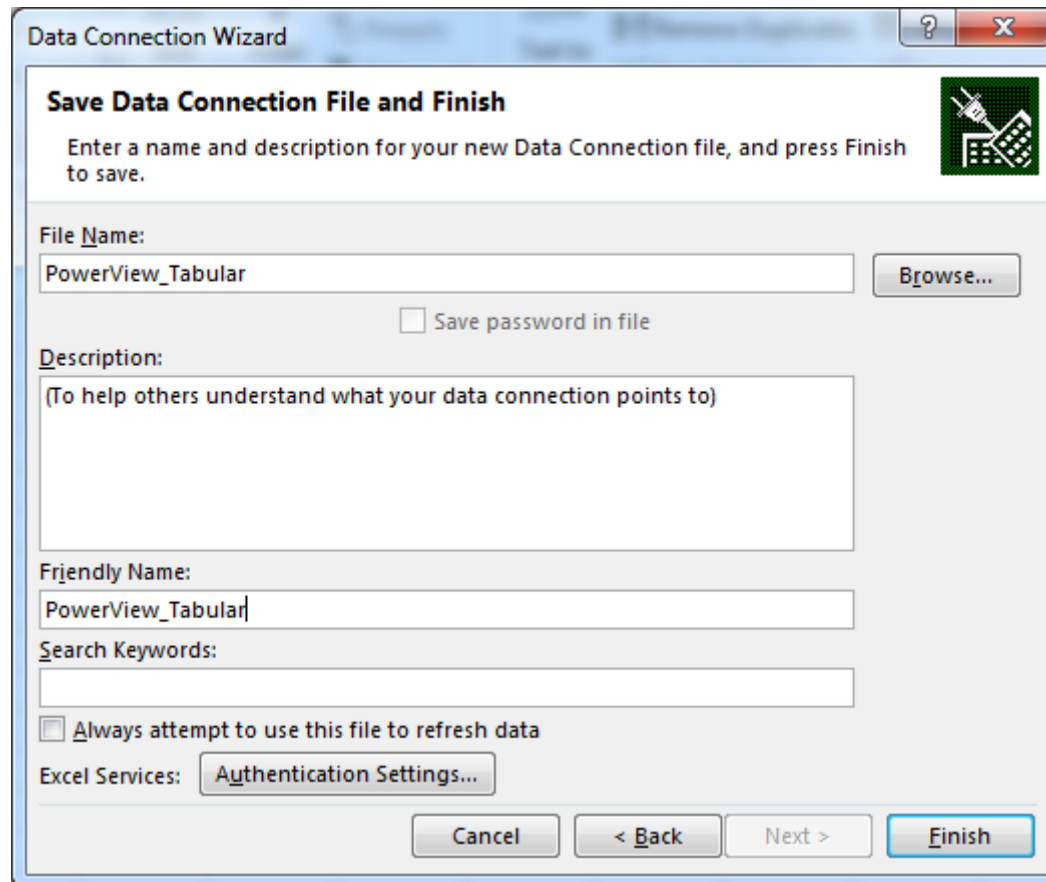
- Select Database and Tables



Querying Tabular With Excel - From Power View ...

Connect to the Deployed Tabular Database ...

- Save Data Connection File and Finish



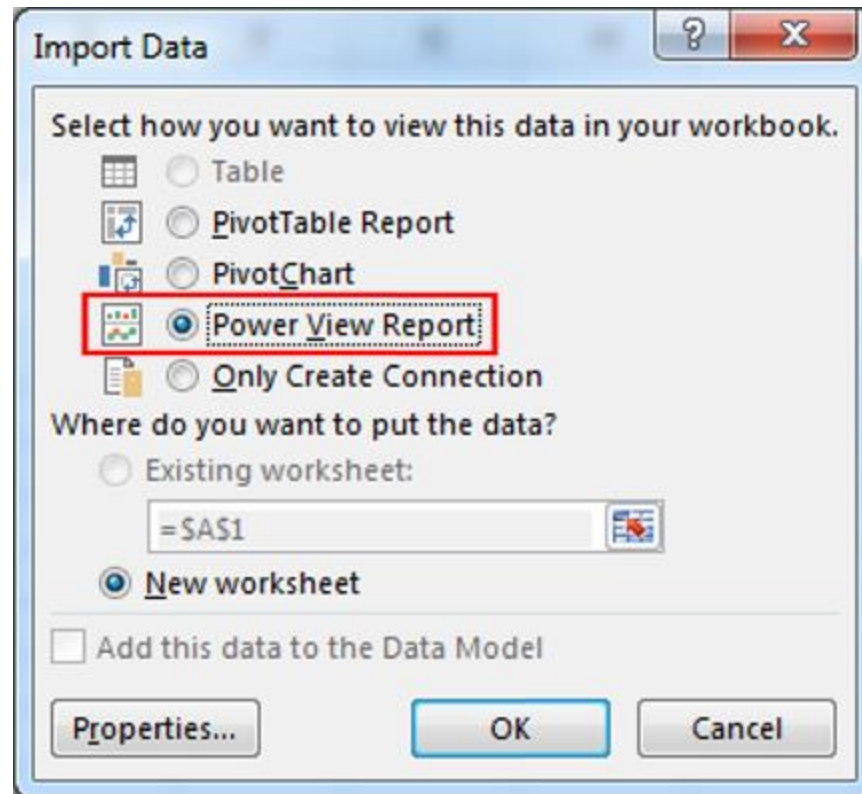
The screenshot shows the 'Data Connection Wizard' dialog box, specifically the 'Save Data Connection File and Finish' step. The dialog has a title bar with a question mark and a close button. The main area contains the following fields and controls:

- Save Data Connection File and Finish** (Section Header)
- Enter a name and description for your new Data Connection file, and press Finish to save.
- File Name:** A text box containing 'PowerView_Tabular' and a 'Browse...' button.
- ☐ Save password in file
- Description:** A text box with the placeholder '(To help others understand what your data connection points to)'.
- Friendly Name:** A text box containing 'PowerView_Tabular'.
- Search Keywords:** An empty text box.
- ☐ Always attempt to use this file to refresh data
- Excel Services:** A button labeled 'Authentication Settings...'.
- Navigation buttons at the bottom: 'Cancel', '< Back', 'Next >', and 'Finish'.

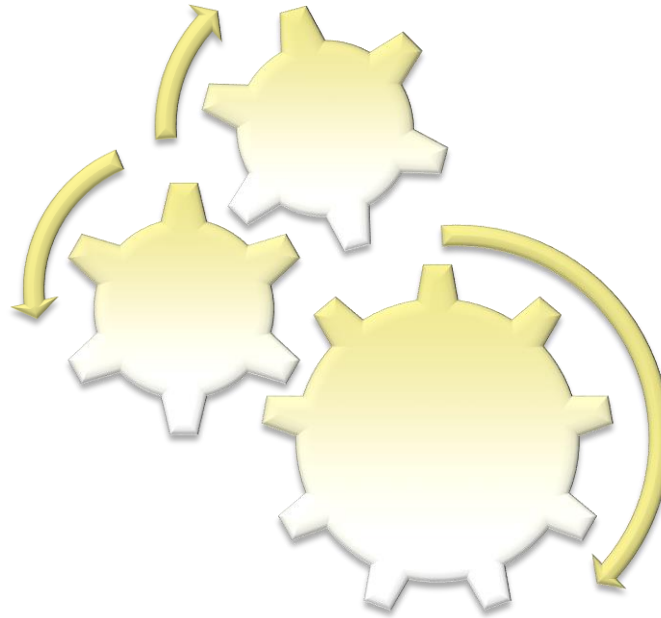
Querying Tabular With Excel - From Power View ...

Connect to the Deployed Tabular Database ...

- Designate as “Power View Report” ...



Querying Tabular With Excel - From Power View ...



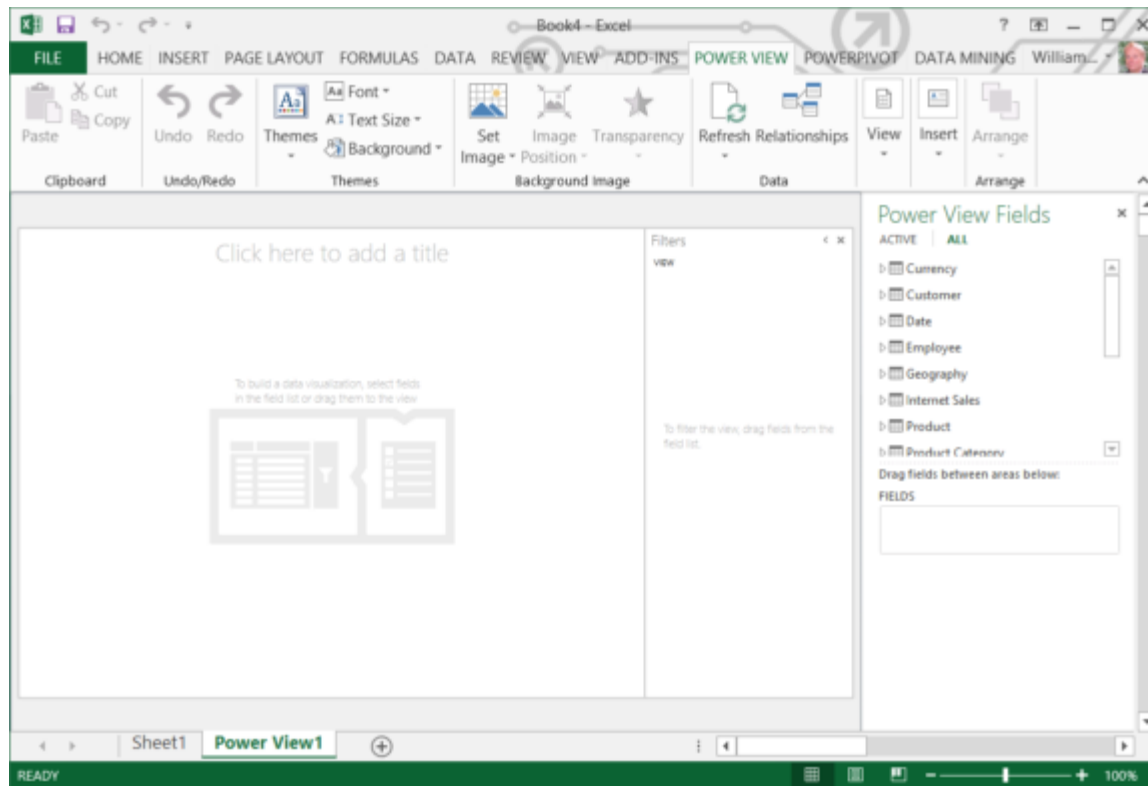
Let's Take a Look:

Connect to a Deployed Tabular Data Base with Power View ...

Querying Tabular With Excel - From Power View ...

Build a Basic Power View Report ...

- Upon finishing Connection creation steps, Power View opens:



Querying Tabular With Excel - From Power View ...

Build a Basic Power View Report ...

ADD:

TO:

Product Subcategory.Product Subcategory Name

Fields

Internet Sales.Internet Total Sales

Fields

Product Category.Product Category Name

Tile by

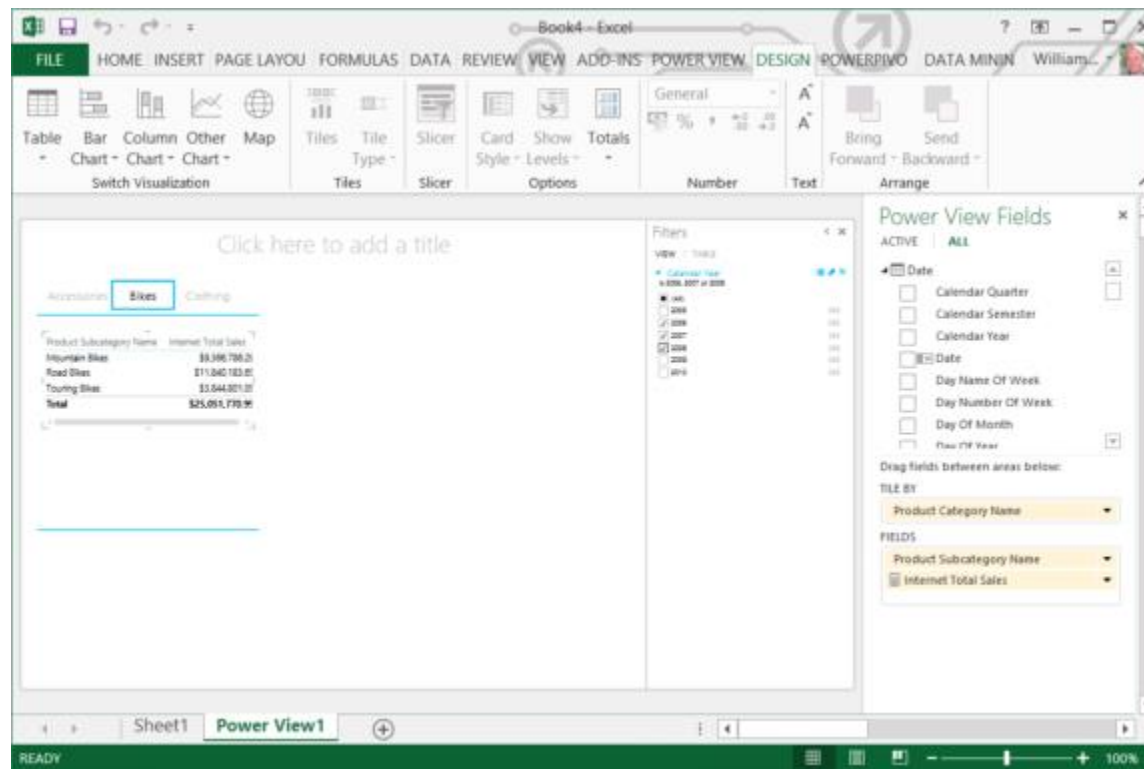
Date.Calendar Year

Filters

Querying Tabular With Excel - From Power View ...

Build a Basic Power View Report ...

- Select some Calendar Year checkboxes in the Filters section



The screenshot shows the Microsoft Excel interface with the Power View tab active. The main area displays a table with the following data:

Product Subcategory Name	Internet Total Sales
Mountain Bikes	\$9,396,796.21
Road Bikes	\$11,040,183.81
Touring Bikes	\$3,544,001.07
Total	\$23,981,779.91

The 'Filters' pane on the right shows the 'Calendar Year' filter selected, with the following options:

- ☒ 2006
- ☒ 2007
- ☒ 2008
- ☒ 2009
- ☒ 2010

The 'Power View Fields' pane on the right shows the 'Date' filter selected, with the following options:

- ☐ Calendar Quarter
- ☐ Calendar Semester
- ☐ Calendar Year
- ☒ Date
- ☐ Day Name Of Week
- ☐ Day Number Of Week
- ☐ Day Of Month
- ☐ Hour Of Year

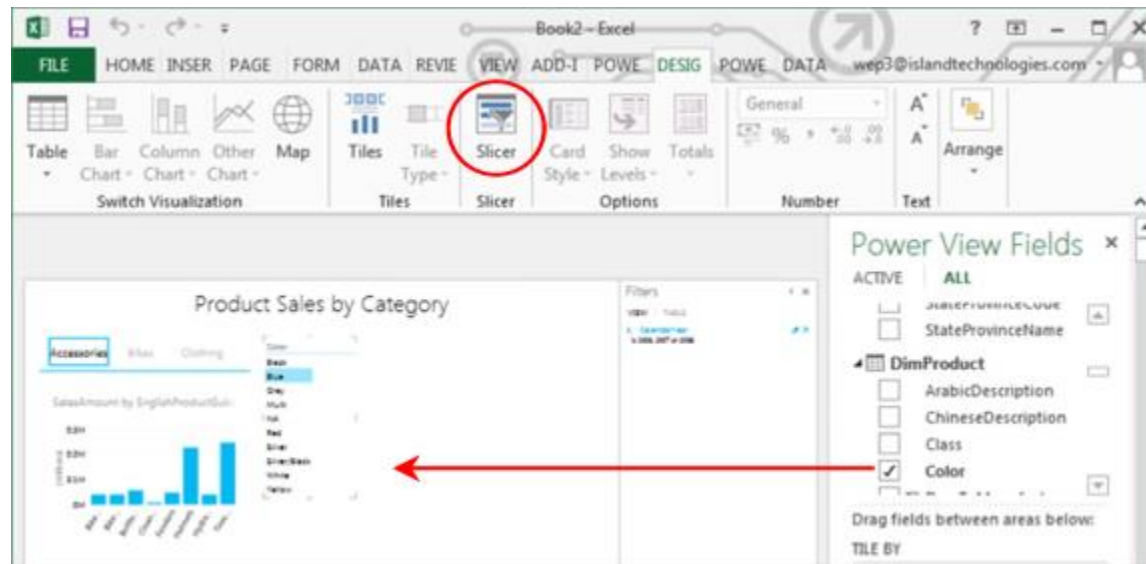
Add Charts and Slicers ...

-
- The screenshot shows the Microsoft Excel ribbon with the 'Insert' tab selected. The 'Column Chart' dropdown menu is open, and the 'Stacked Column' option is highlighted. A red arrow points from this option to a chart on the right. The chart is titled 'SalesAmount by EnglishProductSub' and is a stacked column chart. The y-axis is labeled 'Sales (M)' and ranges from 0M to 0.3M. The x-axis lists product sub-categories: Bike, Bike, Bottle, Cap, Fanny Pack, Helmet, Hydration, and Tee. The chart shows that 'Tee' and 'Helmet' have the highest sales, both exceeding 0.2M.

Querying Tabular With Excel - From Power View ...

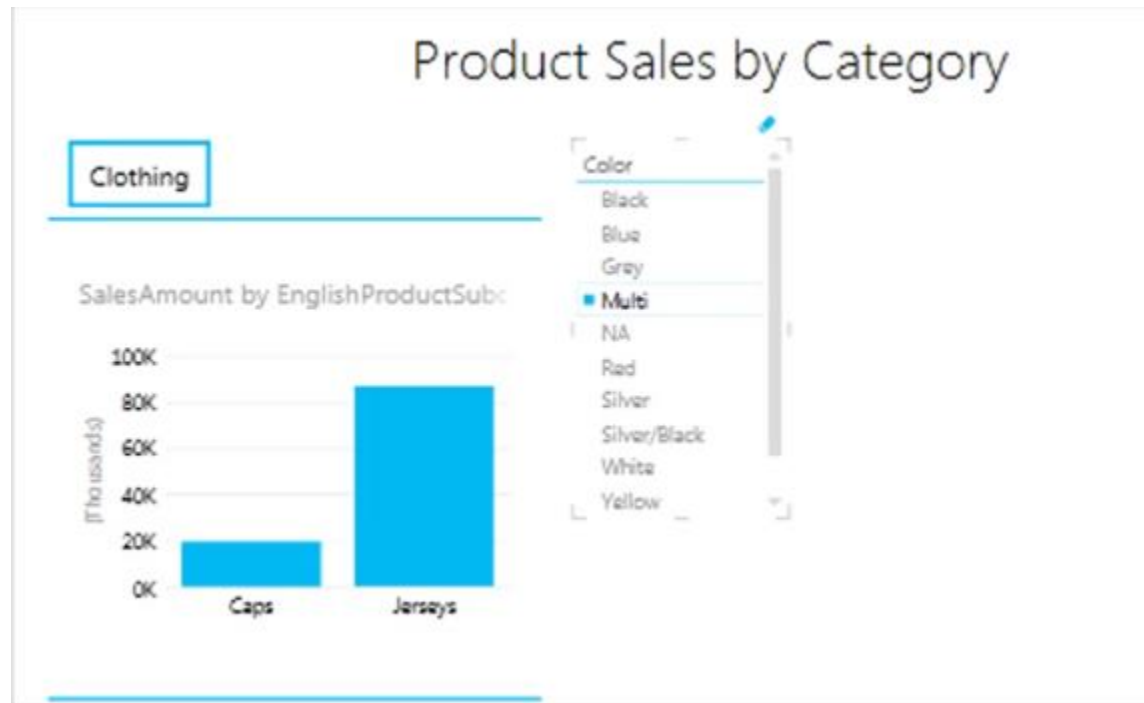
Add Charts and Slicers ...

- Drag Product.Color to the blank area to the right of the new Stacked Columns Chart
- Click the new table, and click the Slicers button in the Power view ribbon

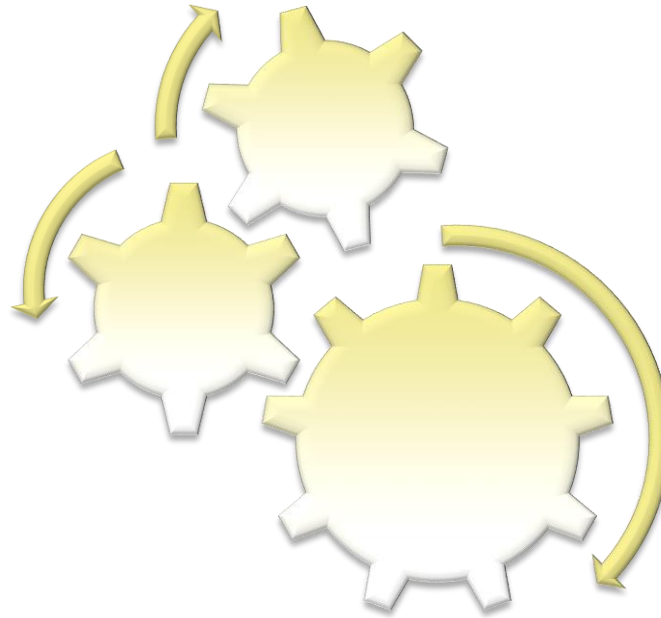


Querying Tabular With Excel - From Power View ...

The new table becomes a working Slicer ...



Querying Tabular With Excel - From Power View ...



Let's Take a Look:

Chart and Slicer in Power View ...

Querying Tabular With Excel - From Power View ...

Add another Chart Example

... Animated Scatter Chart

- Create a new tab.
- Create a new table:

ADD:

TO:

Product Subcategory.Product Subcategory Name

Fields

Internet Sales.Order Date

Fields

Internet Sales.Sales Amount

Fields

- Click inside new table and select Other Chart → Scatter

Querying Tabular With Excel - From Power View ...

... Animated Scatter Chart

ADD:

TO:

Internet Sales.Order Lines Count
(Internet Sales.Sales Amount is "X Value")

"Y Value"

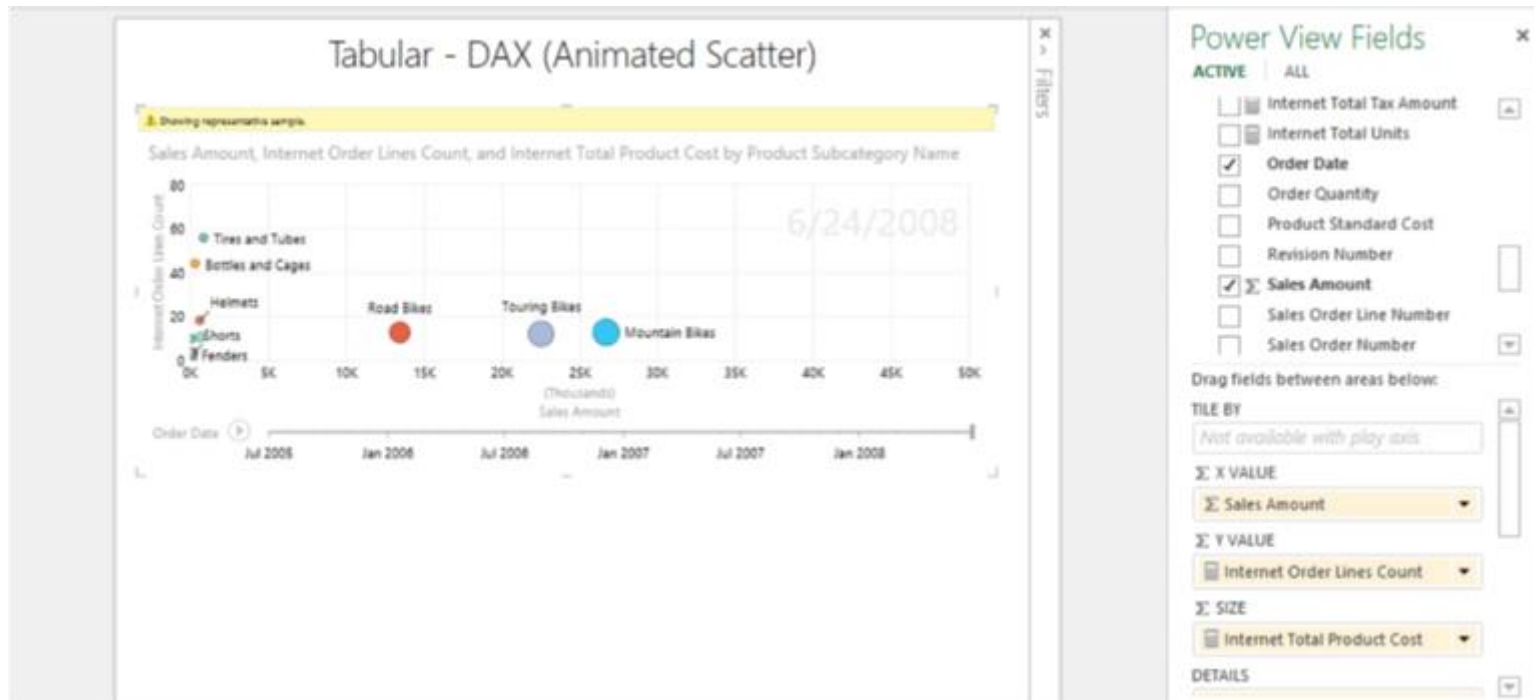
Internet Sales.Total Product Standard Cost

Size

- *Click the "Pop Out" icon in the upper right corner*
- *Click the "Play" button to run animation over dates*

Querying Tabular With Excel - From Power View ...

Animated Scatter Chart is added ...



Summary

- Understanding Language Options and Editors
- Querying Tabular With Excel