## **Data Analysis with Tableau**

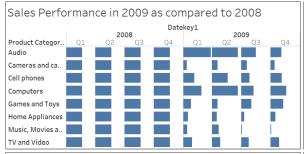
## **Learning Objectives**

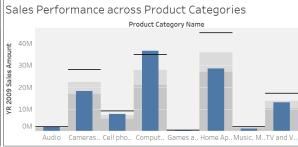
- 1. Data Extracts: How to create, when is it appropriate to use?
- 2. Table calculations, Year over Year Growth Calculations
- 3. Reference lines and bullet graphs for monitoring performance
- 4. Filtering based on ranks. Identifying leading and lagging performers

## Instructions

- 1. Data Source
  - a. FactSales, Channel, Date, Product and Subcategory, Category, Store and Geography, Promotion
  - b. Create Custom SQL (Data-> Covert to Custom SQL)
  - c. Remove unnecessary attributes
  - d. Change to Extract
  - e. Add filters to extract: Year =2008 to 2009, Region = United States, State = Washington, Channel =Store
- 2. Create Sheet: Sales Growth YoY
  - a. Create Product Category Hierarchy
  - b. Use Category Hierarchy as Rows, DateKey as columns and expand to quarters, Sales Amount as Cell values
  - c. Select Sum(Sales Amount) from Marks panel and select Add Table Calculation. Select Percent Difference From as Calculation Type, Dimension for Compute Using, and Check Year as Dimension. The sheet should show growth in sales from previous year.
- 3. Create Sheet: Targets by Category
  - a. Create calculated columns
    - i. YR 2008 Sales Amount: IF [Calendar Year] = 2008 THEN [Sales Amount] END
    - ii. YR 2009 Sales Amount: IF [Calendar Year] = 2009 THEN [Sales Amount] END
  - b. Create Bullet graph with Product Categories as dimension, 2009 and 2008 sales as measures, right click on the vertical axis to swap reference from 2009 to 2008
- 4. Create new sheet: Top Selling Products
  - a. Create calculated field profit as Sales Amount (Total Cost + Return Amount)
  - b. Create calculated field to rank products that exceed 2008 sales targets
    - i. RANK(SUM([YR 2009 Sales])-SUM([YR2008 Sales]))
  - c. Use Product Names as Columns and Sales 2009 and Sales 2008, and Profit as measures

## Dashboard:





Top Performing Products								
	Product Name							
	Adventure	Adventure	Adventure	Fabrikam La	Fabrikam La			
Profits	206,966	253,002	548,958	212,367	205,159			
Rank	5	2	1	4	3			
YR 2008 Sales Amount	65,591	80,735	263,502	72,747	60,951			
YR 2009 Sales Amount	364,191	398,745	584,680	373,042	363,891			

	Underperforming Products								
		Product Name							
		Contoso Pro	Litware Refr	Proseware P	Proseware	Proseware P			
9	Profits	542,264	820,951	390,848	435,286	387,828			
3	Rank	2,129	2,130	2,127	2,126	2,128			
1	YR 2008 Sales Amount	663,140	1,041,437	509,171	519,244	518,555			
1	YR 2009 Sales Amount	164,322	213,279	88,715	145,733	68,506			