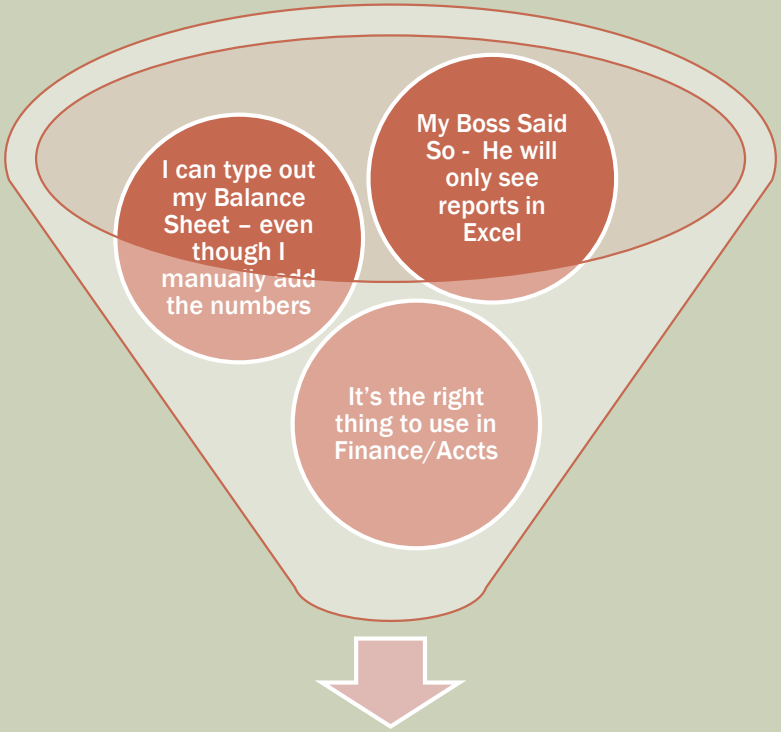
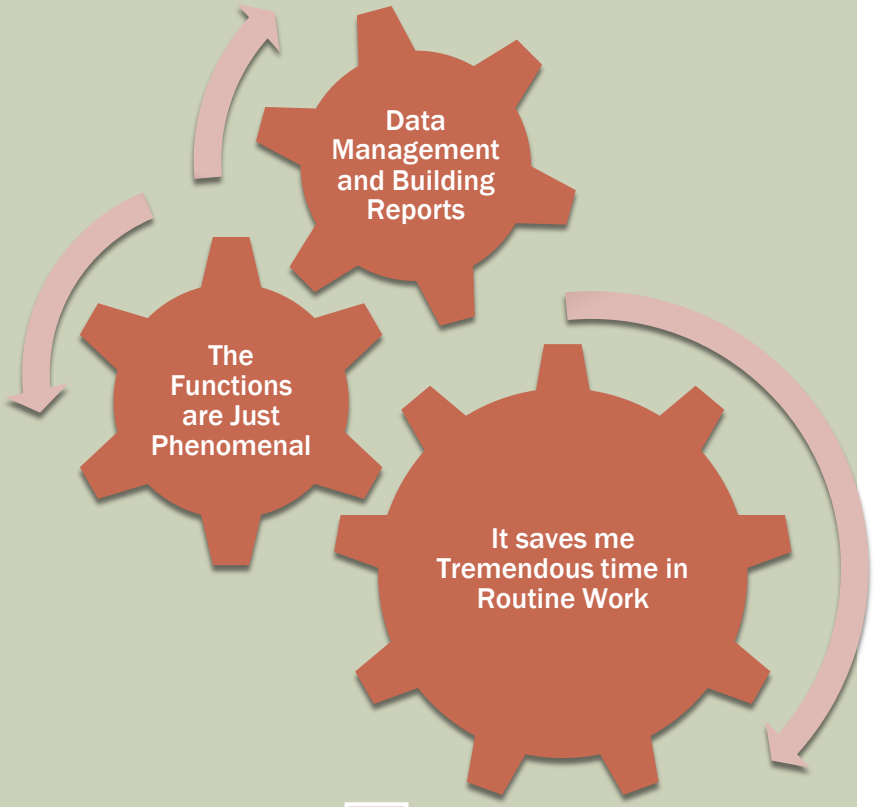
MS EXCEL

Utilities

THE EXCEL DEMOGRAPHIC



It's a Great Calculator and I can use it. Period.



Its Just Too Cool an Analysis Tool.

EXCEL BASICS

- Functions and Formulas
  - You Can Start a Function using the "=" sign. Though the "+" and "-" Also work
  - Excel's Calculations work using BODMAS – Brackets, Order, Division, Multiplication, Addition, Subtraction
  - It is highly efficient to use references rather than hard numbers –
    - Remember changing one variable at a time can reflect through the sheet, workbook and even across workbooks.
  - The "*fx*" button on the formula bar unlocks a host of useful formulae
  - How you plan your spreadsheet indicates how much time it saves you
  - Extensively use interlinking of cells, sheets, and if needed workbooks
  - Automate routine reports and functions so that only "Data Dump" is required – Spend the time on analysis and not report building
  - Use $ signs to freeze rows or columns so that formulas can be copied easily

DATA ANALYSIS

- Small Database
- Adding Meaning to Data
- Search in Data by Sorting/Filtering
- Conditional Search
- Summarize Data using functions
- Create Pivot Tables and Reports

AUTOMATE ROUTINE TASKS

- Data Dump and Refreshing Reports
- Sum across Sheets for Easy Consolidation
- Link Spreadsheets to a Database
- Management Flash Reports
- Macros for Automation of Routine Tasks

FINANCIAL / BUSINESS MODELS

- What if Scenarios & Planning
- Financial Models
- Dynamic Analysis Tools
- Data Collection & Feedback Tool
- Auditing Spreadsheets

CHARTING

- Trend Charting
- Bubble Charts to show three dimensional data
- Percentage Charting
- Pivot Charts

DOLLAR SIGN

- The Dollar Sign (F4) for Windows and (Command + T) for Mac Users toggles between various dollar signs
- A1 – This shall freeze the reference in cell cell A1 no matter where you copy it
- $A1 shall freeze the relative references in the copied cells to have the column “A” with the rows changing relative to the copied cell position
- A$1 shall do exactly the reverse of the above with the row “1” being constant and the columns changing relative to the copied cell position
- A1 shall keep all rows and columns flexible and relative to the copied cell position

PASTE SPECIAL

- Edit - > Paste Special Lets you do various operations while pasting
  - Paste Values, Formats, Formulas, Comments, Validation
  - You can Add, Subtract, Multiply and Divide to cells pasting into
  - You can Skip Blanks and Transpose
- Window - > Freeze Panes lets you Freeze Panes or Un Freeze Panes for easy viewing and spreadsheet management

SUM, AVERAGE, COUNT "IF"

- Sumif, Averageif are conditional operations:
  - Sumif(Range, Criteria, SumRange)
  - Averageif(Range,Criteria,AverageRange)
- Countif works to count in criteria
  - Countif(Range, Criteria)
- CountA counts non-numeric
- Count counts numeric
- If you use SumIfs, AverageIfs, CountIfs – you can specify multiple criteria with the AND condition in multiple ranges

IF – THEN - ELSE

- Conditions specified in cells lets your spreadsheet decide operations dynamically
- IF(Condition, True Argument, False Argument)
- You can nest IF statements as the condition, true argument and false argument can be if statements, or for the matter any function
- OR (condition 1, condition 2) returns true value if condition1 or condition 2 are true
- And (condition 1, condition 2) returns a true value one if both conditions are correct

- Be VERY CAREFUL OF BRACKETS else your formulas will return errors

DATA VALIDATION

- You can use Data Validation to make spreadsheet reports dynamic
- In Cell Dropdowns and other Validation criteria can be used

TEXT AND CONCATENATE

- Decipher Codes and parse them to make meaningful analysis
  - Left(Text, No of Characters) – Selects characters from Left
  - Right(Text, No of Characters) – Selects characters from Right
  - Mid(Text, Start No, No of Characters) will start from the number specified and select the number of characters specified
  - Len(text) calculates the number of characters in a text string
  - Find(Find Text, Within Text, Start Number) – finds the position of a character in a string. Start Number will start the find from the character number specified

SUMPRODUCT

- One of the most useful functions when building spreadsheet models
- Multiplies and adds at the same time
- Sumproduct(Array1, Array2)
- Use $ to freeze start cells for Sum, Sumproduct, etc. functions for cumulative results.

VLOOKUP, HLOOKUP

- Lets you do what multiple nested Ifs would do
- Vlookup(lookup value, range, column to lookup, True or False) – vertical lookup
- Hlookup(lookup value, range, row to lookup, True or False) – horizontal lookup
  - True value returns approximate match
  - False value returns exact match
  - Remember to use Dollar signs in Ranges if you copy cells down

SUBTOTALS AND AUDITING

- The sum function is a basic function of Excel
- What if you want to have sub-totals in a large spreadsheet and do not want to worry about mistakenly including sub total total cells in grand totals
  - Subtotal(9,range) – sums up the range but excludes any subtotal cells
  - Subtotal(1, range) – averages the same way
- You can use the auditing toolbar to trace errors

FORMATTING

- Regular Formatting
- Ctrl +1 returns the cell dialog box for cell formatting
- Conditional formatting can bring reports to life by having dynamic formatting

FINANCIAL FUNCTIONS AND DATA TABLES

- NPV Function – Returns Net Present Value of a stream of cash flows with a given Discount Rate
- IRR Function – Returns internal rate of return that makes NPV zero for a series of cash flows
- XIRR function links the IRR function with dates so you can vary payment time lengths
- PMT function returns the annuity payment amount for a fixed loan and a fixed rate of interest and a fixed duration
- Data - > Table lets you see results with one or two variable changing dynamically – Very useful for sensitivity analysis

GOAL SEEK AND SOLVER

- Goal Seek and Solver let you find optimal solutions to multi-variable problems
- Goal Seek is simple that lets you get to a desired result by making excel change a cell's value to optimize to your desired solution
- Solver lets to have more changing cells and various criteria to restrict excel in its offered solutions

PIVOT TABLES

- Pivot Tables lets you summarize data and dynamically change grouping data for easy analysis
- Pivots can be refreshed so each update or refresh cycle does not need creation of a new report or new pivot
- GETPIVOTDATA is a function to make reports link to pivot table data. This enables you to refresh a pivot table and have a formatted report refresh automatically.
- GETPIVOTDATA(Data Field, pivot table, field 1 , criteria 1, field 2, criteria 2,…)
- Remember that the value desired to be a result of the GETPIVOTDATA function should be visible in the layout of the pivot table