Using MS Excel as a Data Management Tool

Data Validation

Data validation is a feature in Excel which is used to control what users can enter into a cell. It allows you to dictate specific rules and allows users to display a custom message if users try to enter invalid data. You can apply the following restrictions using Data Validation:

- Whole Number - to restrict the cell to accept only whole numbers.
- Decimal - to restrict the cell to accept only decimal numbers.
- List - to pick data from the drop-down list.
- Date - to restrict the cell to accept only date.
- Time - to restrict the cell to accept only time.
- Text Length - to restrict the length of the text.
- **Custom – for custom formula.**
  a. Requires some knowledge of Excel formulas
  b. "MID" IF RIGHT LEFT

Custom restrictions require some knowledge of Excel formulas. The following formulas were explained in the workshop and can be applied to create Data Hub centric data entry forms:

Canadian Postal Code
(restricts character value to follow Canadian Postal Code format:
=AND(ISTEXT(MID(D1,1,1)),ISTEXT(MID(D1,3,1)),ISTEXT(MID(D1,5,1)),ISNUMBER(MID(D1,2,1)*1),ISNUMBER(MID(D1,4,1)*1),ISNUMBER(MID(D1,6,1)*1))

Client ID
(restricts first two characters of value to be TEXT and length to be 7 characters)
=AND(LEN(**A1**)=7,ISNUMBER(MID(**A1,**3,5)*1)).

Data Cleaning

Data Cleaning is an important part of data management. Data cleaning ensures accuracy and quality of data. These were the formulas and Excel features discussed in the workshop for data cleaning:

=**TRIM()** function: helps remove the extra spaces in data and thus clean up the cells in the worksheet.

Conditional formatting:
 - Check whether country values in list match values in another list: Highlight cell values -> New Rule > Use a formula to determine which cells to format: =ISERROR(MATCH($**A1**,Countries!$A$1:$A$24,0))

 - Check whether all dates are in appropriate range: Highlight cell values -> Greater Than -> =TODAY()

Data Analysis

=COUNTIF() COUNTIF is an Excel function to count cells in a range that meet a single condition.
FILTER
Filters can be used to narrow down the data in your worksheet, allowing you to view only the information you need.