**Time Intelligence in Power BI**

Time is an asset for businesses just like resources, materials, and money. Businesses use cumulative time-based calculations (Year-to-Date, Month-to-Date, or Quarter-to-Date) that are referred to as YTD, MTD, QTD in common parlance. They are helpful metrics to analyze trends or compare sales and financial performance.

The Time intelligence functions in [Power BI](https://docs.microsoft.com/en-us/power-bi/) helps the users perform calculations that can evaluate business performance on-the-go, without storing them explicitly in a separate sheet and refer them back. Microsoft Power BI offers formula like calculations called Data Analysis Expressions (DAX) that can help the user to come up with new features from the data. Time intelligence functions are go-to expressions for a Power BI developer to measure patterns in business metrics over time (year-on-year, quarter-on-quarter, compared to last year, etc.).

To implement time intelligence measures using DAX  formula :-

% change on previous quarter = DIVIDE([Qty],CALCULATE([Qty],PARALLELPERIOD('Calendar'[DateKey],-3,MONTH)))

**PARALLELPERIOD -** Returns a table that contains a column of dates that represents a period parallel to the dates in the specified dates column, in the current context, with the dates shifted a number of intervals either forward in time or back in time.

**Syntax -***PARALLELPERIOD(<Dates>, <No. of intervals>, <Interval>)*

**YTD % of all previous year** = DIVIDE(TOTALYTD([Qty],'Calendar'[DateKey]),CALCULATE([Qty],PARALLELPERIOD('Calendar'[DateKey],-1,YEAR)))

**3-month moving average** = (CALCULATE([Qty],DATESINPERIOD('Calendar'[DateKey],LASTDATE('Calendar'[DateKey]),-3,MONTH)))/3.

