# Concepts

**Context:** In DAX everything happens within a [context](https://support.microsoft.com/en-us/office/context-in-dax-formulas-2728fae0-8309-45b6-9d32-1d600440a7ad), there is row context, filter context, and query context. It enables the dynamics calculations performed by the formulas.

Current context = the row where the formula is placed at that time.

**Filters and expression arguments:** The arguments, parameters, and outputs are always ranges or columns, so when you are asked to input an expression argument in a DAX formula, it is used to filter or select specific cells that match the criteria of the expression.

**KPI visual**

**Infinity Goal:** if the goal field of the KPI is pointing to “Infinity”, one reason could be that there is not any previous period to compare data. On my current project, the only month that had dates to compare was February.

# Dates

**Hierarchy date**

Built-in Hierarchy dates cannot show dates from a lower level i.e Month from a multiple-year perspective, you can show the values per year and drill into lower levels within that specific year. To do so I think it is necessary to build your own custom hierarchy with a custom date table.

**Date Table**

Followed [this](https://www.softcrylic.com/blogs/power-bi-for-beginners-how-to-create-a-date-table-in-power-bi/) to create a date table

**Date Tables and visuals**

Make sure that if you are using a slicer, it is configured with the 'Date'[Date] field from the date table. Don’t forget that all visuals need to use this field. If you don’t do this and you use some visuals with the original date field from the data table, it’s not going to work properly.

**Month field for slicers**

If you can use only month periods on your canvas to filter your visuals, it is better for the slicer to be configured with a Month field, so the user can’t mess up with not valid period intervals.

**Confusion with current dates vs last period dates**: if you put these two measures on separate table visuals, the Last\_Year\_Sales shows the dates as the current dates, but in fact, the values correspond to the previous year.

The measure is doing the job correctly showing the values for the last period while using the ‘Date’[Date] field that you provide to perform this calculation.

The confusion appears when you add an additional Date field to show right next to the measure calculation: it is not linked to Last\_Year\_Sales measure, thus the field is going to show the current dates filtered on the visual.

# Data Sources

## ODBC

In order to connect to a remote ODBC database:

* Download ODBC Driver according to the CPU: 32 bits or 64 bits. Used the 32 bits ODBC driver on a 64 bits PC and it didn’t work.
* Create a DSN Name for the connection data to be stored on the PC (See ODBC Windows Administrator)
* Use the DSN to connect

# Content creation workflow

## First steps

1. Question to make to the final user: ¿Which questions do you want to answer by creating this content?
2. The final user should make a drawing of the report.
3. Look if there is existing content already made that fits the requirements if there is a similar one then adapt it. If there isn’t any, then you’ll have to design it.
4. The ideal path is to serve the model and other users would make their own reports based on their needs. The first step in making a report is to take a look at the data, the company should have valid data sources, if not, then a database should be implemented. Afterward, connect to the data sources, clean the data if needed, and make the model.
5. If you don’t know how to start or to get creative with the visual appearance, check out the sample content.

## Considerations

1. Make sure to disable Time Intelligence for the current file and for all PowerBI files.
2. Create the model and the report together but when it’s done separate the model from the report.
3. If you can modify the data source design safely then do it but this is most likely to be hard. While we don’t have a data warehouse nor dataflows nor other tool to shape data model before modelling in PowerBI, then all the transformations to normalize the tables should be done in PowerQuery.

## Transforming Data with PowerPivot.

Some of these recommendations are not mandatory since we still have to learn about performance and avoid too many data transformations.

1. Stage your data, Import everything as is, make a duplicate and make the transformations on the duplicate.
2. Unpivot tables: if the tables has repetitive groups you need to unpivot them and make it a single column.
3. Check data types: date, text, number fields etc.
4. Change the table names classifying them to dimension tables (D\_ prefix) or fact tables (F\_ prefix)
5. Delete tables that aren’t necessary or duplicated.
6. Remove unnecessary columns from: if there is already a foreign key in the table then delete al related columns.
7. Change the column names to ensure consistency.

## Modelling your data

1. Ensure that you have your date table marked ad ‘Date Table’
2. Create MonthSort field (MonthSort = Format('Date'[Date], "yyyy-mm")
3. Check the relationships.
4. Test your data model
5. Once it’s tested and ready, publish the stand-alone data model to the PowerBI service

## Making first visualizations

1. Before you make any visualization test your model ensuring that the data it contains is accurate (see testing data model)

# PowerBI To do list

Pin an icon from a dashboard to another dashboard

Pin an icon from Excel to a dashboard

Make some sample dashboards using the examples.

Complete pbi-tools workflow

Try powerbi pipelines

Learn to use dax studio, tabular editor, etc.