



# AZURE DAY

## Power BI. Lesson Learned al tempo del Coronavirus

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 /in/abenedetti

 @anBenedetti



<https://github.com/anbened>





Grazie!






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← → ↺ [https://community.powerbi.com/t5/COVID-19-Data-Stories-Gallery/bd-p/pbi\\_covid19\\_datastories](https://community.powerbi.com/t5/COVID-19-Data-Stories-Gallery/bd-p/pbi_covid19_datastories) ☆ ☆! 📄 👤 ...

Microsoft | Power BI | Products | Pricing | Solutions | Partners | Learn | Community




USA Facts COVID-19 County level report with per capita detail

Hikmer 4




Covid 19 Dashboard - Global and US View

dan-dsecpa 3



Coronavirus Disease (COVID-19)

anbenedetti 3



Power BI Covid19 Model

SteveD2 1

<https://aka.ms/covidreport>



AZURE DAY

*«SPIEGARE LE BATTUTE È COME SEZIONARE UNA RANA: A  
NESSUNO PIACE, E NEL PROCESSO LA RANA MUORE»*





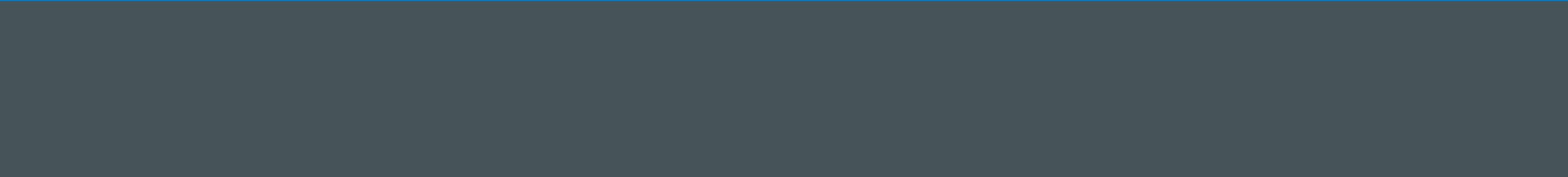
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- Questo talk NON è:
  - Introduzione Power BI
  - Tips avanzati DAX/M
  - Deep-dive di qualcosa
- Questo talk è:
  - Condivisione di lesson learned di un progetto reale
  - Condivisione di alcune tecniche utili con Power BI
  - Condivisione di alcuni tips di produttività

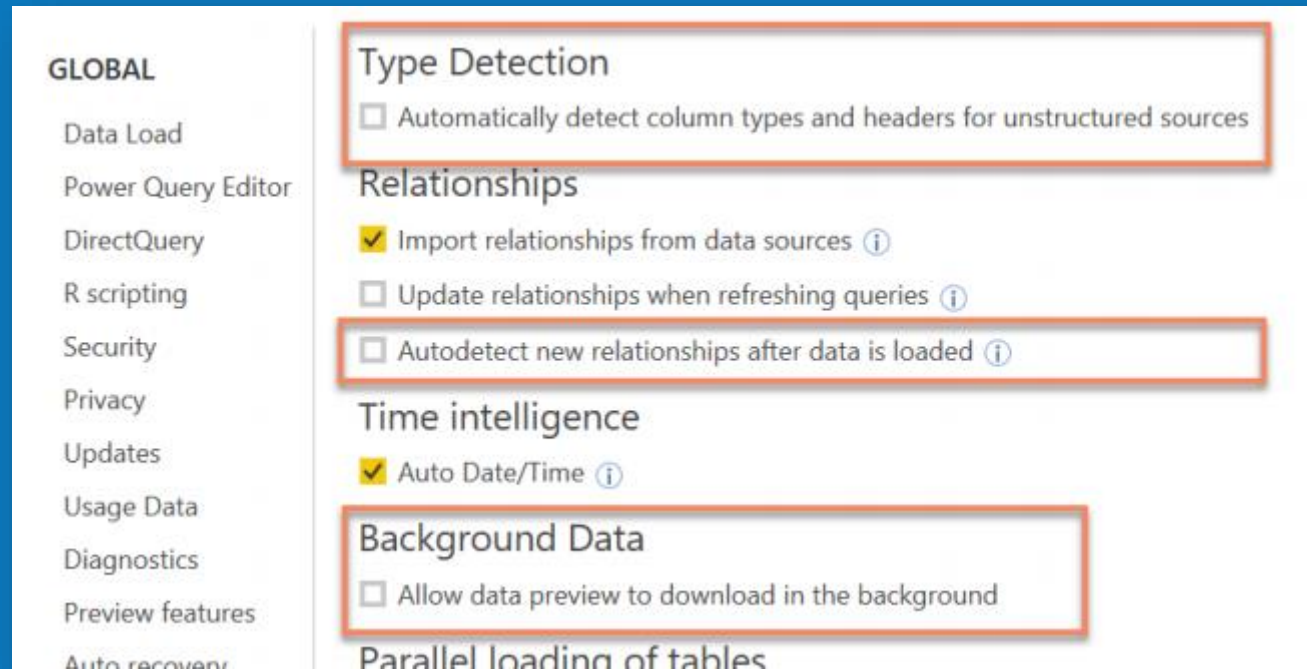


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# LE BASI



# Attenzione alle impostazioni di default







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# Date table

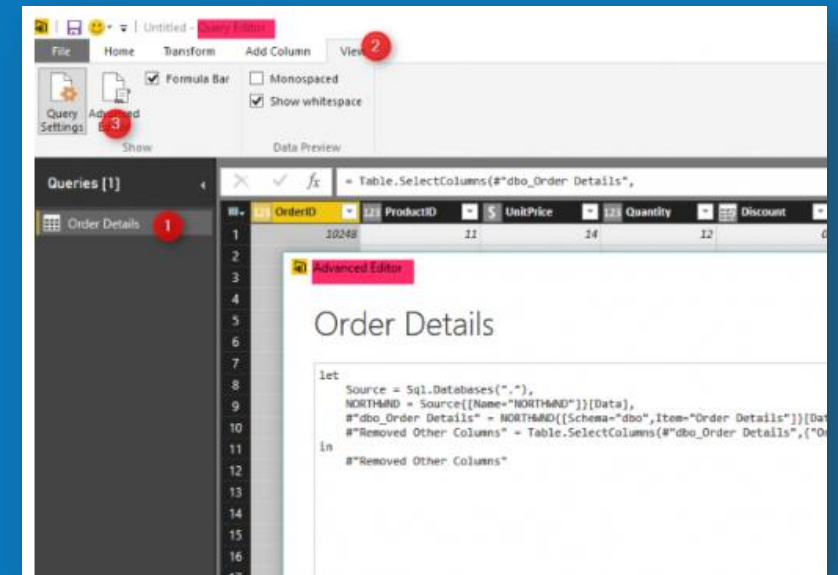
```
let
    P_Today = #date(2016,08,27),
    P_StartDate = #date(2013,1,1),
    P_EndDate = #date(Date.Year(P_Today),12,31),
    P_Culture = "en-US",
    P_Lang = "EN",
    P_FirstDayOfWeek = 1,
    DayCount = Duration.Days(Duration.From(P_EndDate - P_StartDate)) + 1,
    Source = list.Dates(P_StartDate, DayCount, #duration(1,0,0,0)),
    TableFromList = Table.FromList(Source, Splitter.SplitByNothing(),
    ChangedType = Table.TransformColumnTypes(TableFromList,{{"Column1", type date}}),
    RenamedColumns = Table.RenameColumns(ChangedType,{{"Column1", "Date"}}),
    InsertYear = Table.AddColumn(RenamedColumns, "Year", each Date.Year([Date])),
    InsertQuarter = Table.AddColumn(InsertYear, "Quarter", each Date.QuarterOfYear([Date])),
    InsertMonth = Table.AddColumn(InsertQuarter, "Month", each Date.Month([Date])),
    InsertDay = Table.AddColumn(InsertMonth, "Day", each Date.Day([Date])),
    InsertMonthName = Table.AddColumn(InsertDay, "Month (Name)", each Date.ToText([Date], "MMMM", P_Culture), type text),
    InsertShortMonthName = Table.AddColumn(InsertMonthName, "Month (Short Name)", each try(Text.Range([#"Month (Name)"],0,3)) otherwise [#"Month (Short Name)"]),
    InsertCalendarMonth = Table.AddColumn(InsertShortMonthName, "Month of Year", each [#"Month (Short Name)" & " " & Number.ToText([Year])]),
    InsertCalendarQtr = Table.AddColumn(InsertCalendarMonth, "Quarter of Year", each "I" & Number.ToText([Quarter]) & " " & Number.ToText([Year])),
    InsertWeek = Table.AddColumn(InsertCalendarQtr, "Week", each Date.WeekOfYear([Date], P_FirstDayOfWeek)),
    InsertCalendarWeek = Table.AddColumn(InsertWeek, "Week of Year", each "M" & Number.ToText([Week]) & " " & Number.ToText([Year])),
    InsertDayWeek = Table.AddColumn(InsertCalendarWeek, "Week Day", each Date.DayOfWeek([Date], P_FirstDayOfWeek) + 1),
```

- Utilizza una TUA calendar table (M o DAX)
- Es: <https://www.sqlbi.com/articles/reference-date-table-in-dax-and-power-bi/>



# Advanced editor

“Surprisingly, most people don’t know about the Advanced Editor. It is because it’s hidden away inside the Query Editor, which a lot of users don’t utilize as much as they should.”



# Commentare non è il male

DataIndexed

```
let
    //This is a single line comment
    Source = Excel.CurrentWorkbook(){[Name="Data"]}[Content],
    /* This is a multi
       line comment */
    #"Changed Type" = Table.TransformColumnTypes(Source,{{"Product", type text}, {"Order Date",
in
    #"Changed Type"
```

Single line comment

Multi line comment

# Partire con il piede giusto

- Carica solo quello di cui hai effettivamente bisogno
- Pensa alla tua naming convention e sii coerente
- Entità != Tabelle



```
graph TD
    ItalyProvince[ItalyProvince]
    ItalyRegions[ItalyRegions]
    ItalyRegions --- Deceduti["% Deceduti vs Totale Casi"]
    ItalyRegions --- Dimessi["% Dimessi Guariti vs Totale Casi"]
    ItalyRegions --- Isolamento["% Isolamento Domiciliare vs Totale Casi"]
    ItalyRegions --- Popolazione["% Popolazione Contagiata"]
    ItalyRegions --- Ricoverati["% Ricoverati con Sintomi vs Totale Casi"]
    ItalyRegions --- Tamponi["% Tamponi Positivi"]
    ItalyRegions --- TerIntensiva["% Ter. Intensiva vs Tot Casi"]
```

► ItalyProvince  
▾ ItalyRegions  
    % Deceduti vs Totale Casi  
    % Dimessi Guariti vs Totale Casi  
    % Isolamento Domiciliare vs Totale Casi  
    % Popolazione Contagiata  
    % Ricoverati con Sintomi vs Totale Casi  
    % Tamponi Positivi  
    % Ter. Intensiva vs Tot Casi

# Copiare dati da power bi

	Tran Id	Date	Aff Payout Date	Region	Product ID
	100J11	02 January 2011		New Delhi	BS-TEMP
	102J11	03 January 2011		New Delhi	BMC-COURSE
	108J11	07 January 2011		New Delhi	FFCHARTS-TEMP
	115J11	14 January 2011		New Delhi	P&L-TEMP
	118J11	17 January 2011		New Delhi	BS-TEMP
	121J11	21 January 2011		New Delhi	P&L-TEMP
	127J11	29 January 2011		New Delhi	BS-TEMP
	138F11	17 February 2011		New Delhi	FFCHARTS-TEMP
	139F11	18 February 2011		New Delhi	CFM-COURSE
	143F11	20 February 2011		New Delhi	R&M-EBK
	144F11	20 February 2011		New Delhi	CFM-COURSE
	149M11	01 March 2011		New Delhi	CF-TEMP
	150M11	06 March 2011		New Delhi	R&M-EBK
	151M11	08 March 2011		New Delhi	R&M-EBK



AZURE DATA

# La data quality è *\*sempre\** tua responsabilità

Data	Citta	Casi Confermati
01/05/2020	Brescia	12
01/05/2020	Bergamo	21
02/05/2020	Brescia	14
02/05/2020	Bergamo	21
02/05/2020	Brescia	14
03/05/2020	Brescia	16
03/05/2020	Bergamo	22



AZURE DATA

# La data quality è \*sempre\* tua responsabilità

Data	Città	Casi Confermati
01/05/2020	Brescia	12
01/05/2020	Bergamo	21
02/05/2020	Brescia	14
02/05/2020	Bergamo	21
02/05/2020	Brescia	14
03/05/2020	Brescia	16
03/05/2020	Bergamo	22



1	COUNTIF for Duplicate Rows =
2	COUNTROWS
3	FILTER(
4	ALL(ConfermatiCittà);
5	EARLIER(ConfermatiCittà[Data]) = ConfermatiCittà[Data] && EARLIER(ConfermatiCittà[Città]) = ConfermatiCittà[Città]
6	)
7	)

Data	Città	Casi Confermati	COUNTIF for Duplicate Rows
venerdì 1 maggio 2020	Brescia	12	1
venerdì 1 maggio 2020	Bergamo	21	1
sabato 2 maggio 2020	Brescia	14	2
sabato 2 maggio 2020	Bergamo	21	1
sabato 2 maggio 2020	Brescia	14	2
domenica 3 maggio 2020	Brescia	16	1
domenica 3 maggio 2020	Bergamo	22	1



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# DATASOURCE & SIMILARI







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# Matrici sorgenti: attenzione num colonne fisso

267 lines (267 sloc) | 85.5 KB

Raw Blame History

Search this file...

	Province/State	Country/Region	Lat	Long	1/22/20	1/23/20	1/24/20	1/25/20	1/26/20	1/27/20
2		Afghanistan	33.0	65.0	0	0	0	0	0	0
3		Albania	41.1533	20.1683	0	0	0	0	0	0
4		Algeria	28.0339	1.6596	0	0	0	0	0	0
5		Andorra	42.5063	1.5218	0	0	0	0	0	0

```
1 let
2 ... Source = Csv.Document(Web.Contents("https://raw.githubusercontent.com/CSSEGISandData/COVID-19/master/csse_covid_19_data/csse_covid_19_time_series/time_series_covid19_confirmed_global.csv"),[Delimiter=";", Columns=104, Encoding=65001, QuoteStyle=QuoteStyleNone])
3 ... #"Changed Type" = Table.TransformColumnTypes(Source,{{"Column1", type text}, {"Column2", type text}, {"Column3", type text}, {"Column4", type text}, {"Column5", type text}, {"Column6", type text}, {"Column7", type text}, {"Column8", type text}})
4 in
5 ... #"Changed Type"
```

```
1 let
2 ... Source = Csv.Document(Web.Contents("https://raw.githubusercontent.com/CSSEGISandData/COVID-19/master/csse_covid_19_data/csse_covid_19_time_series/time_series_covid19_confirmed_global.csv"),[Delimiter=";", Encoding=65001, QuoteStyle=QuoteStyleNone])
3 ... #"Filtered Rows" = Table.SelectRows(Source, each true),
4 ... #"Changed Type" = Table.TransformColumnTypes(#"Filtered Rows",{{"Column1", type text}, {"Column2", type text}, {"Column3", type text}, {"Column4", type text}, {"Column5", type text}, {"Column6", type text}, {"Column7", type text}, {"Column8", type text}}),
5 ... #"Promoted Headers" = Table.PromoteHeaders(#"Changed Type", [PromoteAllScalars=true]),
6 ... #"Changed Type1" = Table.TransformColumnTypes(#"Promoted Headers",{{"Province/State", type text}, {"Country/Region", type text}, {"Lat", type text}, {"Long", type text}, {"1/22/20", Int64.Type}, {"1/23/20", Int64.Type}, {"1/24/20", Int64.Type}, {"1/25/20", Int64.Type}, {"1/26/20", Int64.Type}, {"1/27/20", Int64.Type}}),
7 ... #"Unpivoted Other Columns" = Table.UnpivotOtherColumns(#"Changed Type1", {"Long", "Lat", "Country/Region", "Province/State"}, "Attribute", "Value")
```



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Data20200515.xlsx

Data202005016.xls

...

Abbiamo o no  
il file?  
Che tipo di  
file?

let

```
//provo a scaricare file XSL del giorno corrente
ewb0_xls_dataOdierna = try Excel.Workbook(Web.Contents("https://www.ecdc.europa.eu/sites/default/
Date.ToText(Date.From(Date.AddDays(DateTime.LocalNow(),0)), "YYYY-MM-DD") & ".xls"), nul

//provo a scaricare file XSLX del giorno corrente
ewb1_xlsx_dataOdierna = try Excel.Workbook(Web.Contents("https://www.ecdc.europa.eu/sites/default/
Date.ToText(Date.From(Date.AddDays(DateTime.LocalNow(),0)), "YYYY-MM-DD") & ".xlsx"), nu

//provo a scaricare file XSL del giorno corrente -1
ewb2_xls_ieri = try Excel.Workbook(Web.Contents("https://www.ecdc.europa.eu/sites/default/files,
Date.ToText(Date.From(Date.AddDays(DateTime.LocalNow(),-1)), "YYYY-MM-DD") & ".xls"), nu

//provo a scaricare file XSLX del giorno corrente -1
ewb3_xlsx_ieri = try Excel.Workbook(Web.Contents("https://www.ecdc.europa.eu/sites/default/file:
Date.ToText(Date.From(Date.AddDays(DateTime.LocalNow(),-1)), "YYYY-MM-DD") & ".xlsx"), ni

//verifico cosa è andato in errore per prendere l'oggetto file corretto
oggettoExcel = if ( ewb0_xls_dataOdierna[HasError] ) then
    if (ewb1_xlsx_dataOdierna[HasError] ) then
        if (ewb2_xls_ieri[HasError] ) then
            if (ewb3_xlsx_ieri[HasError] ) then
                ""
            else
                Excel.Workbook(Web.Contents("https://www.ecdc.europa.eu/sites/default/files,
Date.ToText(Date.From(Date.AddDays(DateTime.LocalNow(),-1)), "YYYY-MM-DD"

        else
            Excel.Workbook(Web.Contents("https://www.ecdc.europa.eu/sites/default/files/docum
Date.ToText(Date.From(Date.AddDays(DateTime.LocalNow(),-1)), "YYYY-MM-DD") & ".x

    else
        Excel.Workbook(Web.Contents("https://www.ecdc.europa.eu/sites/default/files/documen
Date.ToText(Date.From(Date.AddDays(DateTime.LocalNow(),0)), "YYYY-MM-DD") & ".xl

    else
        Excel.Workbook(Web.Contents("https://www.ecdc.europa.eu/sites/default/files/documents/C
Date.ToText(Date.From(Date.AddDays(DateTime.LocalNow(),0)), "YYYY-MM-DD") & ".xls"),

// prelevo worksheet corretto
CSV_4_COMS1 = oggettoExcel{[Name="COVID-19-geographic-disbtributi"]}[Data],
```



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# Static table


## 1/2

```
1 let
2   Query1 = #table(
3     type table
4     [
5       #"Gruppo Regioni"=text,
6       #"Regione"=text,
7       #"N"=Int64.Type
8     ],
9     {
10      {"Nord-Ovest", "Piemonte", 1},
11      {"Nord-Ovest", "Valle d'Aosta", 1},
12      {"Nord-Ovest", "Liguria", 1},
13      {"Nord-Ovest", "Lombardia", 1},
14      {"Nord-Est", "P.A. Trento", 2},
15      {"Nord-Est", "P.A. Bolzano", 2},
16      {"Nord-Est", "Veneto", 2},
17      {"Nord-Est", "Friuli Venezia Giulia", 2},
18      {"Nord-Est", "Emilia Romagna", 2},
19      {"Centro", "Toscana", 3},
20      {"Centro", "Umbria", 3},
21      {"Centro", "Marche", 3},
22      {"Centro", "Lazio", 3},
23      {"Sud", "Abruzzo", 4},
24      {"Sud", "Molise", 4},
25      {"Sud", "Campania", 4},
26      {"Sud", "Puglia", 4},
27      {"Sud", "Basilicata", 4},
28      {"Sud", "Calabria", 4},
29      {"Isole", "Sicilia", 5},
30      {"Isole", "Sardegna", 5}
31    }
32  ),
33   #"Added Custom" = Table.AddColumn(Query1, "OrderBy", each Number.ToText([N]) & "_" & [Regione])
34 in
35   #"Added Custom"
```

# Static table 2/2

```
1 Segments_Datatable =  
2 DATATABLE (  
3     "Price Range", STRING,  
4     "Min Price", CURRENCY,  
5     "Max Price", CURRENCY,  
6     {  
7         { "Low", 0, 10 },  
8         { "Medium", 10, 100 },  
9         { "High", 100, 9999999 }  
10    }  
11 )
```

 COPY  DAX CONVENTIONS  CODE #2

FORMAT CODE WITH  **DAX**  
FORMATTER

<https://www.sqlbi.com/articles/create-static-tables-in-dax-using-the-datatable-function/>

# Introduction to m in power bi

## Introduction to M in Power BI



[Francesco  
De Chirico](#)

### Attachment(s)



[Introduction to M in Power BI.pdf](#)

Uploaded - Apr 25, 2020

Download

# Github è tuo amico

anbened / dati

Code Issues Pull requests Actions Projects Wiki Security Insights

Branch: master dati / IstatMortalita.csv

anbened Update IstatMortalita.csv

1 contributor

4612 lines (4612 sloc) 287 KB

Raw Blame

We can make this file beautiful and searchable if this error is corrected: No commas found in this CSV file in line 0.

```
1 Citta;Causa iniziale di morte - European Short List;Anno;Valore
2 Barletta-Andria-Trani;alcune malattie infettive e parassitarie;2015;131
3 Barletta-Andria-Trani;alcune malattie infettive e parassitarie;2016;89
4 Barletta-Andria-Trani;alcune malattie infettive e parassitarie;2017;105
5 Barletta-Andria-Trani;malattie della cute e del tessuto sottocutaneo;2015;13
6 Barletta-Andria-Trani;malattie della cute e del tessuto sottocutaneo;2016;7
7 Barletta-Andria-Trani;malattie della cute e del tessuto sottocutaneo;2017;12
8 Barletta-Andria-Trani;tumori;2015;886
9 Barletta-Andria-Trani;tumori;2016;892
10 Barletta-Andria-Trani;tumori;2017;912
11 Barletta-Andria-Trani;disturbi psichici e comportamentali;2015;62
```



Excel formula: = Csv.Document(Web.Contents("https://raw.githubusercontent.com/anbened/dati/master/IstatMortalita.csv"),[De

Column1	Column2	Column3	Column4
1 Citta	Causa iniziale di morte - European Short List	Anno	Valore
2 Barletta-Andria-Trani	alcune malattie infettive e parassitarie	2015	131
3 Barletta-Andria-Trani	alcune malattie infettive e parassitarie	2016	89
4 Barletta-Andria-Trani	alcune malattie infettive e parassitarie	2017	105
5 Barletta-Andria-Trani	malattie della cute e del tessuto sottocutaneo	2015	13
6 Barletta-Andria-Trani	malattie della cute e del tessuto sottocutaneo	2016	7
7 Barletta-Andria-Trani	malattie della cute e del tessuto sottocutaneo	2017	12
8 Barletta-Andria-Trani	tumori	2015	886
9 Barletta-Andria-Trani	tumori	2016	892
10 Barletta-Andria-Trani	tumori	2017	912
11 Barletta-Andria-Trani	disturbi psichici e comportamentali	2015	62

Comma-Separated Values

Basic Advanced

URL: https://raw.githubusercontent.com/anbened/dati/master/IstatMortalita.csv

Open file as: Csv Document

File origin: 65001: Unicode (UTF-8)

Line breaks: Apply all line breaks



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# DATA MODELING







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# DAX Studio è tuo amico (sempre)

VertiPaq Analyzer Preview

Tables	Columns	Relationships	Summary											
Name	Cardinality	Table	Col Size	Data	Dictionary	Hier Size	Encoding	Data Type	RI Violations	User Hier Size	Rel Size	% Table	% DB	Segment
ItalyRegions	1.407	607.115	607.043	138....	315.539	153.280	Many	-	-	0	72	1,77%		
ItalyProvince	7.169	1.118.511	1.116....	160....	811.727	144.224	Many	-	-	0	2.288	3,26%		
TimeSeriesUSA	101.108	1.540.086	1.540....	939....	496.790	103.856	Many	-	-	0	0	4,49%		
UKDailyConfirmedCases	74	54.626	54.626	552	52.626	1.448	Many	-	-	0	0	0,16%		
UKTotalCases	1	2.200	2.200	104	1.680	416	VALUE	-	-	0	0	0,01%		
UKNHSEnglandRegionsCases	7	17.676	17.676	16	17.516	144	Many	-	-	0	0	0,05%		
UKUTLACases	149	24.284	24.284	352	22.148	1.784	Many	-	-	0	0	0,07%		
Scenario	2	17.290	17.290	8	17.202	80	Many	-	-	0	0	0,05%		
ItalyRegionsGroup	21	1.101.398	1.101....	64	1.100.798	536	Many	-	-	0	0	3,21%		
ItalyNationalTrend	67	51.056	51.056	3.176	41.120	6.760	Many	-	-	0	0	0,15%		
ItalyISTAT	41.310	318.076	318.068	165....	90.788	61.984	Many	-	-	0	8	0,93%		
ItalyISTATIta	3	2.131.696	2.131....	32	2.131.504	160	Many	-	-	0	0	6,21%		
ItalyISTATArea	15	3.197.592	3.197....	88	3.197.192	304	Many	-	-	0	8	9,32%		
ItalyISTATRegione	21	4.263.928	4.263....	144	4.263.096	680	Many	-	-	0	8	12,43%		
ItalyISTATCitta	321	4.268.352	4.268....	1.936	4.263.824	2.584	Many	-	-	0	8	12,44%		
ItalyLatLong	7.978	1.275.522	1.259....	63....	940.290	255.424	Many	-	1	0	15.968	3,72%		
ItalyCities	7.979	1.620.555	1.604....	118....	1.188.651	297.112	Many	-	-	0	15.968	4,72%		
TimeSeries	26.600	6.460.708	6.460....	434....	5.862.716	163.376	Many	-	-	0	192	18,83%		
time_series_covid19_deaths_global	26.600	135.488	135.488	41....	82.736	11.568	Many	-	-	0	0	0,39%		
AreaCountry	249	81.562	81.562	808	77.306	3.448	Many	-	1	0	0	0,24%		
time_series_covid19_recovered_global	25.200	161.923	161.923	44....	99.667	17.856	Many	-	-	0	0	0,47%		
IstatMortalita	1.595	2.254.264	2.254....	15....	2.215.952	22.336	Many	-	-	0	104	6,57%		
Citta	107	1.067.584	1.067....	96	1.066.592	896	Many	-	-	0	0	3,11%		
ItalyGruppoRegioneRegioneProvincia	107	75.796	75.796	336	73.956	1.504	Many	-	1	0	0	0,22%		
PostiTerapiaIntensiva	21	1.067.928	1.067....	280	1.066.744	904	Many	-	-	0	0	3,11%		
TimeSeriesCountry	18.700	1.400.980	1.400....	194....	1.135.924	70.704	Many	-	-	0	0	4,08%		



4a225522-64f9-4027-a869-1b38c88fb834

Total Size

32,73 Mb

Last Data Refresh

01/05/2020 11:32:02

Analysis Date

01/05/2020 13:34:14

Compatibility

1465

Tables

26

Columns

275

Server

localhost:52289

- Focus su colonne con alta cardinalità
- Rimuovi colonne inutili
  - (carica solo quanto utile)
- Split colonna per ridurre valori distinti
  - Datetime → date e time

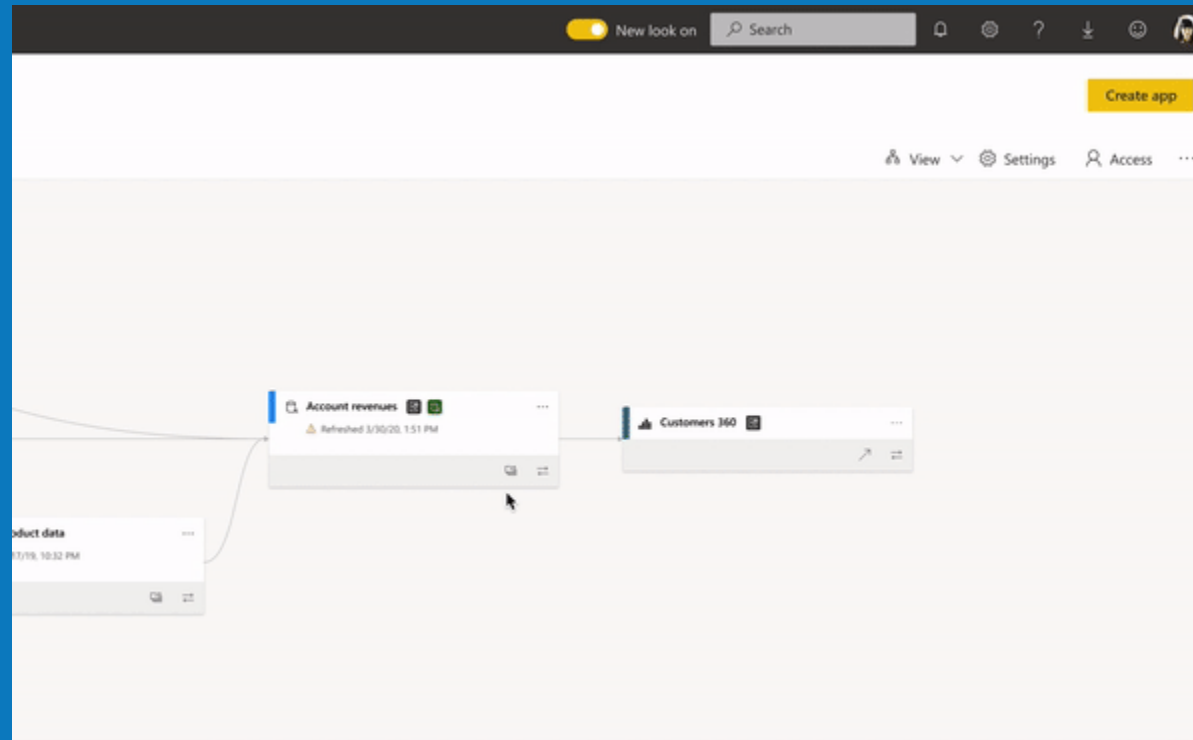


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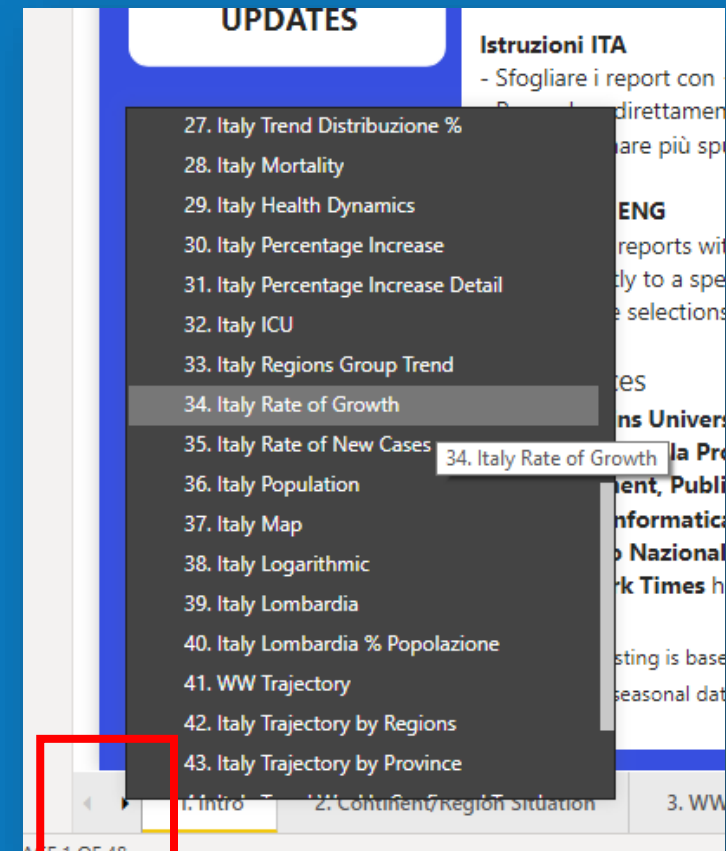
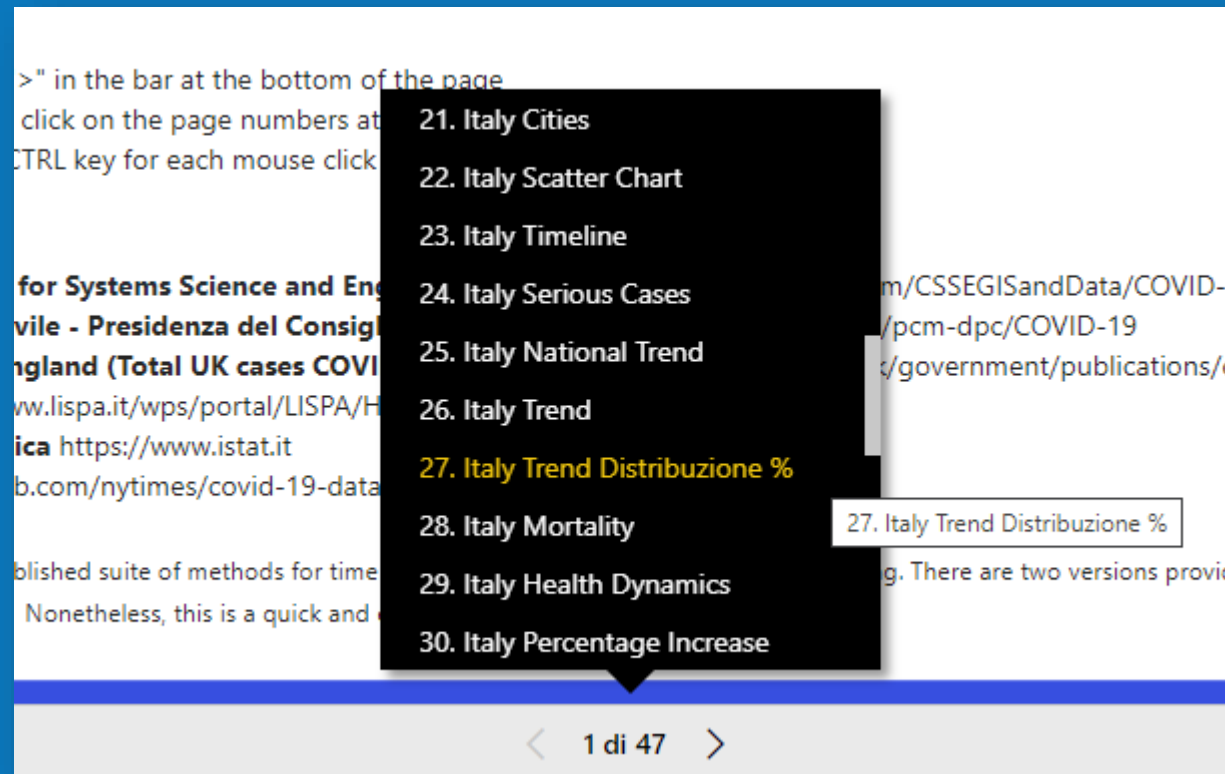
# TIPS & TRICKS



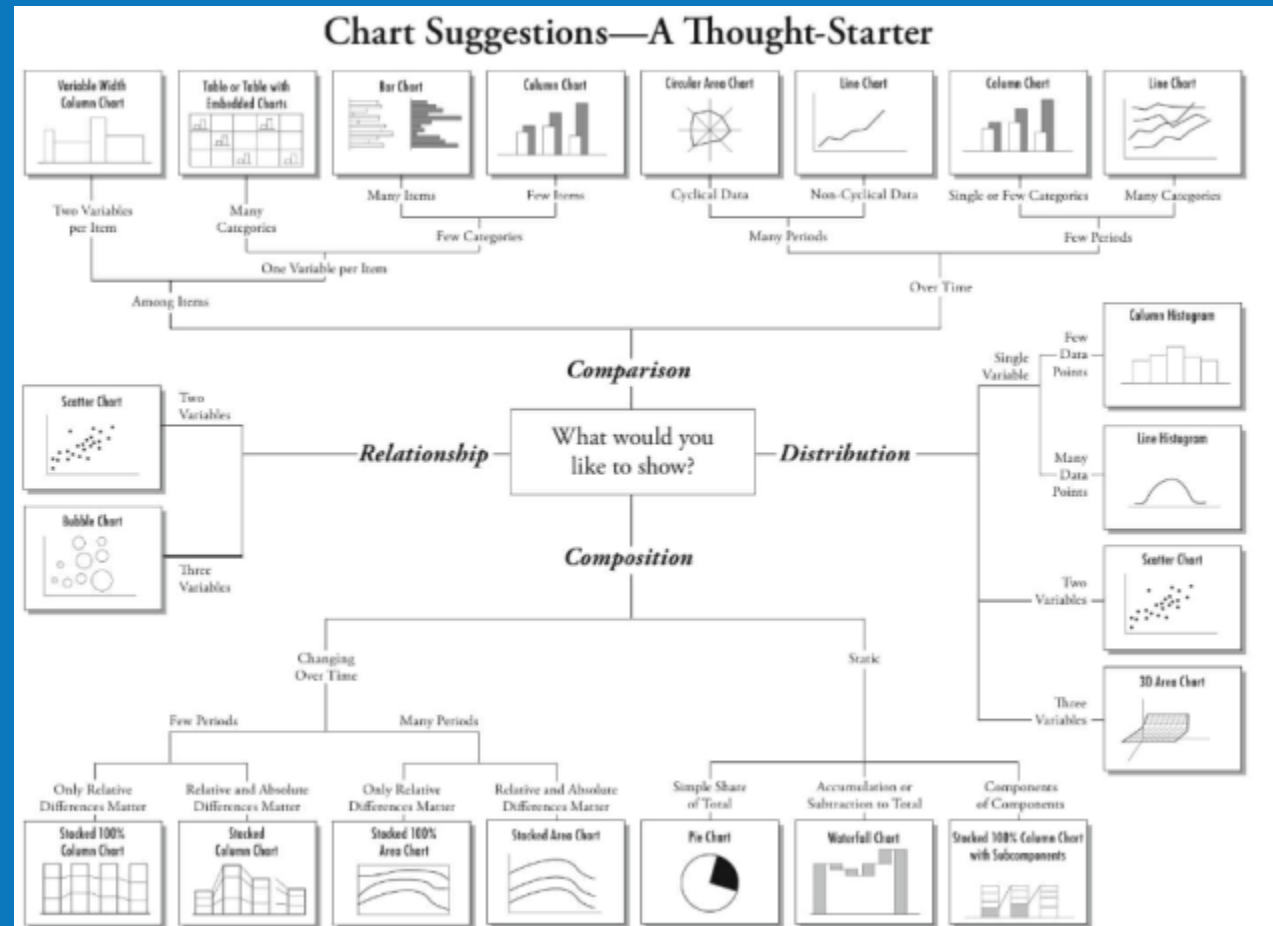
# Power bi lineage view in GA



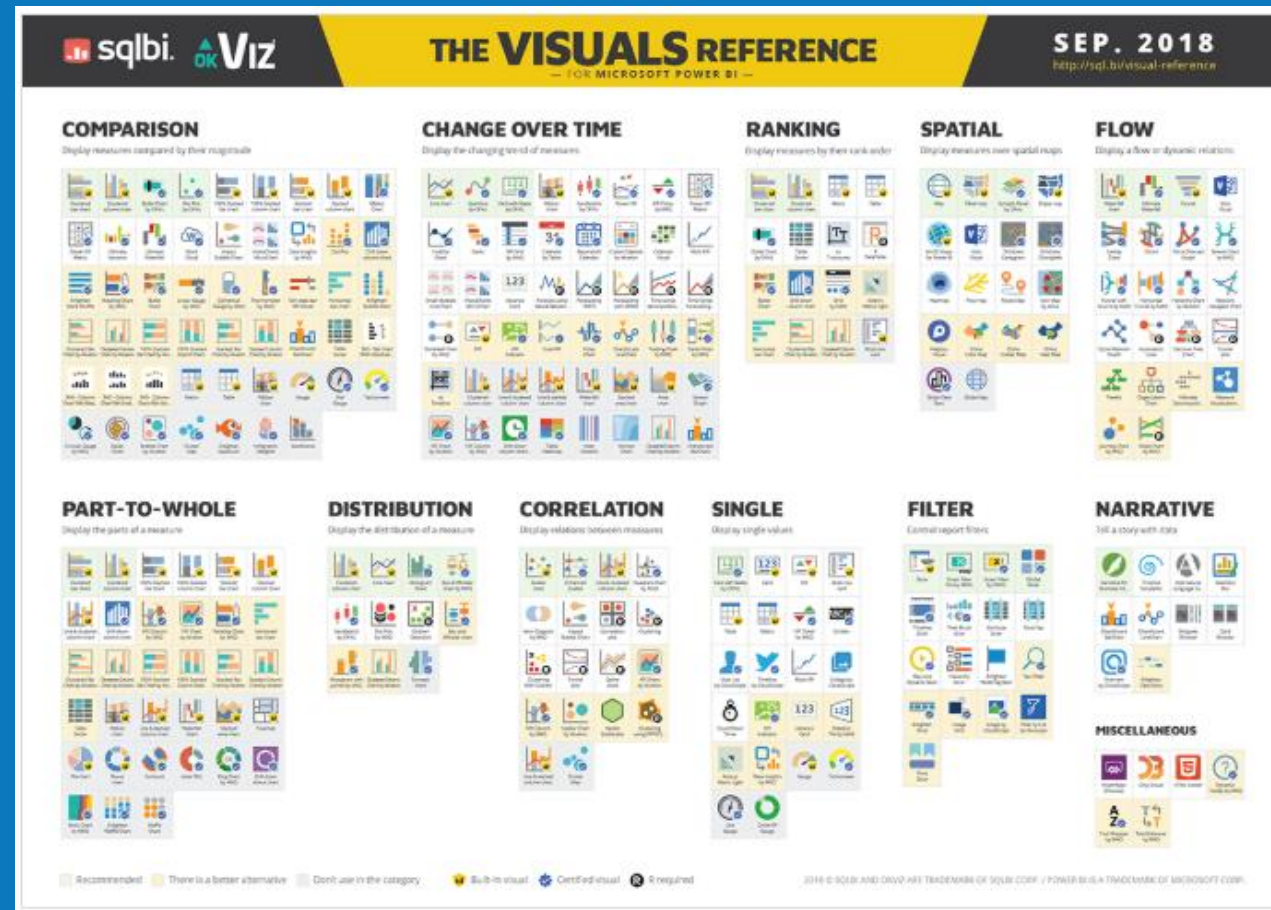
# Report Quickly Switch



"With enough data, the numbers speak for themselves"



# "With enough data, the numbers speak for themselves"



# Template

```
Theme.json - Notepad
File Edit Format View Help
{"name": "Custom", "visualStyles": {"*": {"*": {"border": [{"color": {"solid": {"color": "#FFFFFF"}}, {"show": true, "radius": 10}]}}, "page": {"*": {"background": [{"color": {"solid": {"color": "#374FE0"}}, {"transparency": 0}]}}}}
```

- September 2017 update for PBI desktop: Report Themes.
- Game changer for advanced Power BI user
- You must know how to write it all in JSON →  
<https://powerbi.tips/tools/report-theme-generator-v3/>

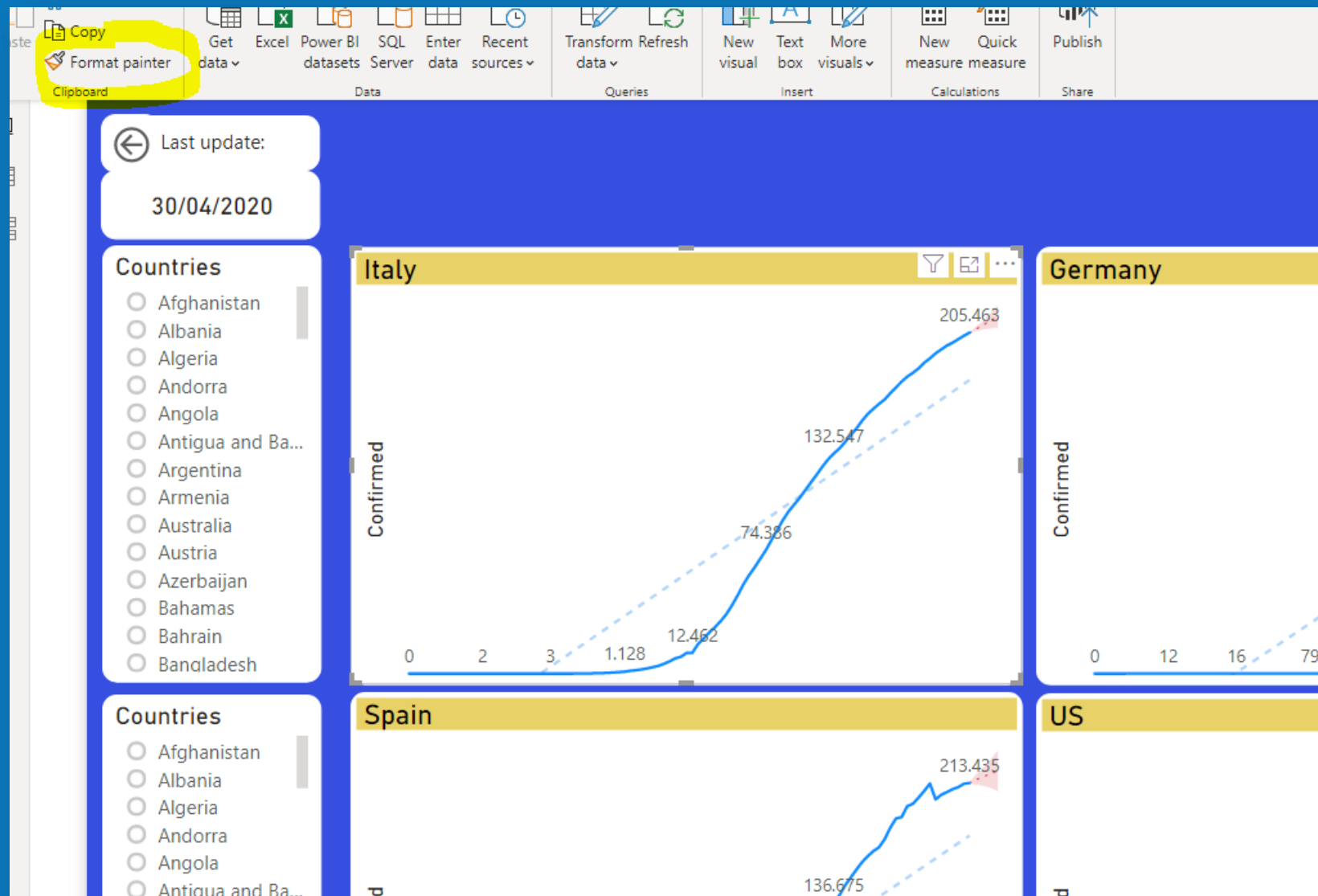




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# Design Tips

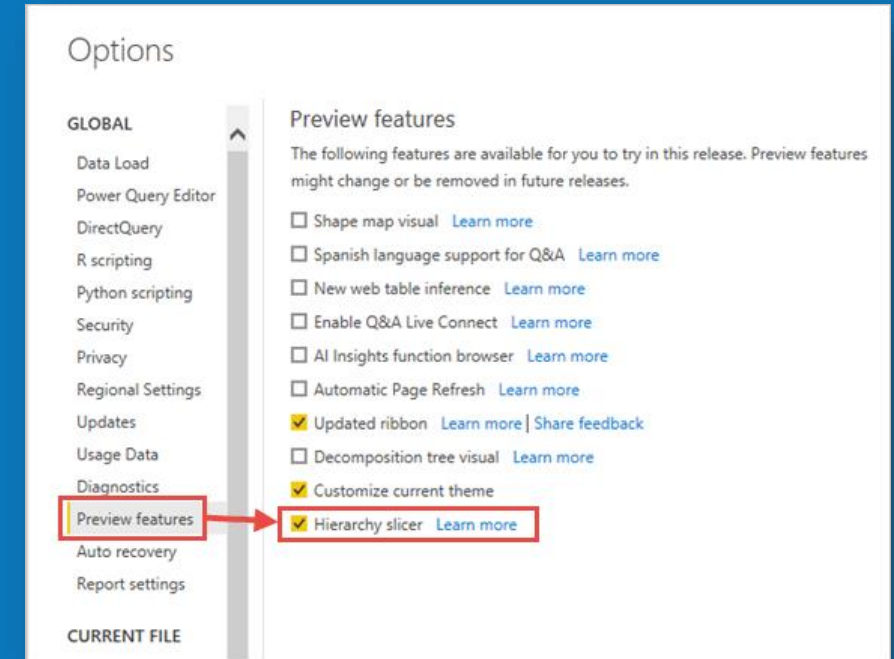
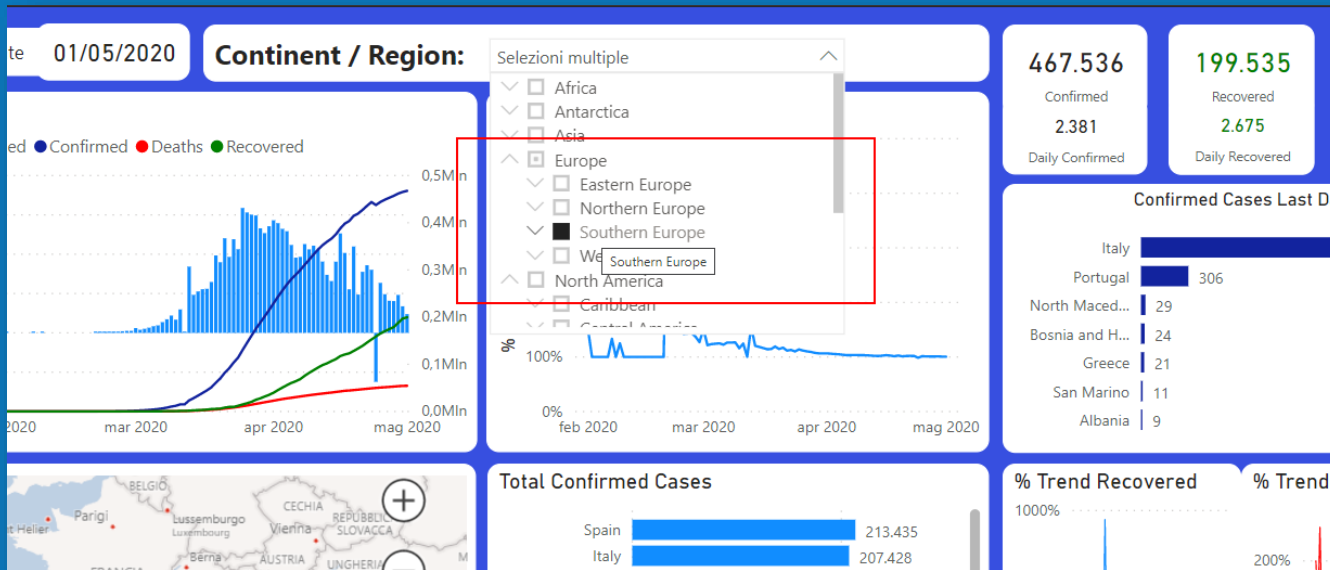
Format painter: click a visual, click format painter, then click on a same type of visualization to switch to former visual's forma





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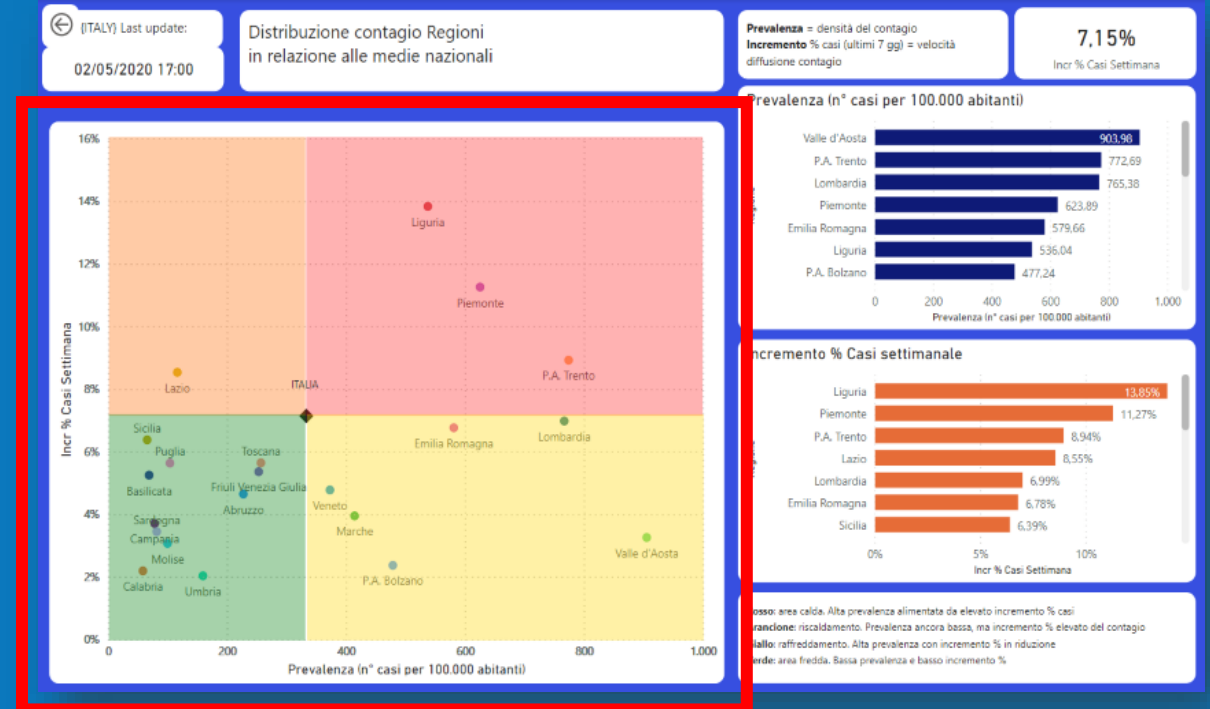
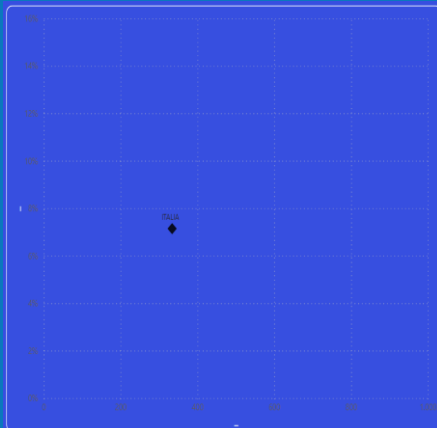
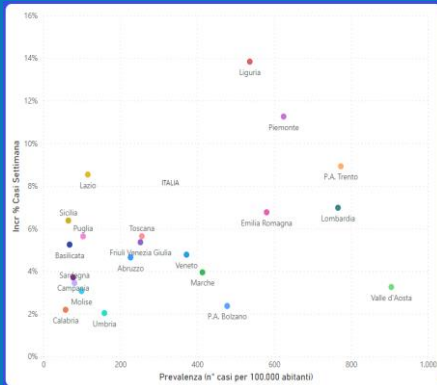
# Preview features



- Hierarchy slicer


- <https://docs.microsoft.com/en-us/power-bi/create-reports/power-bi-slicer-hierarchy-multiple-fields>

# Usate la fantasia...



# ... e power bi ideas

- <https://ideas.powerbi.com/>

 Microsoft

Power BI

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## Power BI Ideas

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### Option to use either light or dark interface.

New Desktop app update installed an almost white user interface. There is zero contrast which is not good for the eyes. I see where some people have requested a light interface so incorporate an option to select either light or dark theme like in the Office apps.

641 comments · Desktop · Flag idea as inappropriate...

 **BACKLOG** · (Program Manager, Power BI, Microsoft Power BI) responded

This is on our roadmap but we don't have a specific timeline to share at this point. We'll update this when we have more details!

282  
votes

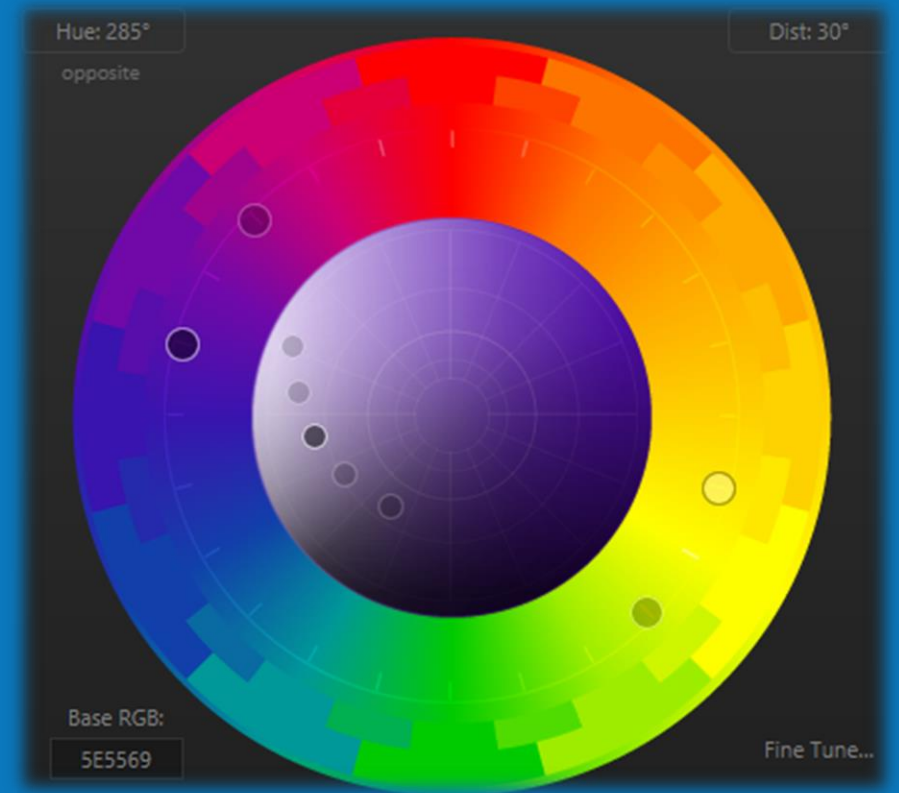
Vote

### Improve performance of MDX queries using Analyze in Excel

When you use Analyze in Excel, MDX queries are sent to the Power BI dataset. If you have a PivotTable with 10 measures, the performance is usually slower compared to a similar Matrix in Power BI with the same content. Power BI generates DAX queries. One of the reasons why this difference exists is that the DAX query is optimized using a process called "fusion"

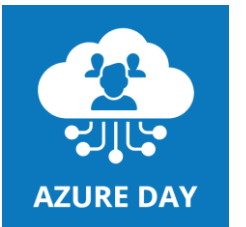
# Disegno e colori

- Color Codes (PBI uses Hex#)
  - <http://www.december.com/html/spec/colorcodes.html>
- Help with determining complementary colors, etc.
  - <http://paletton.com>





Question Time 😊





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# Thank You!!!





Thanks to



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PLURALSIGHT



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