AZURE DAY

Power BI.
Lesson Learned al tempo del Coronavirus

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Microsoft

Grazie!

Microsoft

avanade

REPLY
CLUSTER

Capgemini

blexin.
CON NOI È SEMPLICE

FABARIS

LOBRA

6TH SENSE

PLURALSIGHT

Packt

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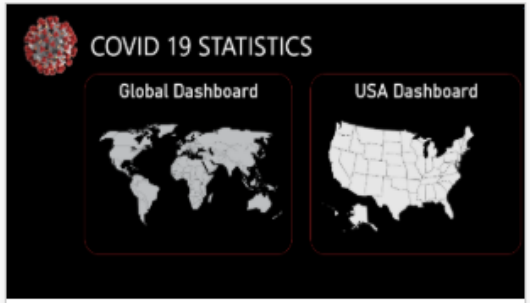
https://community.powerbi.com/t5/COVID-19-Data-Stories-Gallery/bd-p/pbi_covid19_datastories

Microsoft | Power BI Products Pricing Solutions Partners Learn Community

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

Hikmer 4

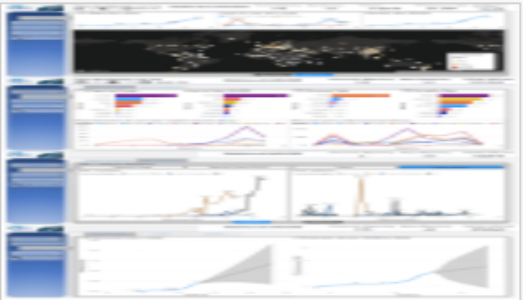


Covid 19 Dashboard - Global and US View

dan-dsecpa 3

Coronavirus Disease (COVID-19)

anbenedetti 3



Power BI Covid19 Model

SteveD2 1

https://aka.ms/covidreport

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

- 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

LE BASI

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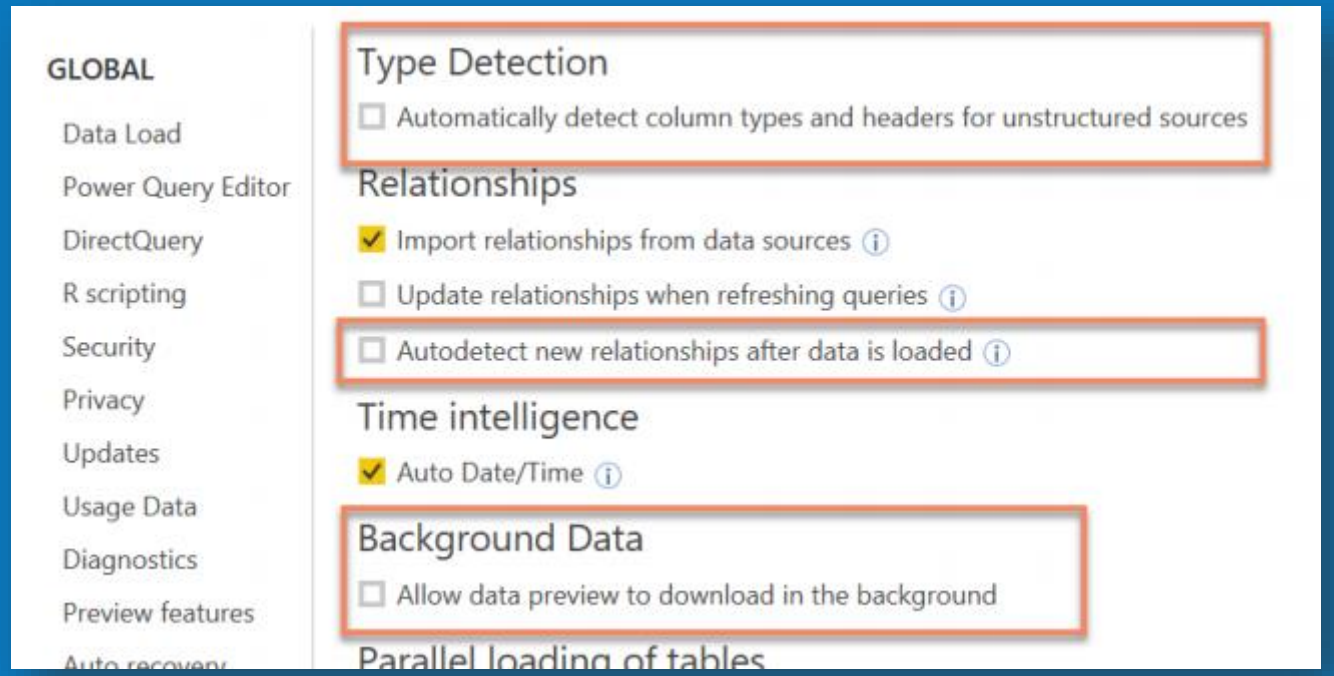
Attenzione alle impostazioni di default



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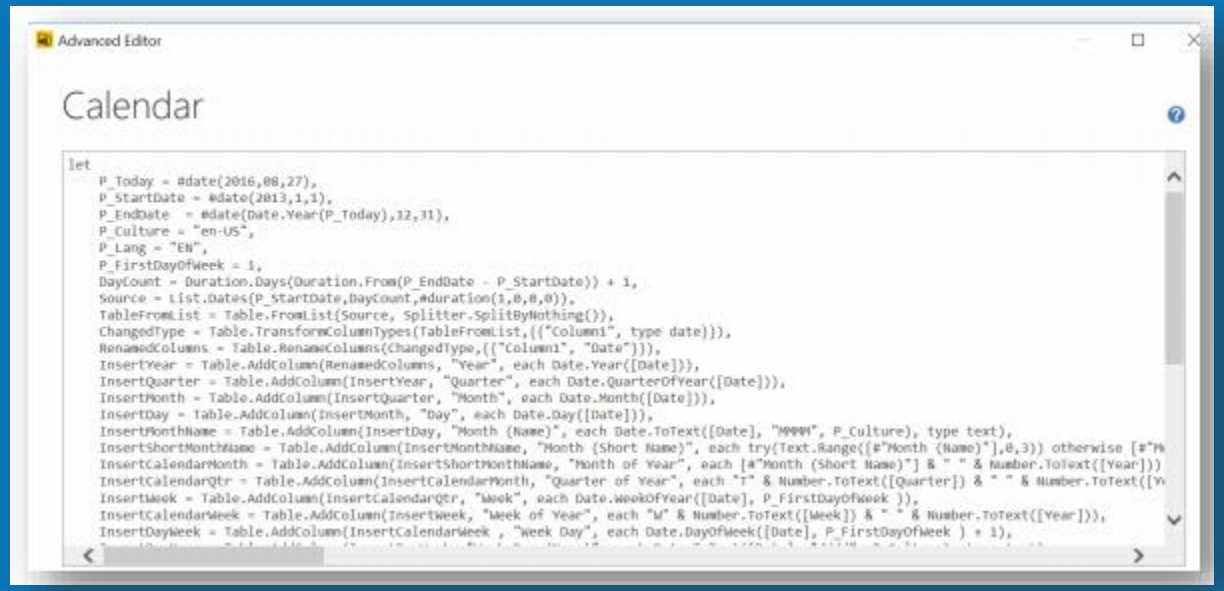
Date table



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

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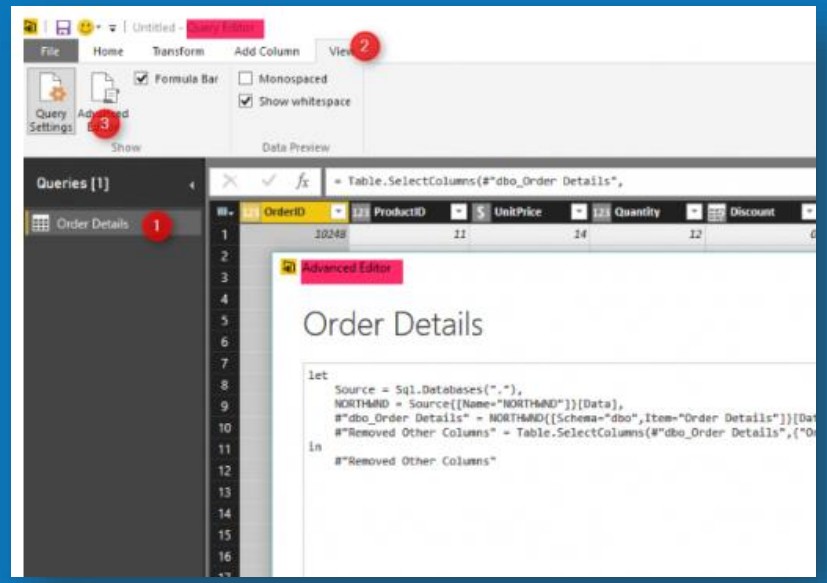
Advanced editor

> *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.*



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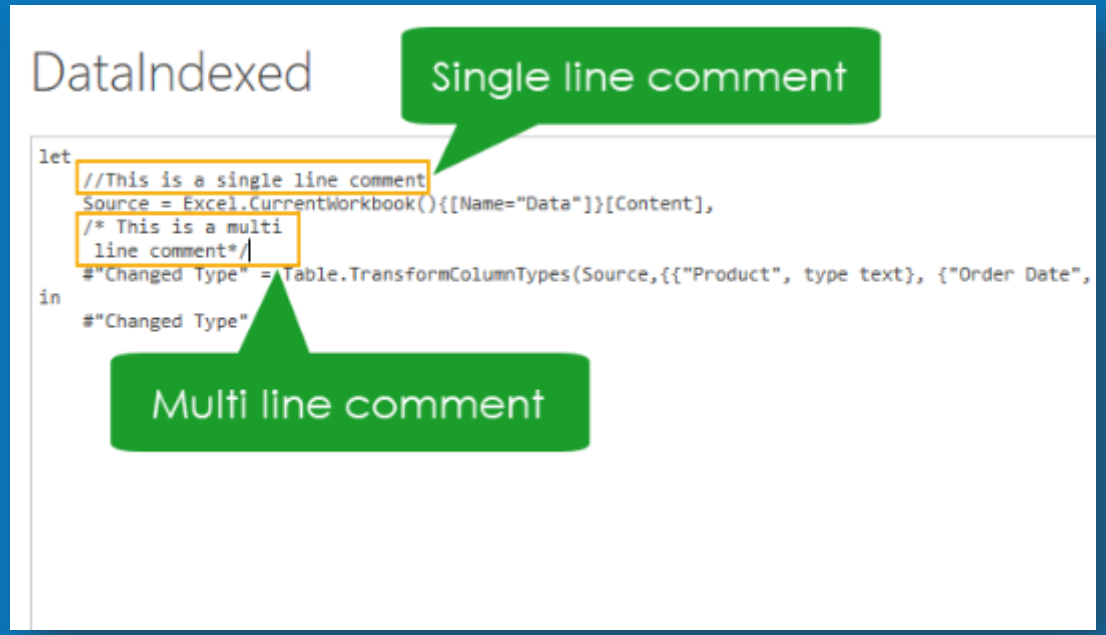
Commentare non è il male



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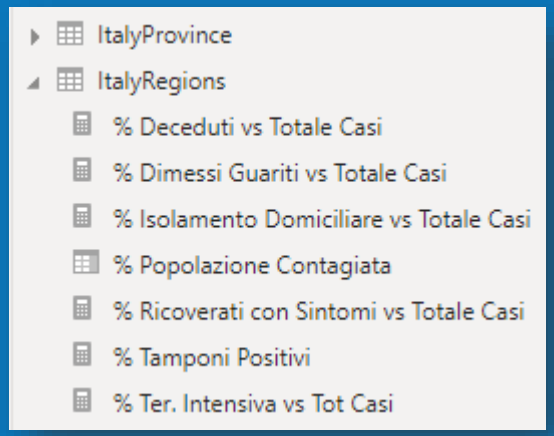
Partire con il piede giusto

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



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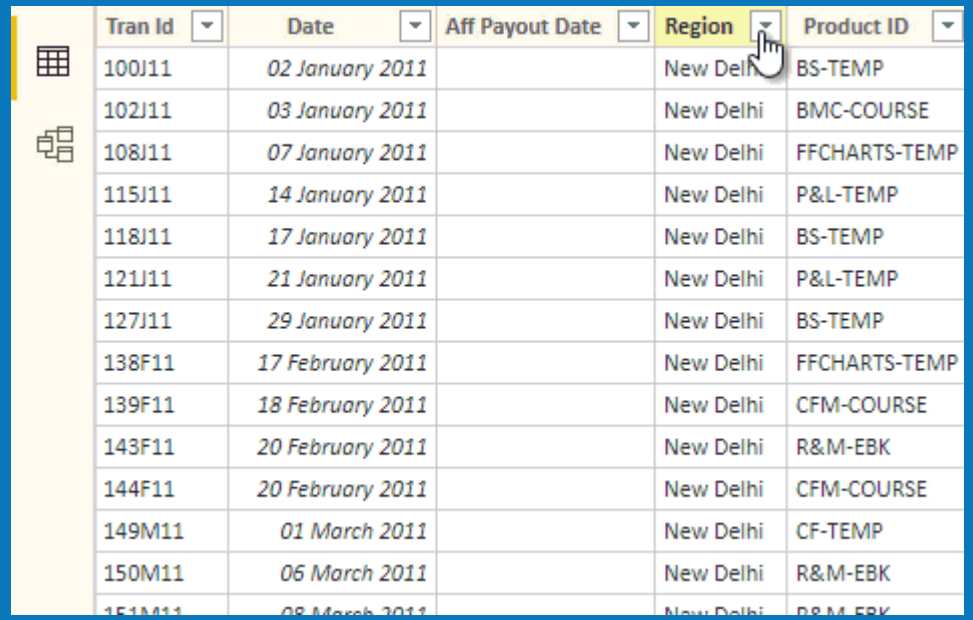
Copiare dati da power bi



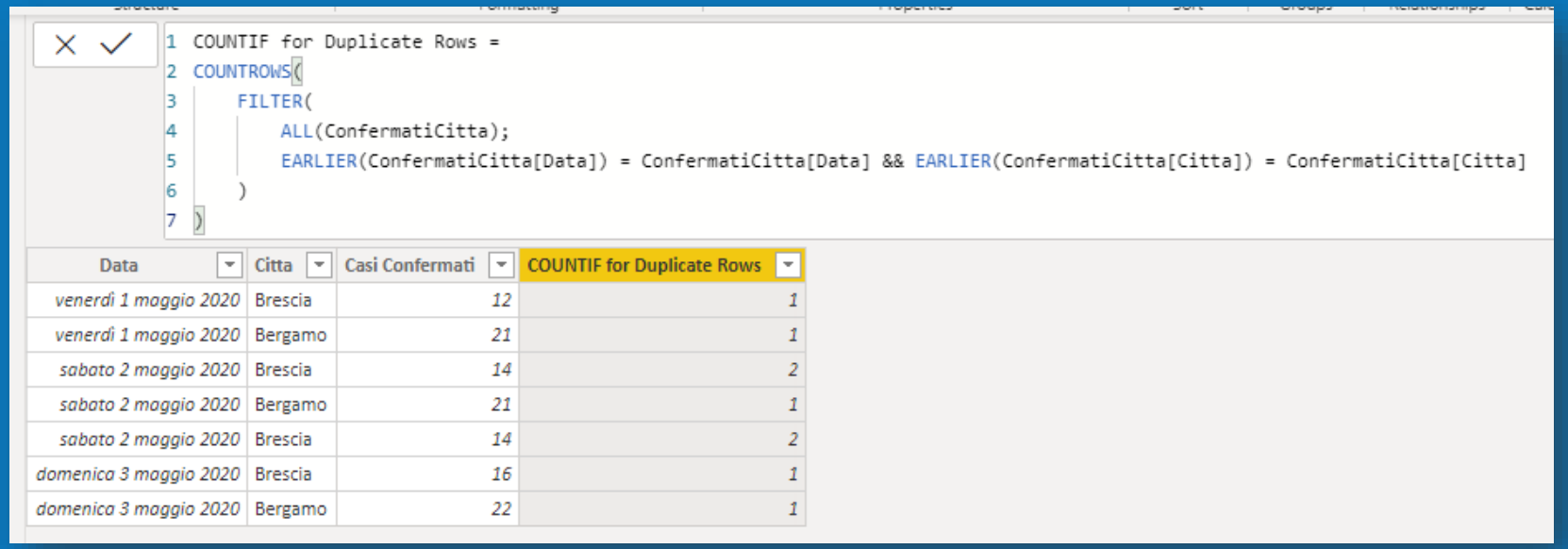
Tran Id	Date	Aff Payout Date	Region	Product ID
100J11	02 January 2011		New Delhi	BS-TEMP
102J11	03 January 2011		New Delhi	BMC-COURSE
108J11	07 January 2011		New Delhi	FFCHARTS-TEMP
115J11	14 January 2011		New Delhi	P&L-TEMP
118J11	17 January 2011		New Delhi	BS-TEMP
121J11	21 January 2011		New Delhi	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

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

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



Data	Citta	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

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	1/27/2
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

```
let
    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=6500
    #"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"
in
    #"Changed Type"
```

```
let
    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, QuoteStyl
    #"Filtered Rows" = Table.SelectRows(Source, each true),
    #"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},
    #"Promoted Headers" = Table.PromoteHeaders(#"Changed Type", [PromoteAllScalars=true]),
    #"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"
    #"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/defaul
        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/defau
        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"), n

//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

```
let
    Query1 = #table(
    type table
    [
    #"Gruppo Regioni"=text,
    #"Regione"=text,
    #"N"=Int64.Type
    ],
    {
        {"Nord-Ovest", "Piemonte", 1},
        {"Nord-Ovest", "Valle d'Aosta", 1},
        {"Nord-Ovest", "Liguria", 1},
        {"Nord-Ovest", "Lombardia", 1},
        {"Nord-Est", "P.A. Trento", 2},
        {"Nord-Est", "P.A. Bolzano", 2},
        {"Nord-Est", "Veneto", 2},
        {"Nord-Est", "Friuli Venezia Giulia", 2},
        {"Nord-Est", "Emilia Romagna", 2},
        {"Centro", "Toscana", 3},
        {"Centro", "Umbria", 3},
        {"Centro", "Marche", 3},
        {"Centro", "Lazio", 3},
        {"Sud", "Abruzzo", 4},
        {"Sud", "Molise", 4},
        {"Sud", "Campania", 4},
        {"Sud", "Puglia", 4},
        {"Sud", "Basilicata", 4},
        {"Sud", "Calabria", 4},
        {"Isole", "Sicilia", 5},
        {"Isole", "Sardegna", 5}
    }
    ),
    #"Added Custom" = Table.AddColumn(Query1, "OrderBy", each Number.ToText([N]) & "_" & [Regione])
in
    #"Added Custom"
```

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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/

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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

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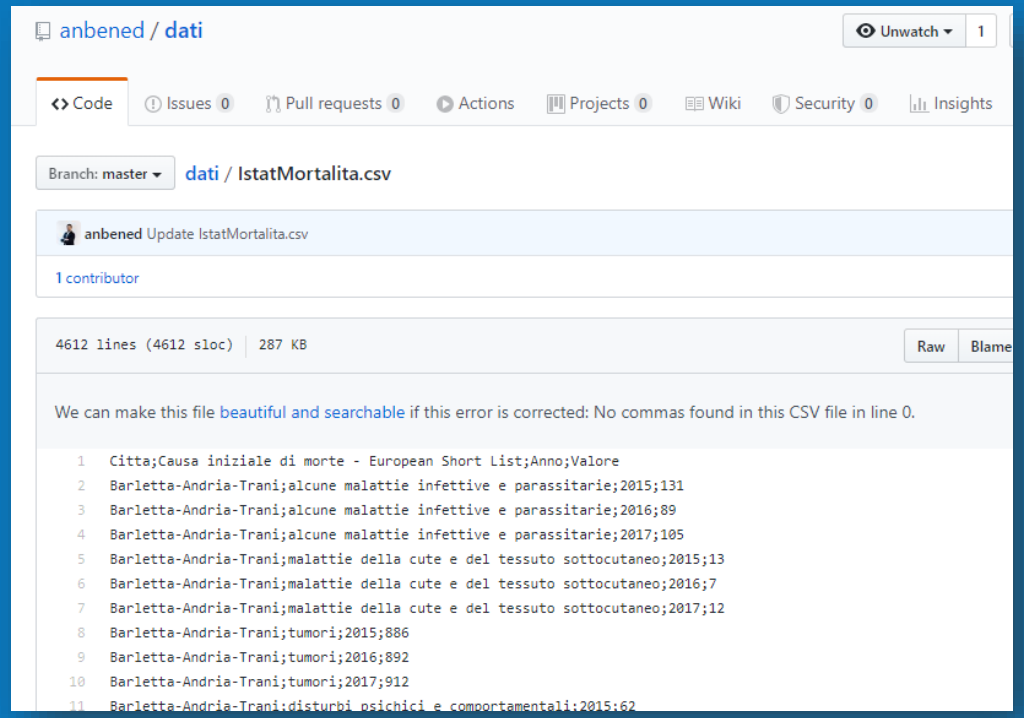
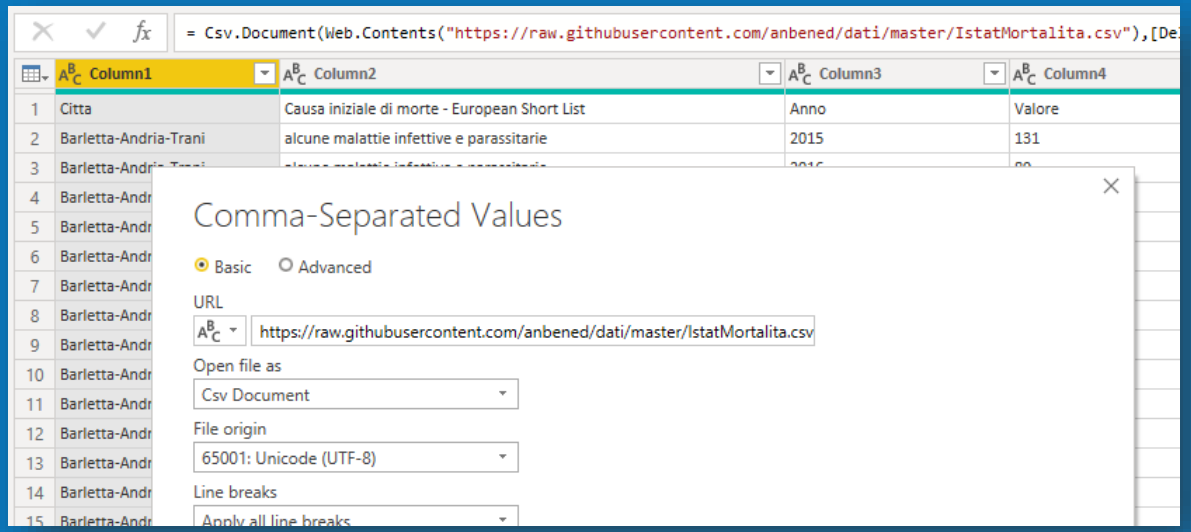
Github è tuo amico





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	Segm
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	Last Data Refresh	Analysis Date
32,73 Mb	01/05/2020 11:32:02	01/05/2020 13:34:14

Compatibility	Tables	Columns	Server
1465	26	275	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

TIPS & TRICKS

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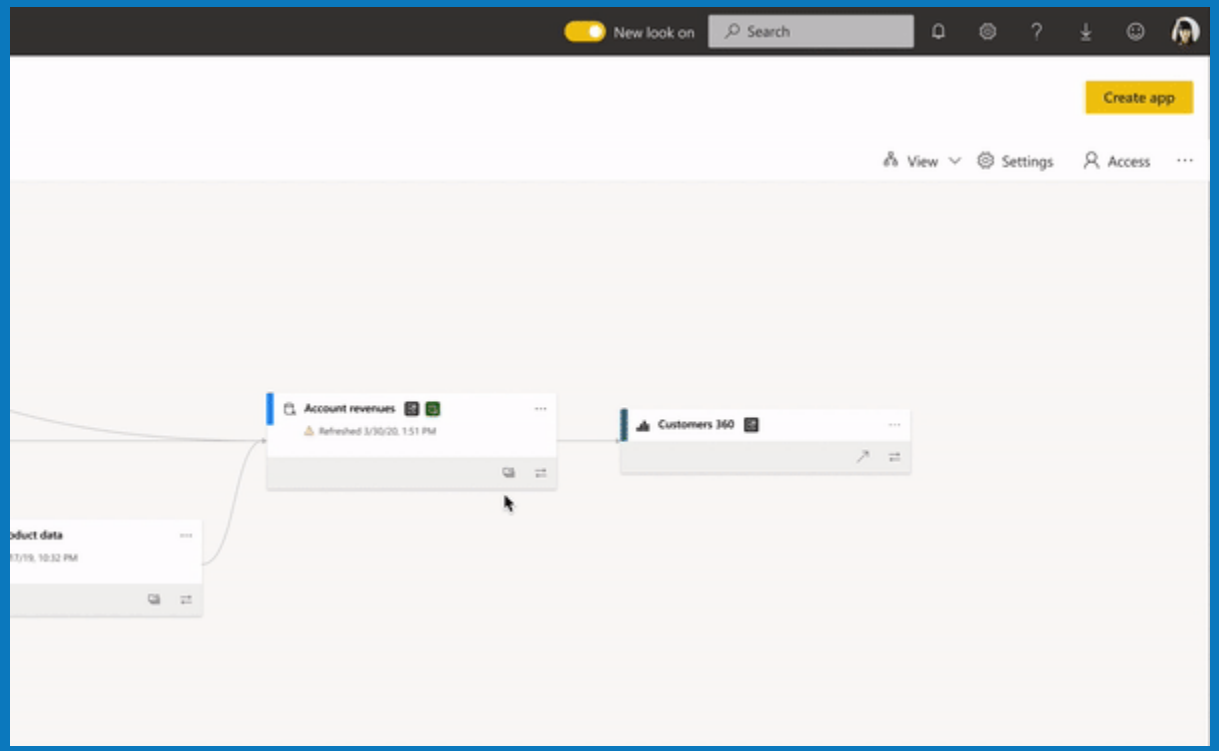
Power bi lineage view in GA



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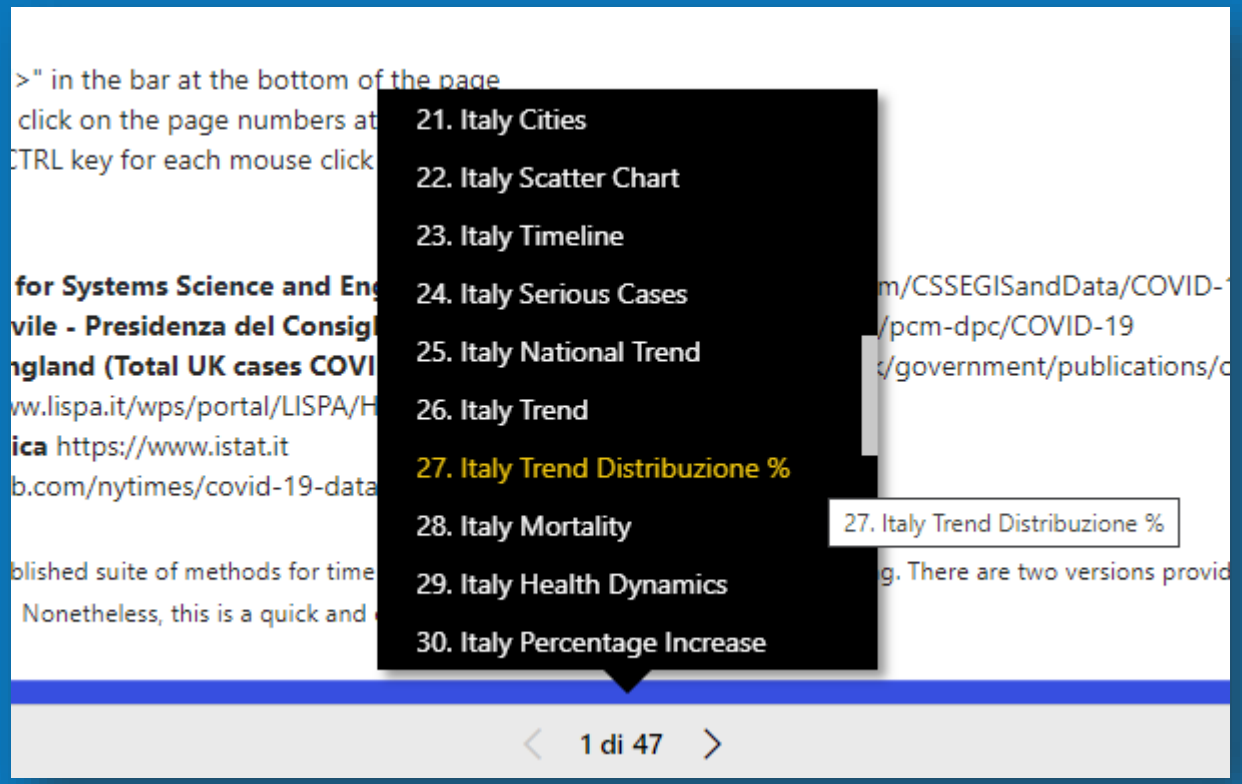
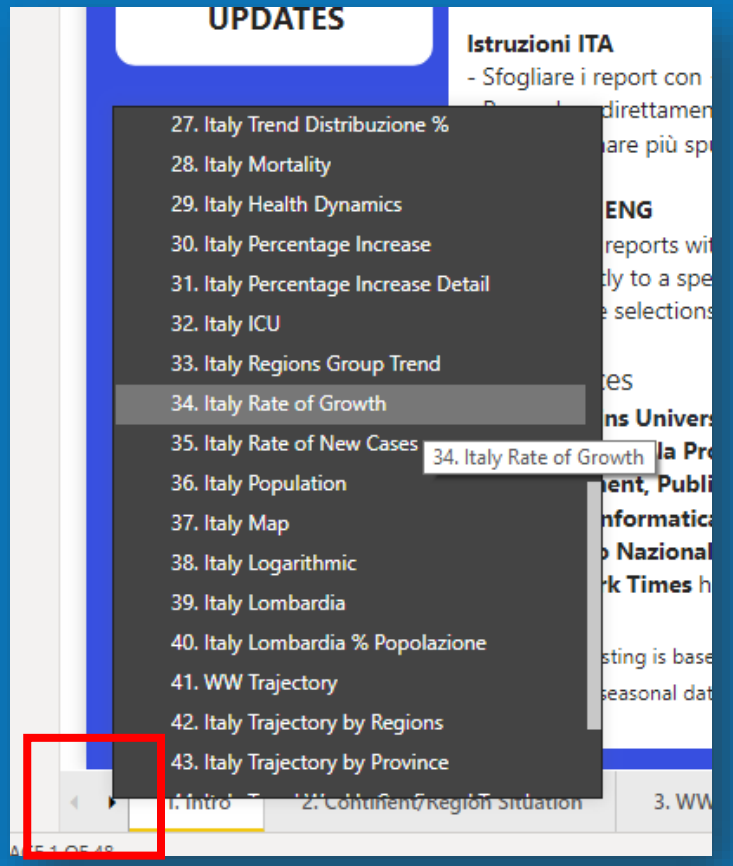
Report Quickly Switch





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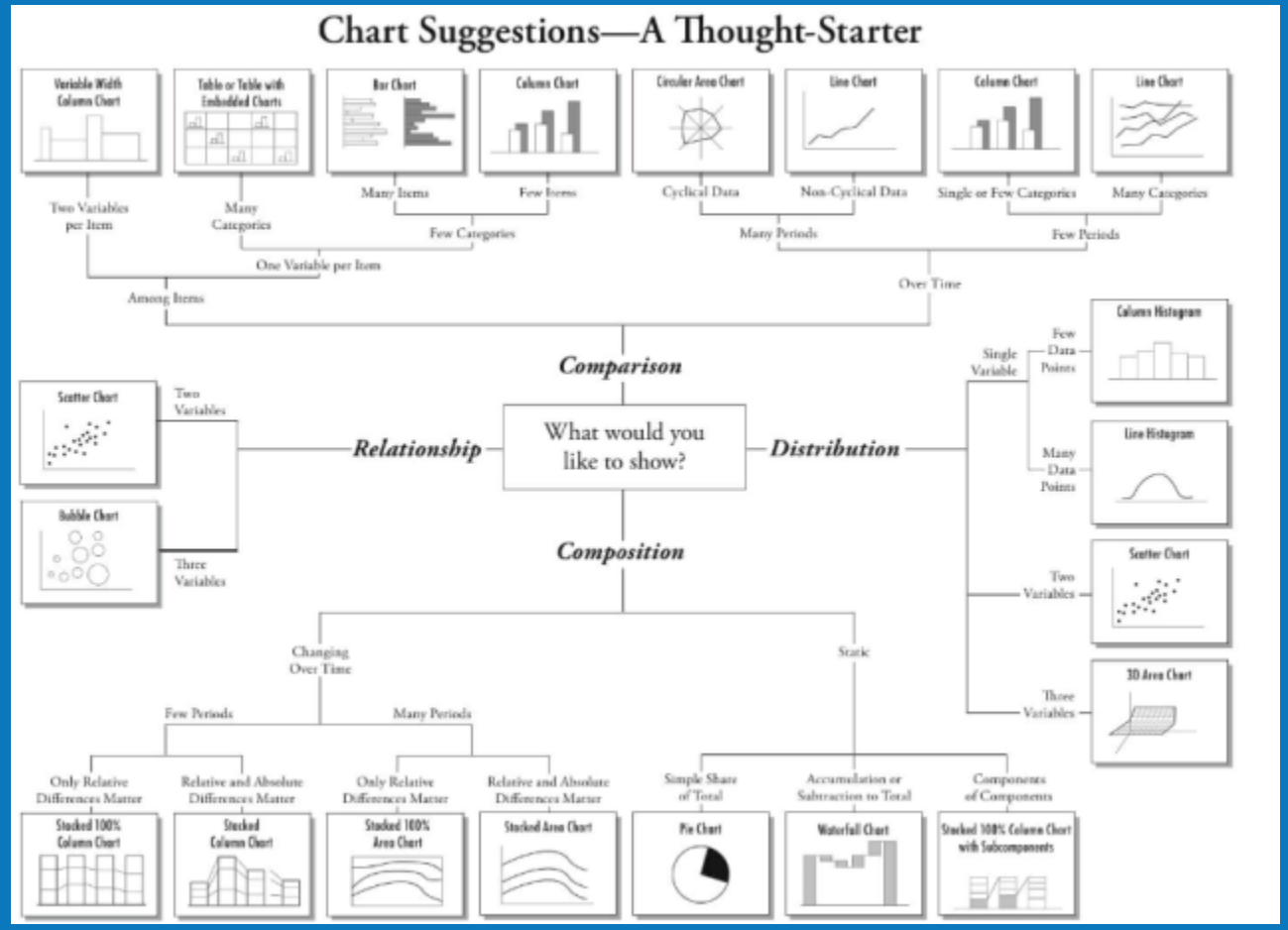
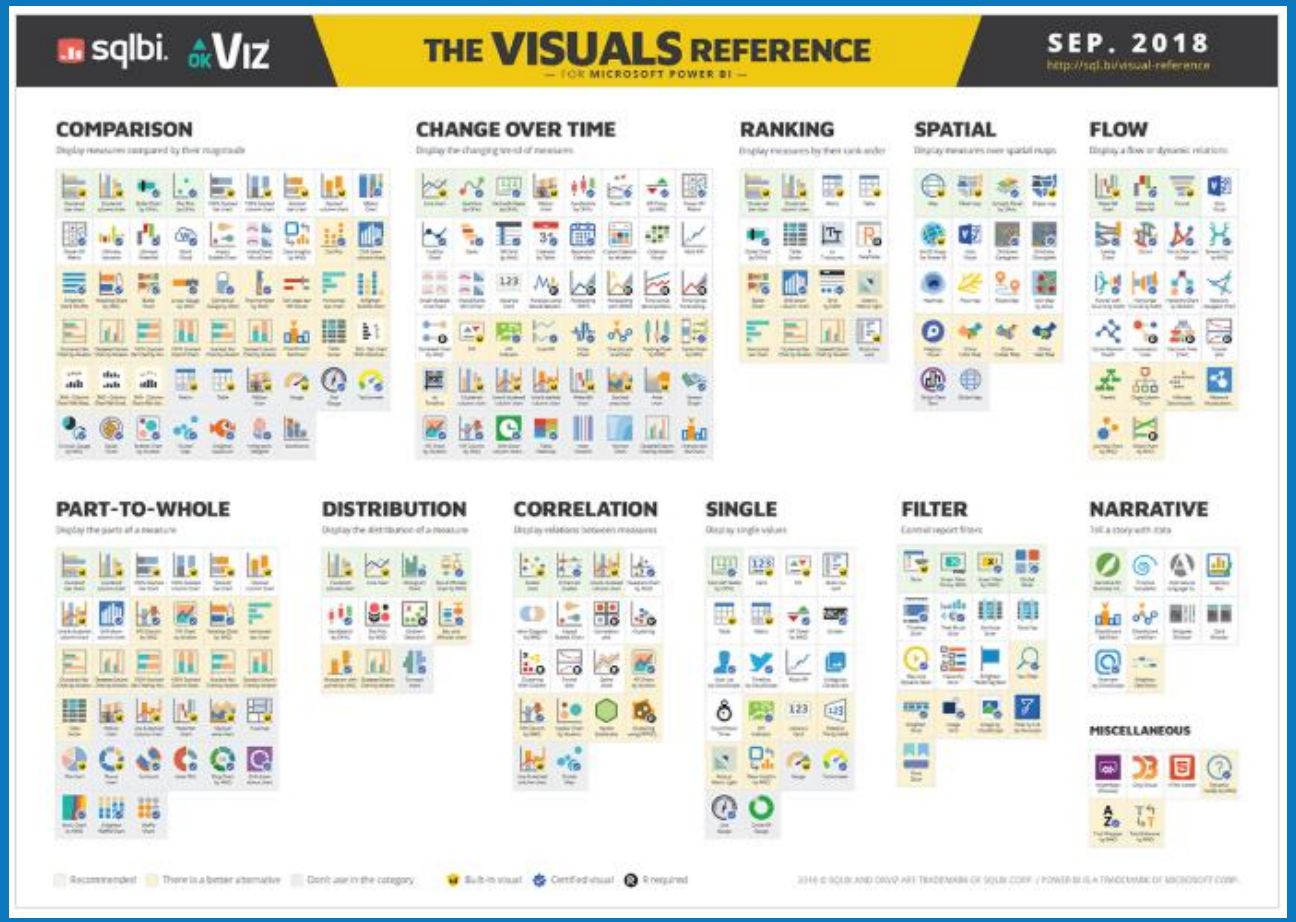
"With enough data, the numbers speak for themselves"



AZURE DAY

"With enough data, the numbers speak for themselves"



https://www.sqlbi.com/ref/power-bi-visuals-reference/

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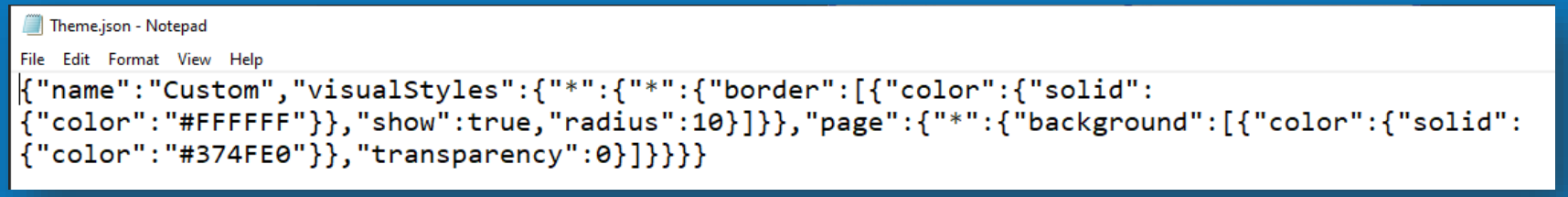
Template



- 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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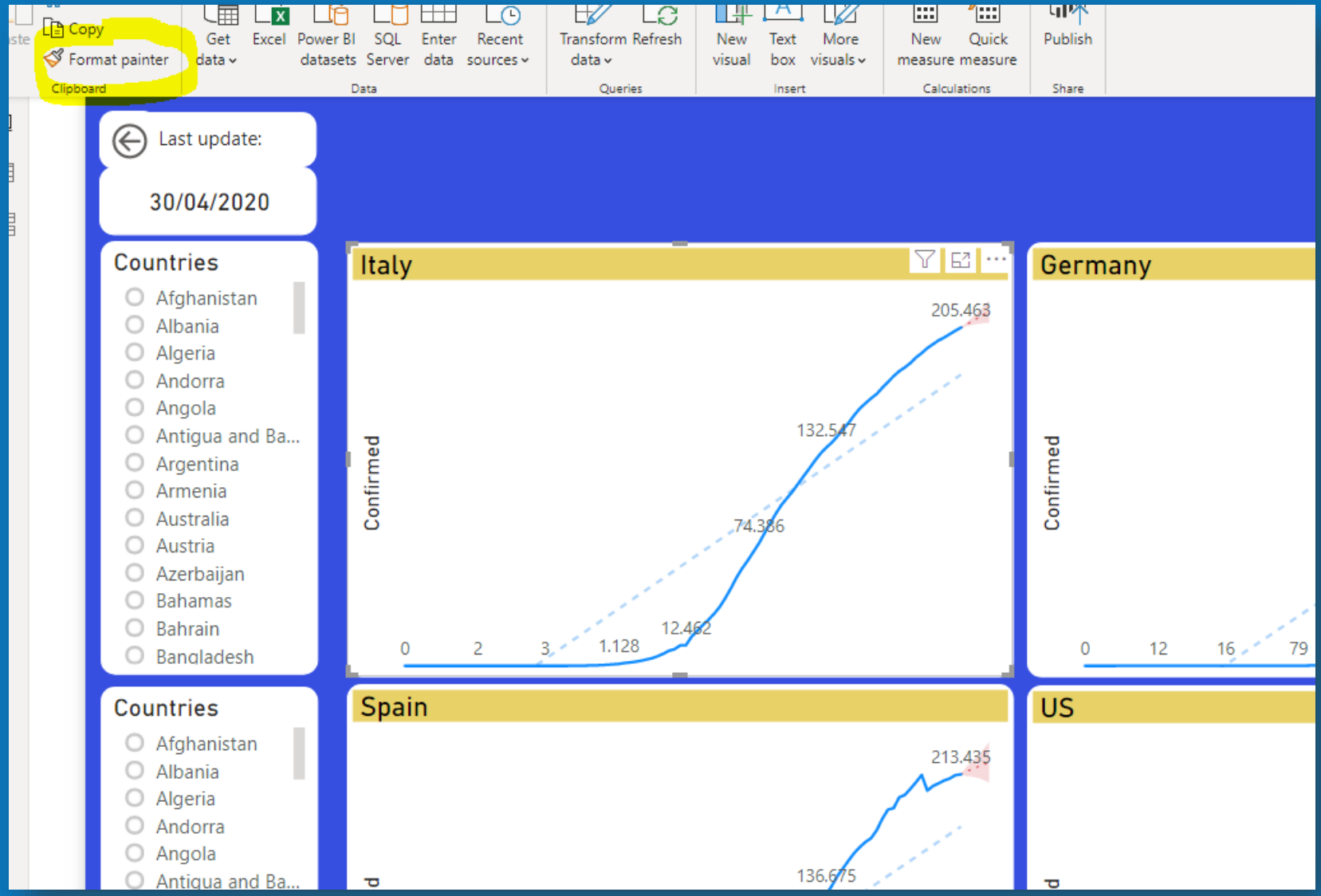
Design Tips

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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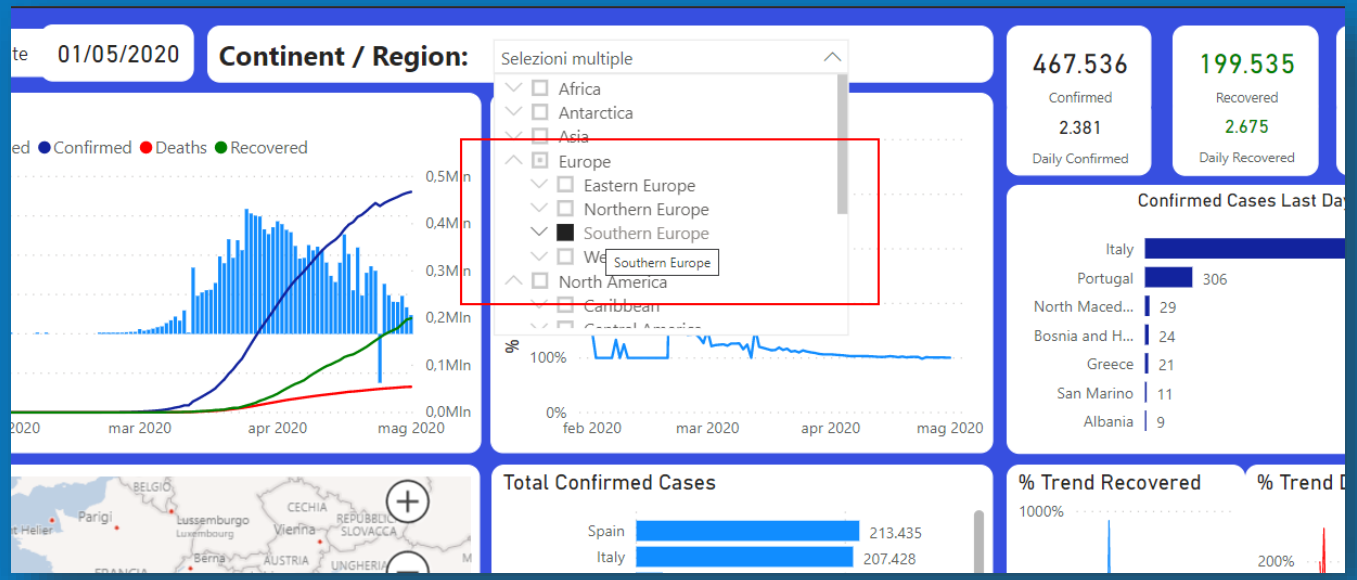
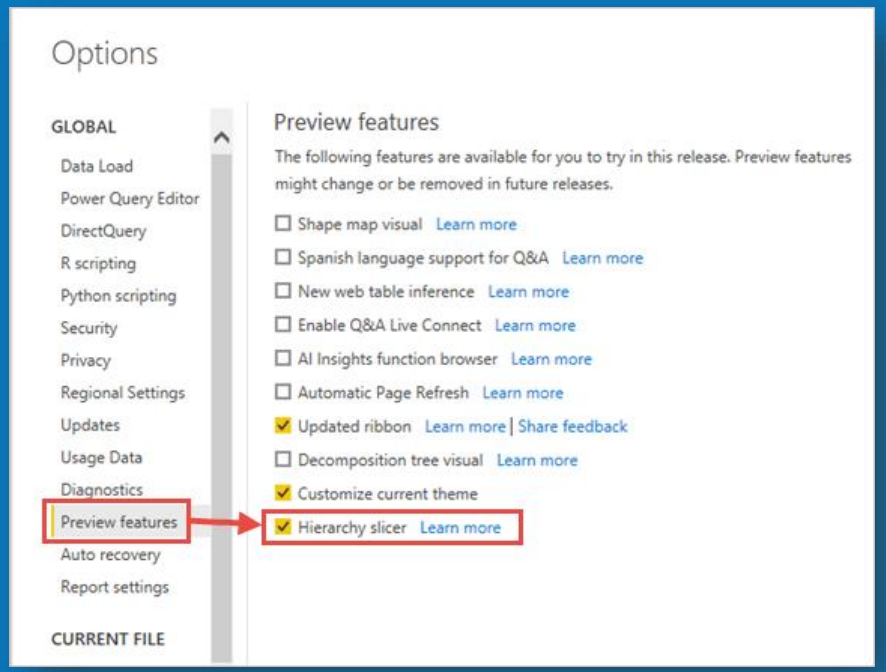
Preview features

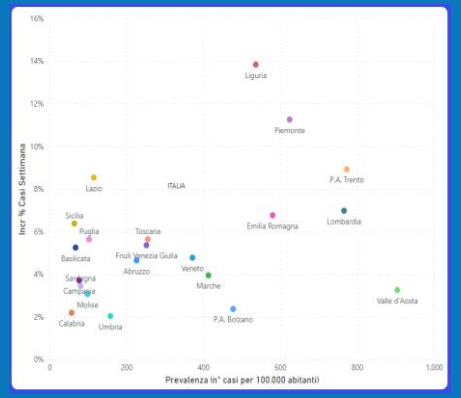


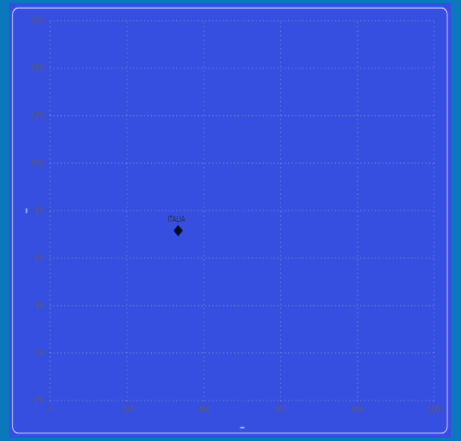


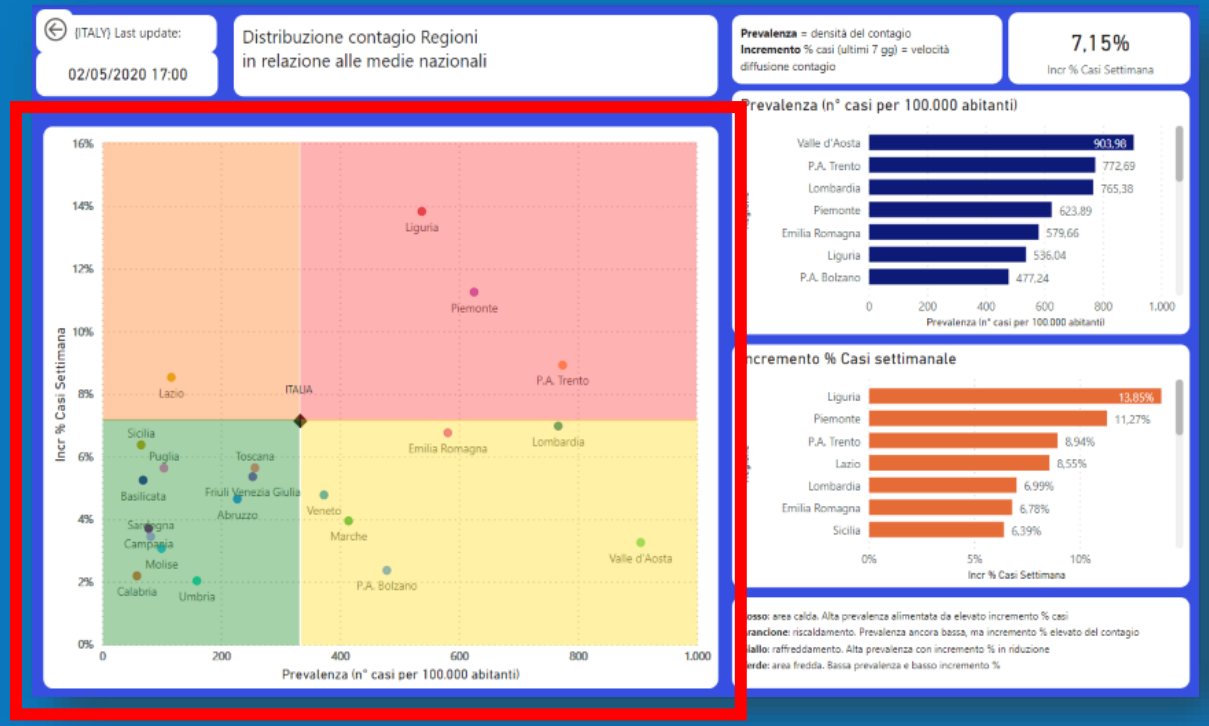
- Hierarchy slicer
  - https://docs.microsoft.com/en-us/power-bi/create-reports/power-bi-slicer-hierarchy-multiple-fields

AZURE DAY

Usate la fantasia…







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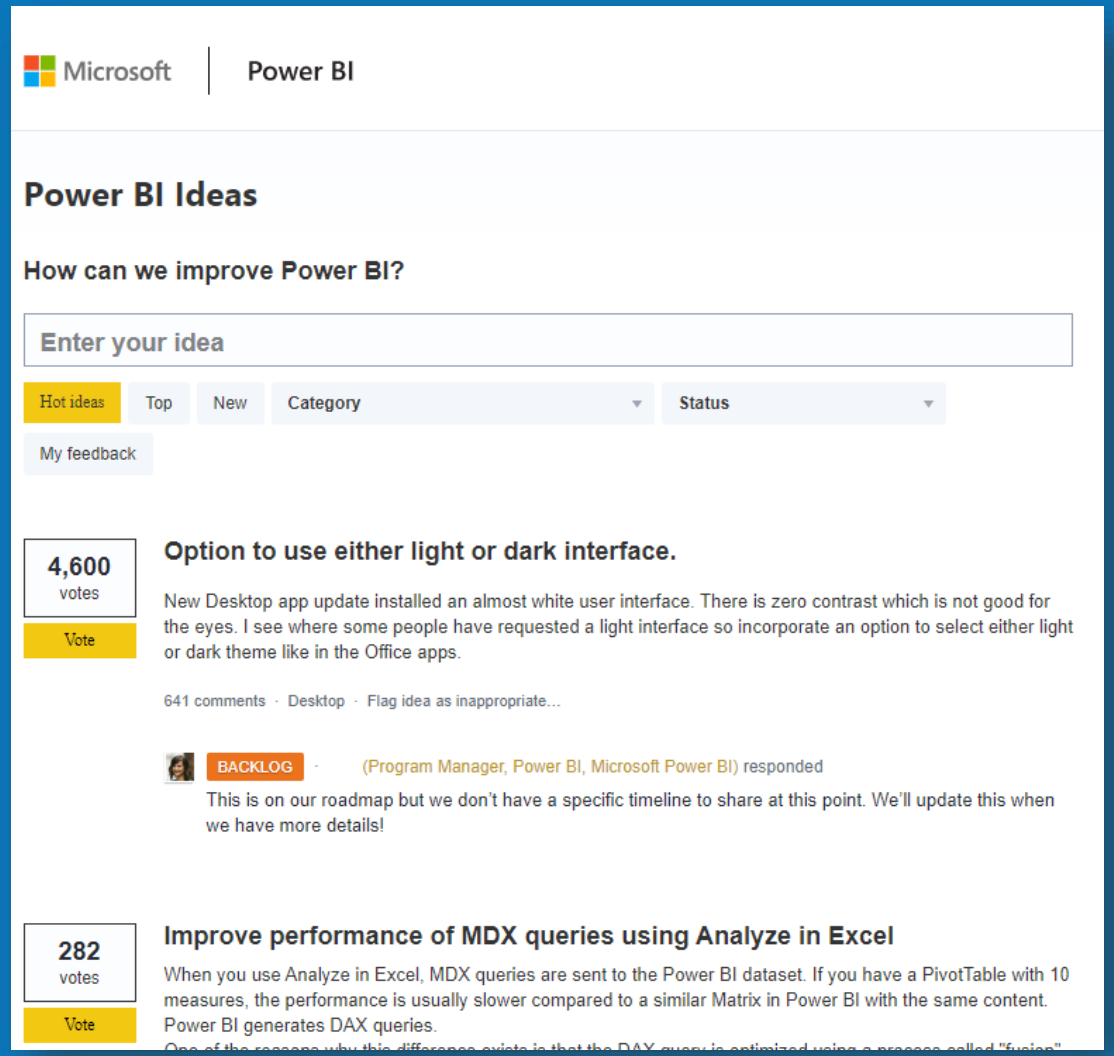
… e power bi ideas

- https://ideas.powerbi.com/



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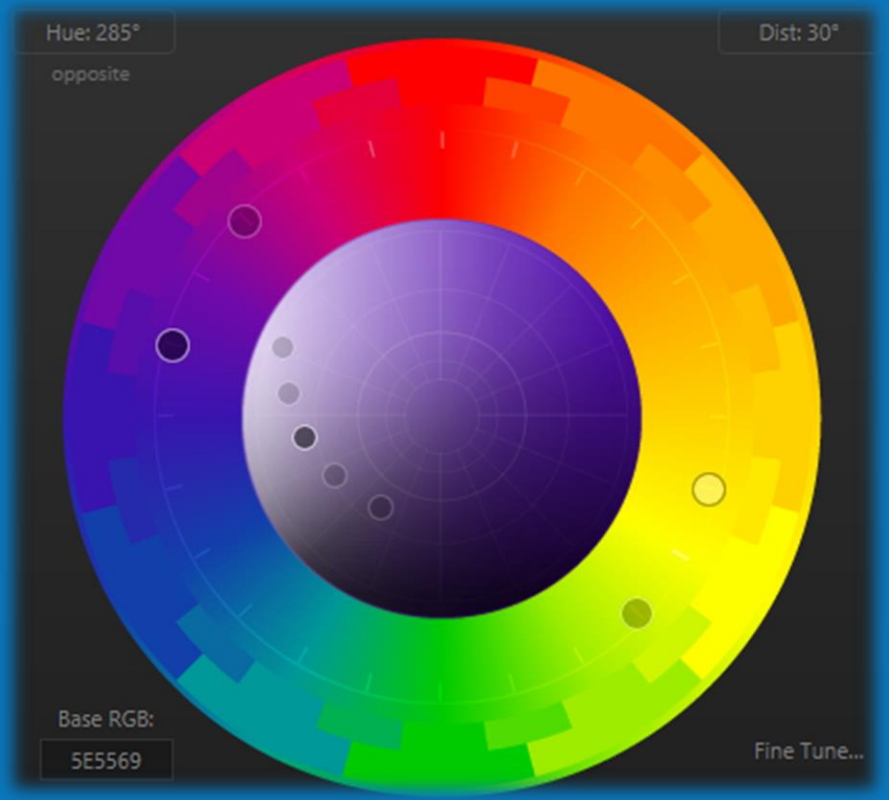
Disegno e colori

- 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

Microsoft

avanade

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CLUSTER

Capgemini

blexin.
CON NOI È SEMPLICE

FABARIS

LOBRA

6TH SENSE

PLURALSIGHT

DotNetCode.IT