Pillole di DAX

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Cos'è DAX

DAX = Data **A**nalysis E**x**pression language

Crea Elementi Calcolati:

- Tabelle Calcolate
- Colonne Calcolate
- Misure (Calcolate)

Adventure Works DW 2020

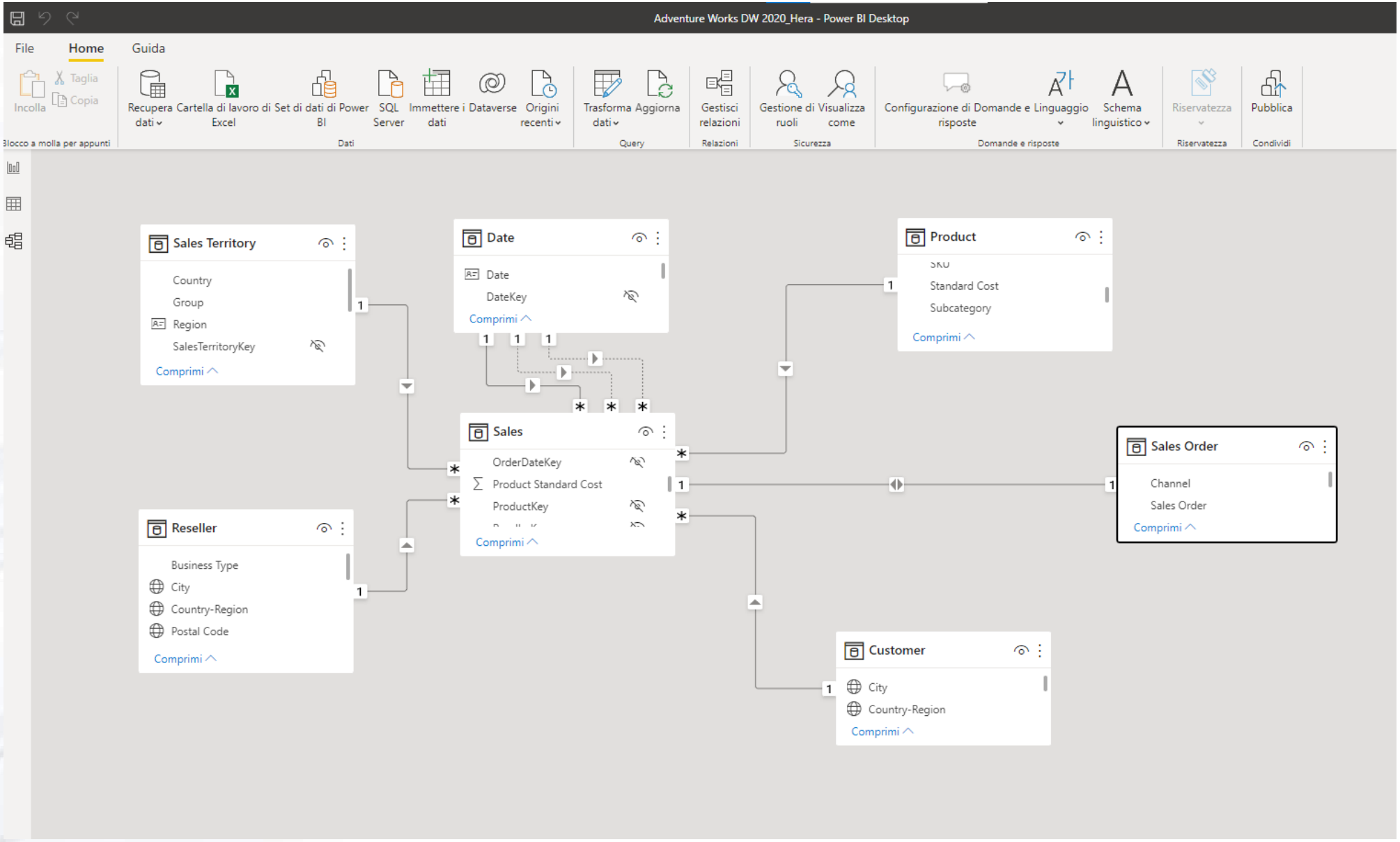
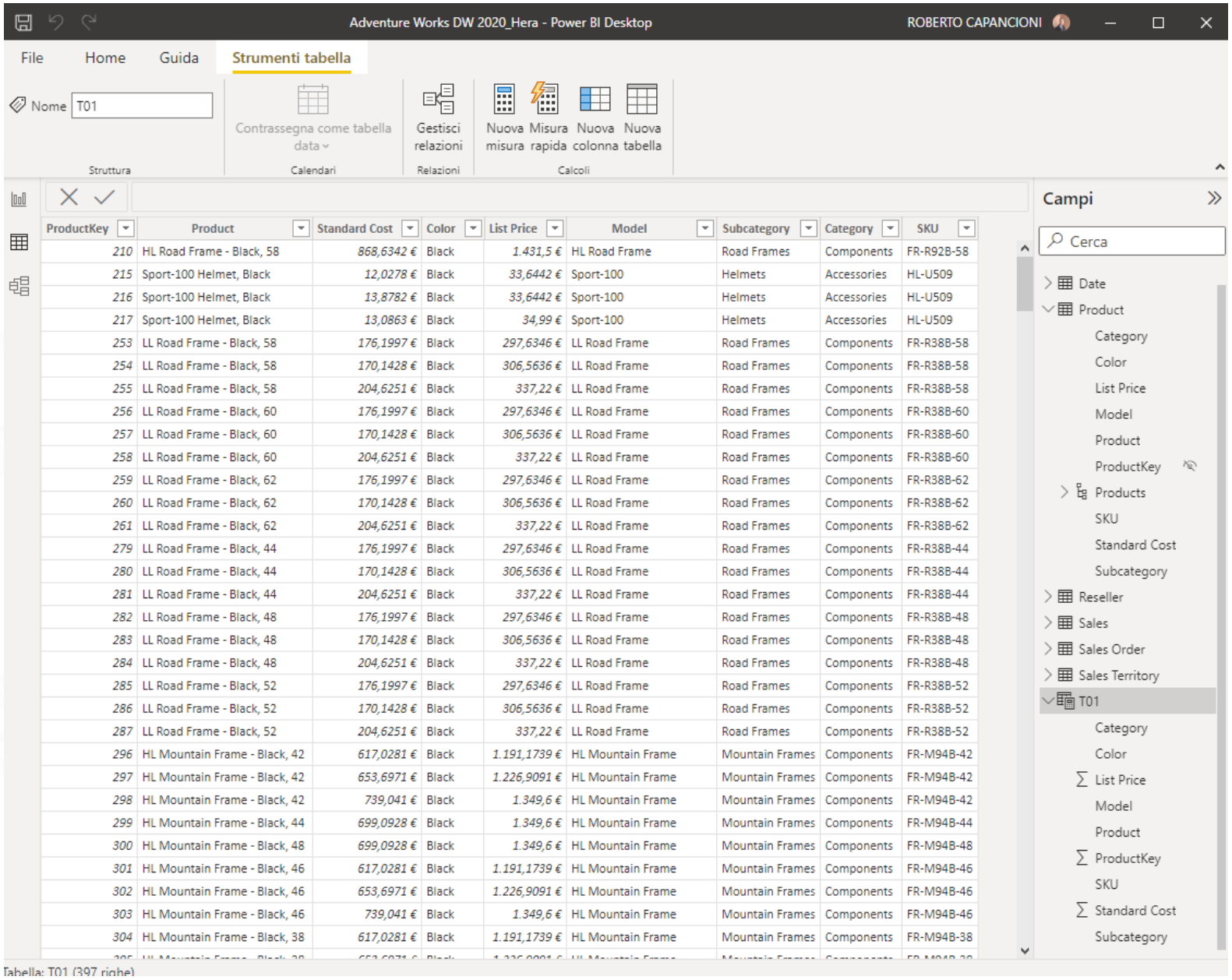


Tabelle Calcolate

Nuova Tabella

```
T01 = 'Product'
```



ProductKey	Product	Standard Cost	Color	List Price	Model	Subcategory	Category	SKU
210	HL Road Frame - Black, 58	868,6342 €	Black	1.431,5 €	HL Road Frame	Road Frames	Components	FR-R92B-58
215	Sport-100 Helmet, Black	12,0278 €	Black	33,6442 €	Sport-100	Helmets	Accessories	HL-U509
216	Sport-100 Helmet, Black	13,8782 €	Black	33,6442 €	Sport-100	Helmets	Accessories	HL-U509
217	Sport-100 Helmet, Black	13,0863 €	Black	34,99 €	Sport-100	Helmets	Accessories	HL-U509
253	LL Road Frame - Black, 58	176,1997 €	Black	297,6346 €	LL Road Frame	Road Frames	Components	FR-R38B-58
254	LL Road Frame - Black, 58	170,1428 €	Black	306,5636 €	LL Road Frame	Road Frames	Components	FR-R38B-58
255	LL Road Frame - Black, 58	204,6251 €	Black	337,22 €	LL Road Frame	Road Frames	Components	FR-R38B-58
256	LL Road Frame - Black, 60	176,1997 €	Black	297,6346 €	LL Road Frame	Road Frames	Components	FR-R38B-60
257	LL Road Frame - Black, 60	170,1428 €	Black	306,5636 €	LL Road Frame	Road Frames	Components	FR-R38B-60
258	LL Road Frame - Black, 60	204,6251 €	Black	337,22 €	LL Road Frame	Road Frames	Components	FR-R38B-60
259	LL Road Frame - Black, 62	176,1997 €	Black	297,6346 €	LL Road Frame	Road Frames	Components	FR-R38B-62
260	LL Road Frame - Black, 62	170,1428 €	Black	306,5636 €	LL Road Frame	Road Frames	Components	FR-R38B-62
261	LL Road Frame - Black, 62	204,6251 €	Black	337,22 €	LL Road Frame	Road Frames	Components	FR-R38B-62
279	LL Road Frame - Black, 44	176,1997 €	Black	297,6346 €	LL Road Frame	Road Frames	Components	FR-R38B-44
280	LL Road Frame - Black, 44	170,1428 €	Black	306,5636 €	LL Road Frame	Road Frames	Components	FR-R38B-44
281	LL Road Frame - Black, 44	204,6251 €	Black	337,22 €	LL Road Frame	Road Frames	Components	FR-R38B-44
282	LL Road Frame - Black, 48	176,1997 €	Black	297,6346 €	LL Road Frame	Road Frames	Components	FR-R38B-48
283	LL Road Frame - Black, 48	170,1428 €	Black	306,5636 €	LL Road Frame	Road Frames	Components	FR-R38B-48
284	LL Road Frame - Black, 48	204,6251 €	Black	337,22 €	LL Road Frame	Road Frames	Components	FR-R38B-48
285	LL Road Frame - Black, 52	176,1997 €	Black	297,6346 €	LL Road Frame	Road Frames	Components	FR-R38B-52
286	LL Road Frame - Black, 52	170,1428 €	Black	306,5636 €	LL Road Frame	Road Frames	Components	FR-R38B-52
287	LL Road Frame - Black, 52	204,6251 €	Black	337,22 €	LL Road Frame	Road Frames	Components	FR-R38B-52
296	HL Mountain Frame - Black, 42	617,0281 €	Black	1.191,1739 €	HL Mountain Frame	Mountain Frames	Components	FR-M94B-42
297	HL Mountain Frame - Black, 42	653,6971 €	Black	1.226,9091 €	HL Mountain Frame	Mountain Frames	Components	FR-M94B-42
298	HL Mountain Frame - Black, 42	739,041 €	Black	1.349,6 €	HL Mountain Frame	Mountain Frames	Components	FR-M94B-42
299	HL Mountain Frame - Black, 44	699,0928 €	Black	1.349,6 €	HL Mountain Frame	Mountain Frames	Components	FR-M94B-44
300	HL Mountain Frame - Black, 48	699,0928 €	Black	1.349,6 €	HL Mountain Frame	Mountain Frames	Components	FR-M94B-48
301	HL Mountain Frame - Black, 46	617,0281 €	Black	1.191,1739 €	HL Mountain Frame	Mountain Frames	Components	FR-M94B-46
302	HL Mountain Frame - Black, 46	653,6971 €	Black	1.226,9091 €	HL Mountain Frame	Mountain Frames	Components	FR-M94B-46
303	HL Mountain Frame - Black, 46	739,041 €	Black	1.349,6 €	HL Mountain Frame	Mountain Frames	Components	FR-M94B-46
304	HL Mountain Frame - Black, 38	617,0281 €	Black	1.191,1739 €	HL Mountain Frame	Mountain Frames	Components	FR-M94B-38

Tabelle Calcolate

```
T02 = ALL('Product')
```

Se tutta la tabella
Restituisce anche righe duplicate

```
T03 = ALL('Product'[Category],
          'Product'[Subcategory])
```

Con una o più colonne
Restituisce solo valori distinti

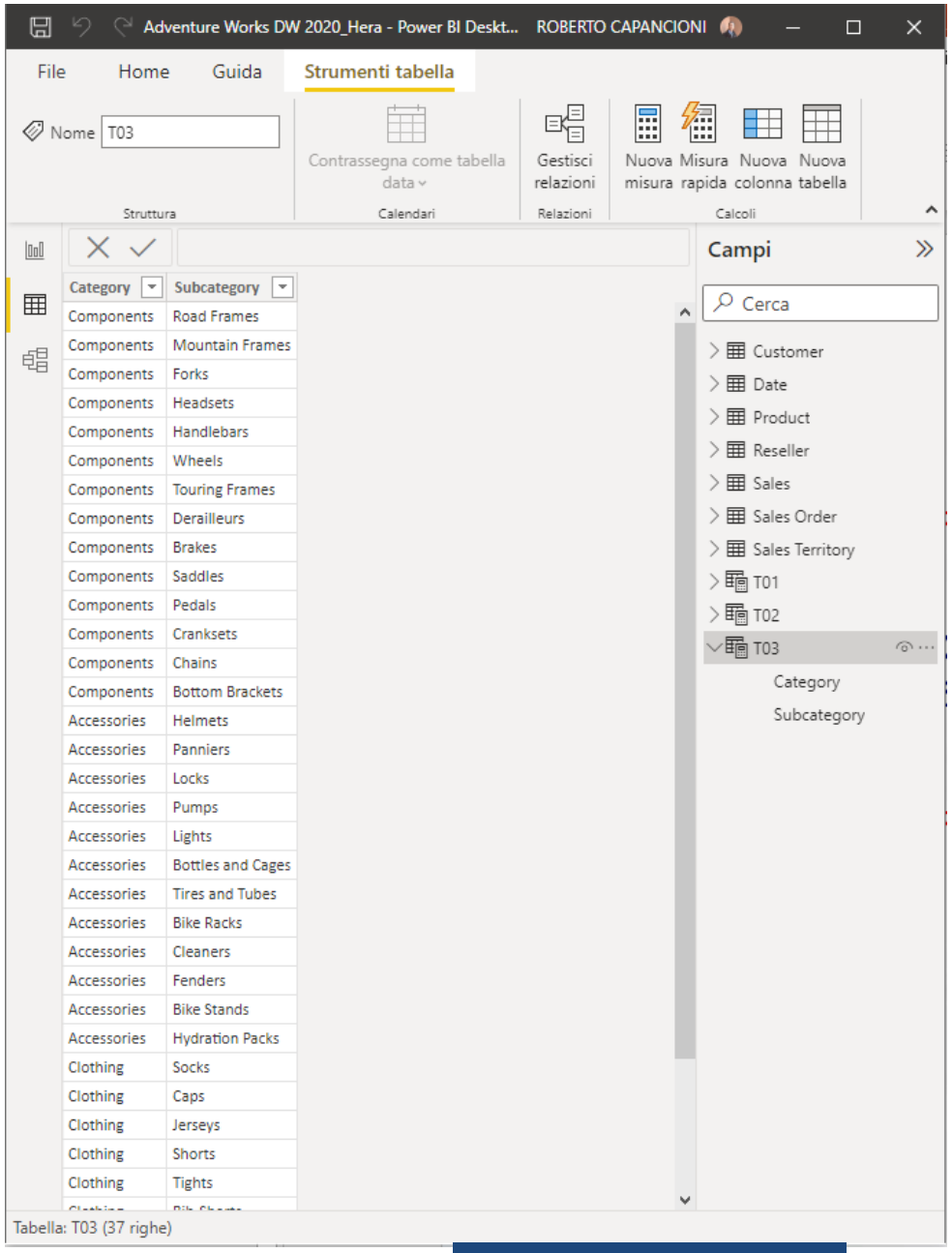


Tabelle Calcolate

```
T04 = VALUES('Product'[Category])
```

Restituisce anche il valore nullo

```
T05 = DISTINCT('Product'[Category])
```

NON Restituisce il valore nullo

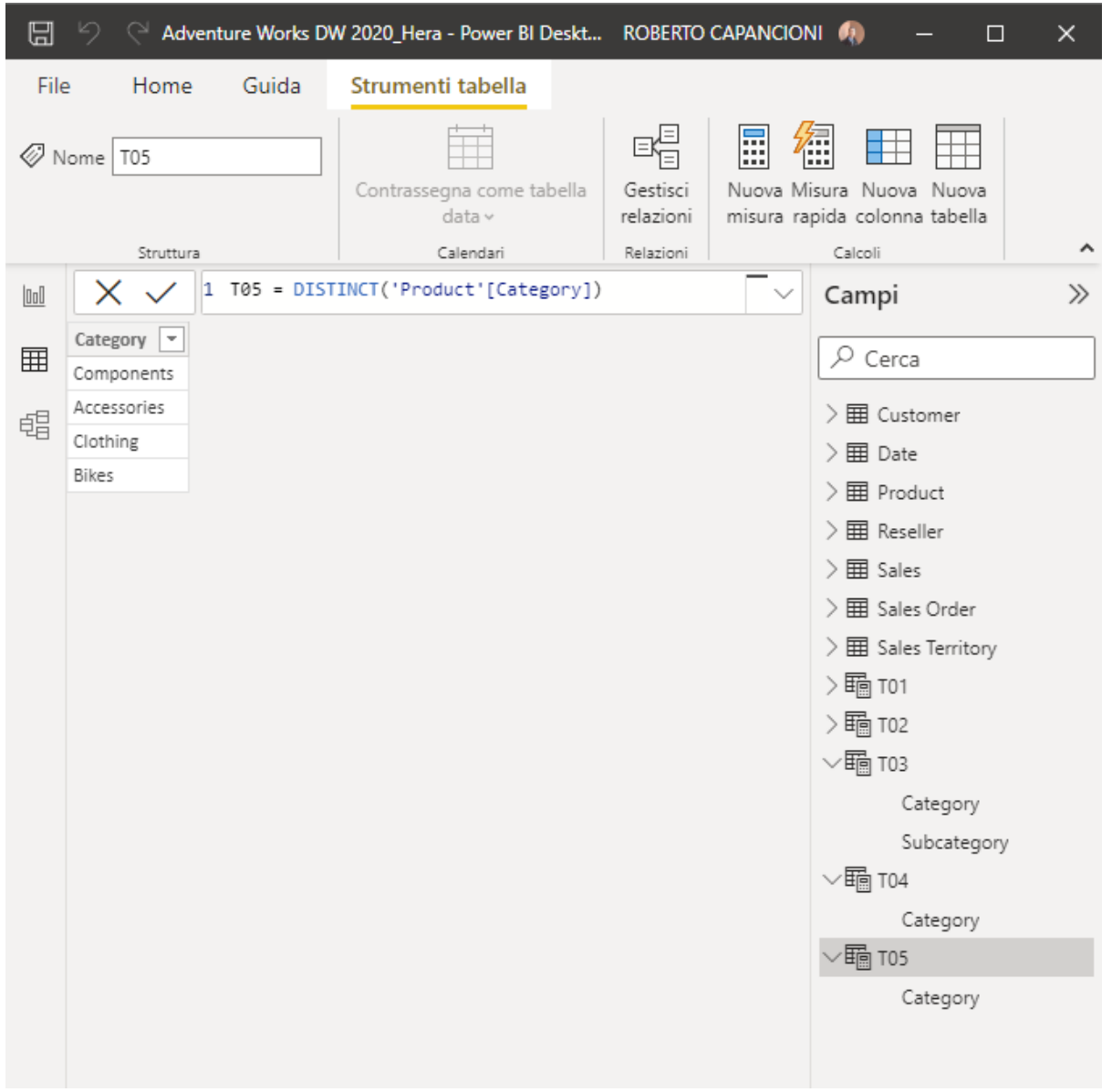


Tabelle Calcolate

```
T04 = VALUES('Product'[Category])
```

Restituisce anche il valore nullo

```
T05 = DISTINCT('Product'[Category])
```

NON Restituisce il valore nullo

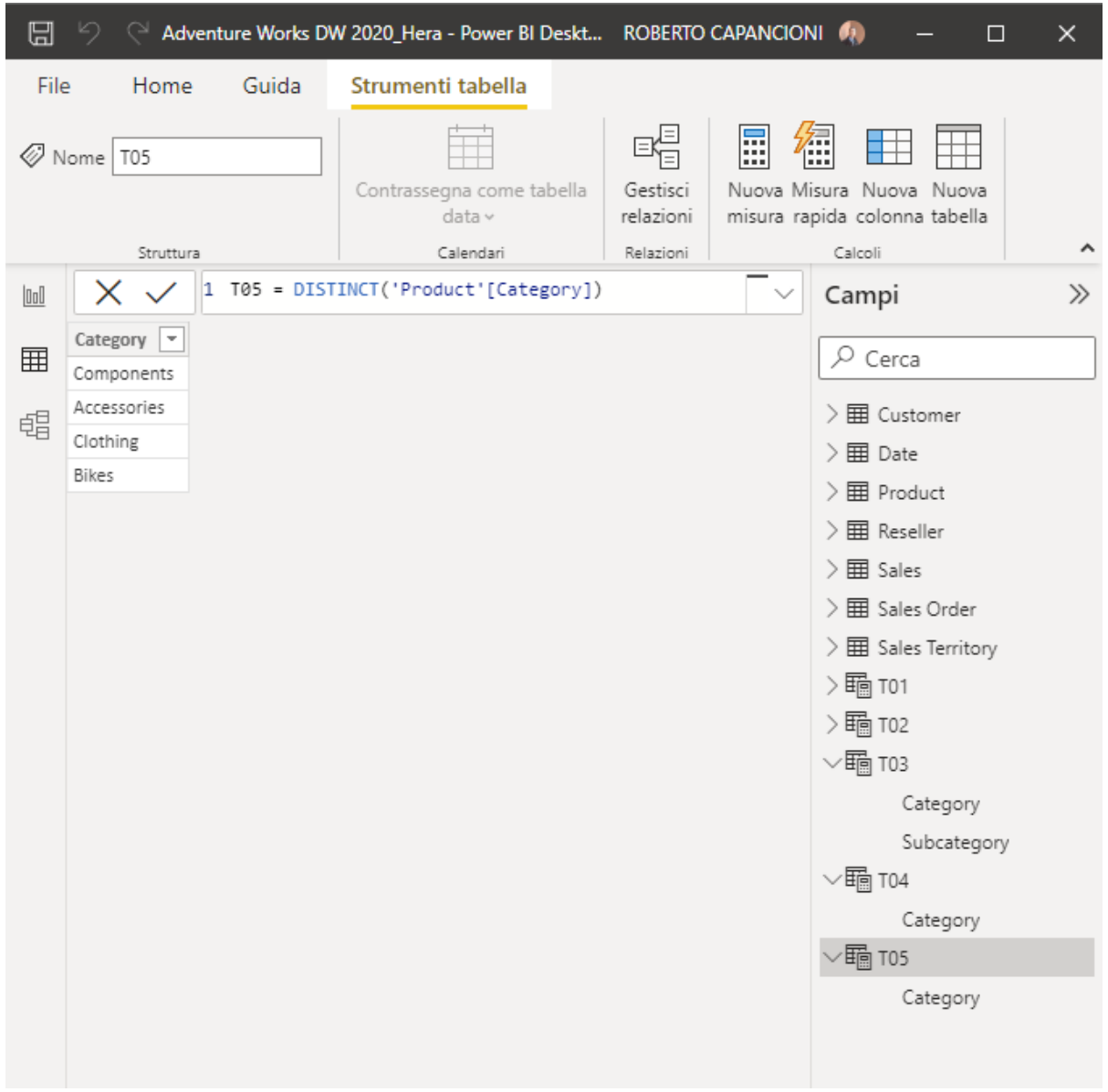
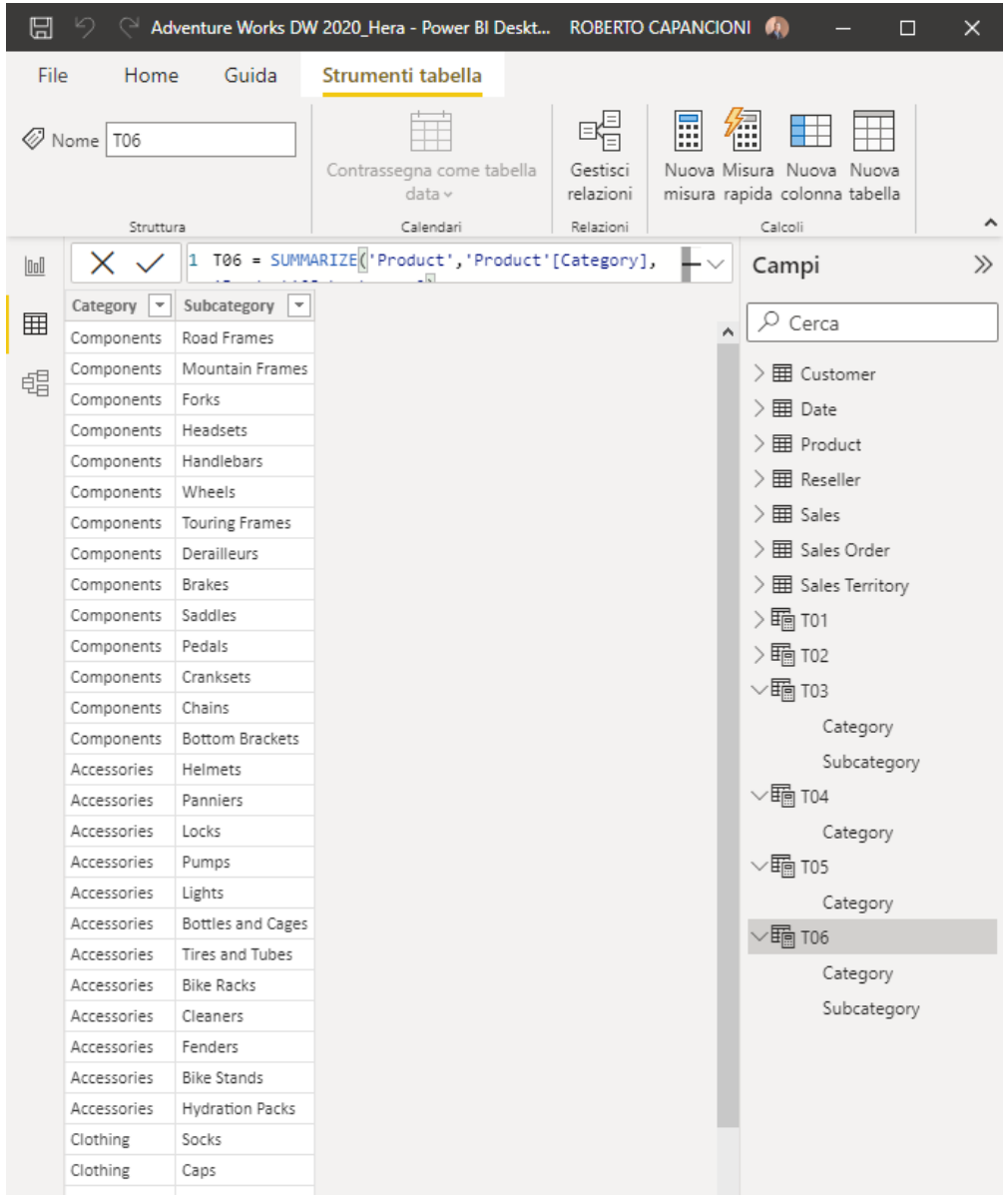


Tabelle Calcolate

```
T06 = SUMMARIZE(
                    'Product’, Tabella
                    'Product'[Category],
                    'Product'[Subcategory]
)
```

MODIFICA UNA TABELLA:

- **Accetta una tabella in Ingresso**
- **Restituisce una tabella in Uscita**



Category	Subcategory
Components	Road Frames
Components	Mountain Frames
Components	Forks
Components	Headsets
Components	Handlebars
Components	Wheels
Components	Touring Frames
Components	Derailleurs
Components	Brakes
Components	Saddles
Components	Pedals
Components	Cranksets
Components	Chains
Components	Bottom Brackets
Accessories	Helmets
Accessories	Panniers
Accessories	Locks
Accessories	Pumps
Accessories	Lights
Accessories	Bottles and Cages
Accessories	Tires and Tubes
Accessories	Bike Racks
Accessories	Cleaners
Accessories	Fenders
Accessories	Bike Stands
Accessories	Hydration Packs
Clothing	Socks
Clothing	Caps

Tabelle Calcolate

```
T07 = FILTER(
            'Product’,  Tabella
            'Product'[Category]="Bikes"   Condizione
          )
T08 = FILTER(
            'Product’,
            'Product'[Category] in {"Bikes","Components"} &&
            'Product'[Color] = "Black"
          )
```

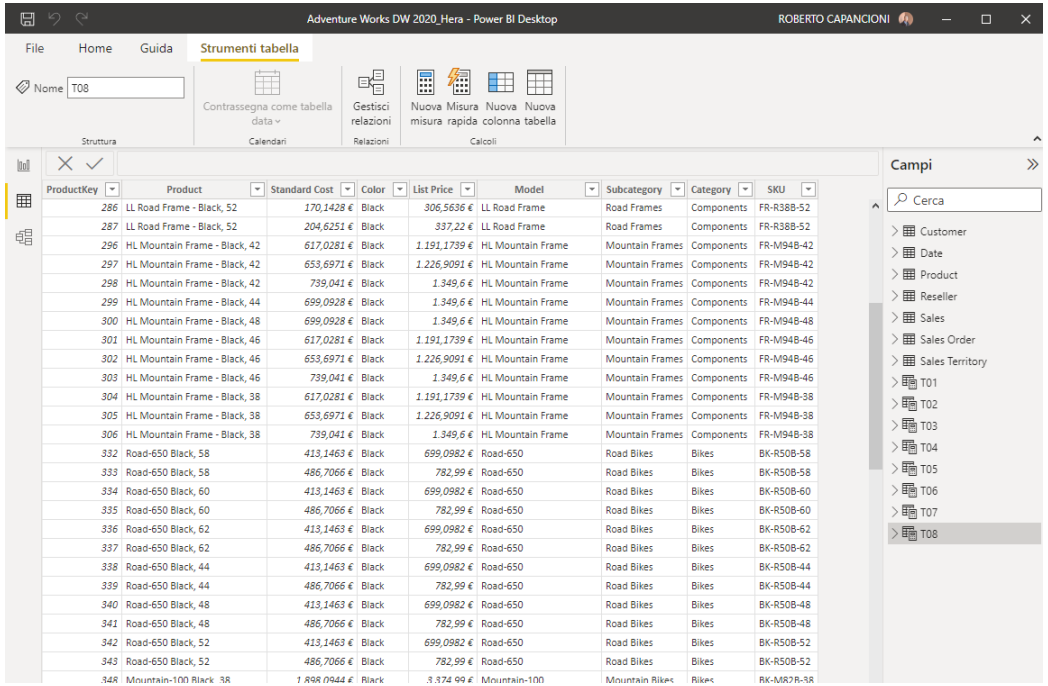
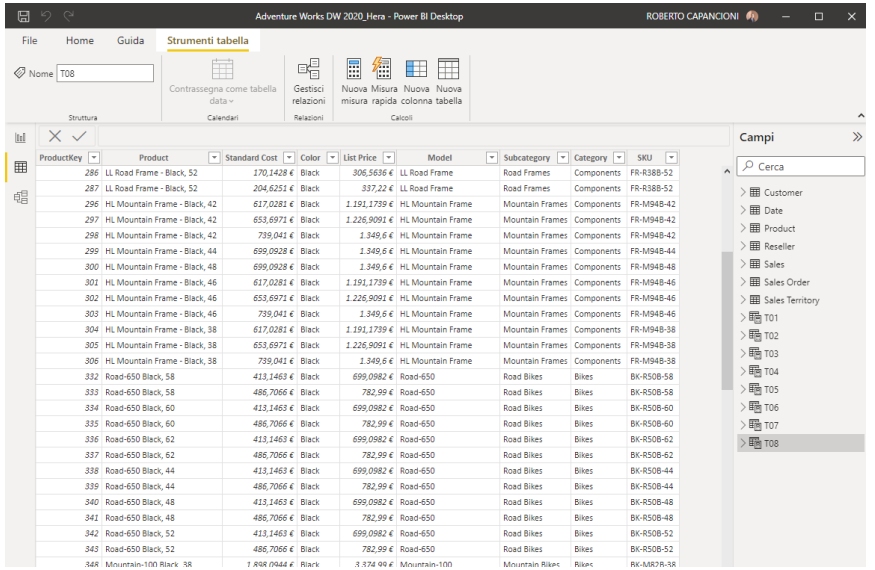


Tabelle Calcolate

```
T07 = FILTER(
          'Product’,   Tabella
          'Product'[Category]="Bikes"   Condizione
          )
T08 = FILTER(
          'Product’,
          'Product'[Category] in {"Bikes","Components"} &&
          'Product'[Color] = "Black"
          )

T09 = FILTER(
          'Sales',
          RELATED('Product'[Color])="Red"
          )
```



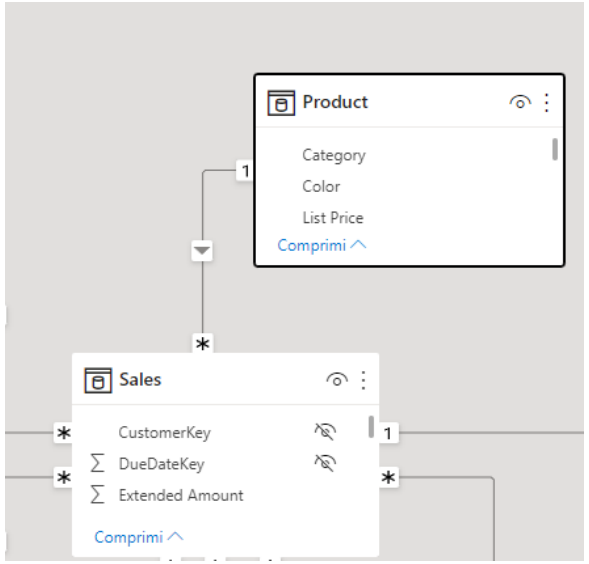
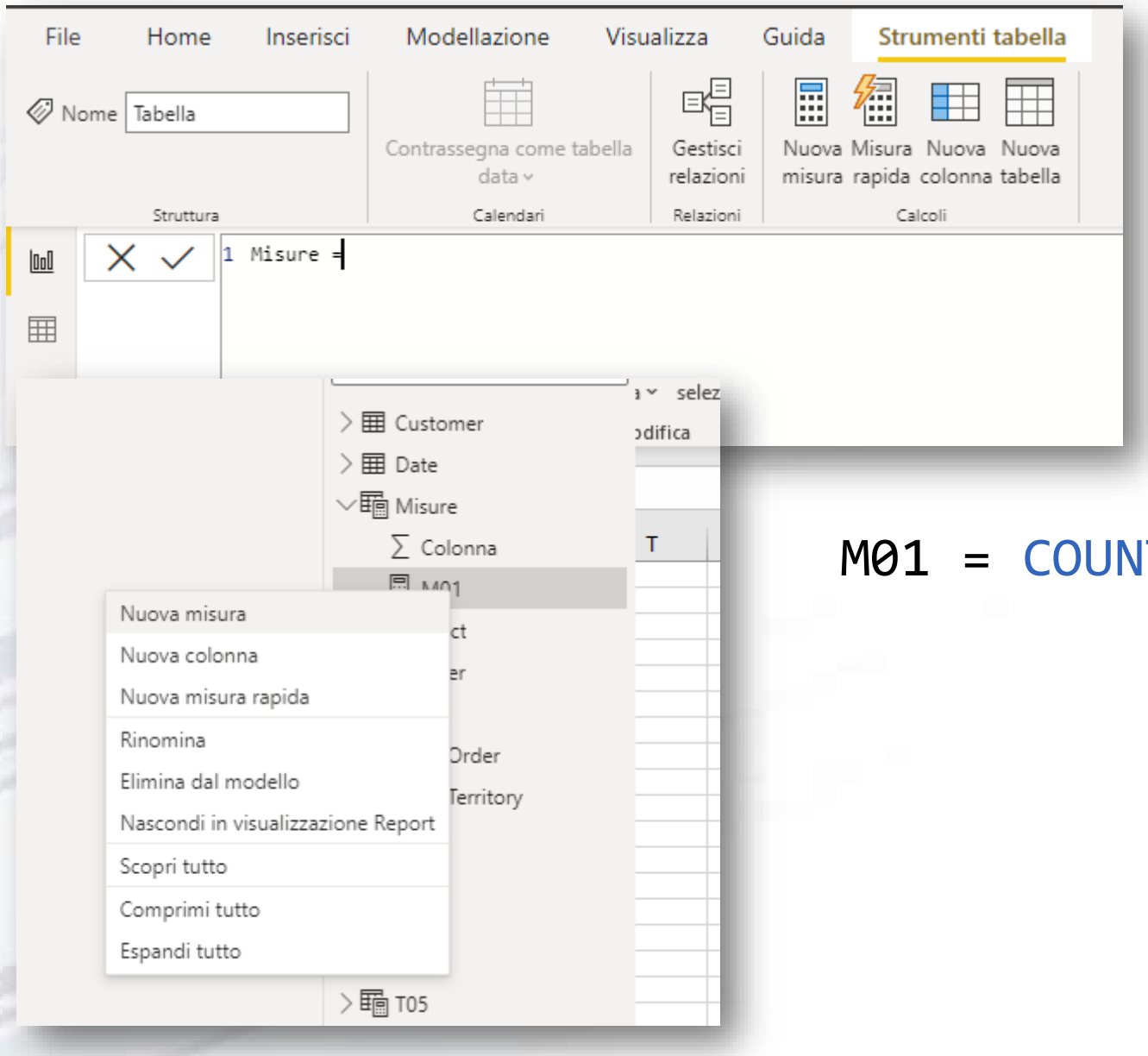


Tabelle Calcolate

```
T06 = SUMMARIZE(
                'Product’,
                'Product'[Category],
                'Product'[Subcategory]
)
T08 = FILTER(
            'Product’,
            'Product'[Category] in {"Bikes","Components"} &&
            'Product'[Color] = "Black"
           )
T10 = SUMMARIZE(
                FILTER('Product’,
                       'Product'[Category] in {"Bikes","Components"} &&
                       'Product'[Color] = "Black"
                      ),
               'Product'[Category],
               'Product'[Subcategory]
               )
```

Category	Subcategory
Components	Road Frames
Components	Mountain Frames
Components	Wheels
Components	Cranksets
Bikes	Road Bikes
Bikes	Mountain Bikes

Misure




```
M01 = COUNT('Product'[ProductKey])
```

Category	M01
Accessories	35
Bikes	125
Clothing	48
Components	189
Totale	**397**

Misure

```
M01 = COUNT('Product'[ProductKey])

M02 = COUNTX('Product’,
             'Product'[ProductKey]
            )
```

Category	M01	M02
Accessories	35	35
Bikes	125	125
Clothing	48	48
Components	189	189
Totale	**397**	**397**

Misure

```
T08 = FILTER(
            'Product’,
            'Product'[Category] in {"Bikes","Components"} &&
            'Product'[Color] = "Black"
          )

M03 = COUNTX(FILTER('Product’,
                    'Product'[Category] in {"Bikes","Components"} &&
                    'Product'[Color] = "Black"
                   ),
            'Product'[ProductKey]
          )
```

Category	M01	M02	M03
Accessories	35	35	
Bikes	125	125	43
Clothing	48	48	
Components	189	189	64
Totale	**397**	**397**	**107**

Misure

```
M04 = SUMX(Sales,
           Sales[Order Quantity]*Sales[Unit Price]
          )
```

ROW CONTEXT

```
M05 = SUMX(FILTER(Sales,
                  RELATED('Product'[Color])="Red"
                 ),
           Sales[Order Quantity]*Sales[Unit Price]
          )
```

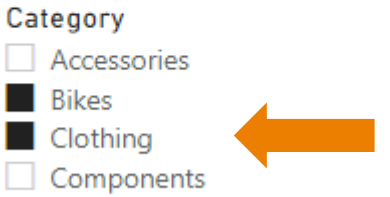
ROW CONTEXT

ROW CONTEXT

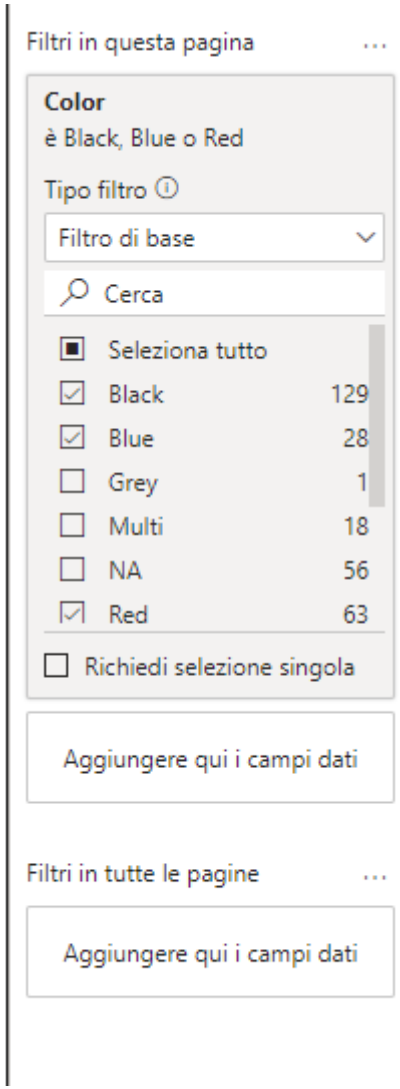
Color	M04	M05
Black	38.349.263,26	
Blue	9.661.162,95	
Multi	651.581,57	
NA	1.102.189,73	
Red	21.634.659,26	21.634.659,26
Silver	19.866.655,77	
Silver/Black	147.530,88	
White	30.029,43	
Yellow	18.893.709,24	
Totale	**110.336.782,09**	**21.634.659,26**

ROW CONTEXT:
Le operazioni di calcolo vengono fatte a livello di riga

Misure



Color	M04	M05
Black	34.098.109,07	
Blue	8.689.411,84	
Red	19.796.432,66	19.796.432,66
Totale	**62.583.953,56**	**19.796.432,66**



FILTER CONTEXT:
Filtra i dati «DOPO» che il calcoli sono stati fatti

FILTER CONTEXT
si ottiene in 2 modi:

- **Filtri grafici nell'interfaccia**
- **CALCULATE o CALCULATETABLE nelle formule**

Misure

```
M05 = SUMX(FILTER(Sales,
                  RELATED('Product'[Color])="Red"
                 ),
           Sales[Order Quantity]*Sales[Unit Price]
          )

M06 = CALCULATE(
                SUMX(Sales,
                     Sales[Order Quantity]*Sales[Unit Price]
                     ),
               'Product'[Color]="RED"
               )
```

ATTENZIONE:
CALCULATE RISCRIVE I FILTRI A PARITA' DI CAMPI (In questo caso Colore)

IL TOTALE TORNA
IL DETTAGLIO COLOR NO!

Color	M04	M05	M06
Black	34.098.109,07		19.796.432,66
Blue	8.689.411,84		19.796.432,66
Red	19.796.432,66	19.796.432,66	19.796.432,66
Totale	**62.583.953,56**	**19.796.432,66**	**19.796.432,66**

Misure

Syntax

```
FILTER ( <Table>, <FilterExpression> )
```

PARAMETER	ATTRIBUTES	DESCRIPTION
Table ITERATOR		The table to be filtered.
FilterExpression ROW CONTEXT		A boolean (True/False) expression that is to be evaluated for each row of the table.

Syntax

```
CALCULATE ( <Expression> [, <Filter> [, <Filter> [, … ] ] ] )
```

PARAMETER	ATTRIBUTES	DESCRIPTION
Expression		The expression to be evaluated.
Filter	Optional Repeatable	A boolean (True/False) expression or a table expression that defines a filter.

Misure

FILTER vs CALCULATE
Cosa è meglio?

Quanto possibile (spesso) usare CALCULATE

In alcuni casi possono essere usati insieme (in casi di CONTEXT TRANSITION) lo vediamo dopo

Misure

```
M06 = CALCULATE(
                SUMX(Sales,
                     Sales[Order Quantity]*Sales[Unit Price]
                     ),
               'Product'[Color]="RED"
               )

M07 = CALCULATE(
                SUMX(Sales,
                     Sales[Order Quantity]*Sales[Unit Price]
                     ),
                KEEPFILTERS('Product'[Color]="RED“)
               )
```

Color	M04	M05	M06	M07
Black	34.098.109,07		19.796.432,66	
Blue	8.689.411,84		19.796.432,66	
Red	19.796.432,66	19.796.432,66	19.796.432,66	19.796.432,66
Totale	**62.583.953,56**	**19.796.432,66**	**19.796.432,66**	**19.796.432,66**

Misure

```
M04 = SUMX(Sales,
           Sales[Order Quantity]*Sales[Unit Price]
          )

M07 = CALCULATE(
                SUMX(Sales,
                     Sales[Order Quantity]*Sales[Unit Price]
                     ),
                KEEPFILTERS('Product'[Color]="RED“)
                )

M08 = CALCULATE(
                [M04],
                KEEPFILTERS('Product'[Color]="RED“)
                )
```

Color	M04	M05	M06	M07	M08
Black	34.098.109,07		19.796.432,66		
Blue	8.689.411,84		19.796.432,66		
Red	19.796.432,66	19.796.432,66	19.796.432,66	19.796.432,66	19.796.432,66
Totale	**62.583.953,56**	**19.796.432,66**	**19.796.432,66**	**19.796.432,66**	**19.796.432,66**

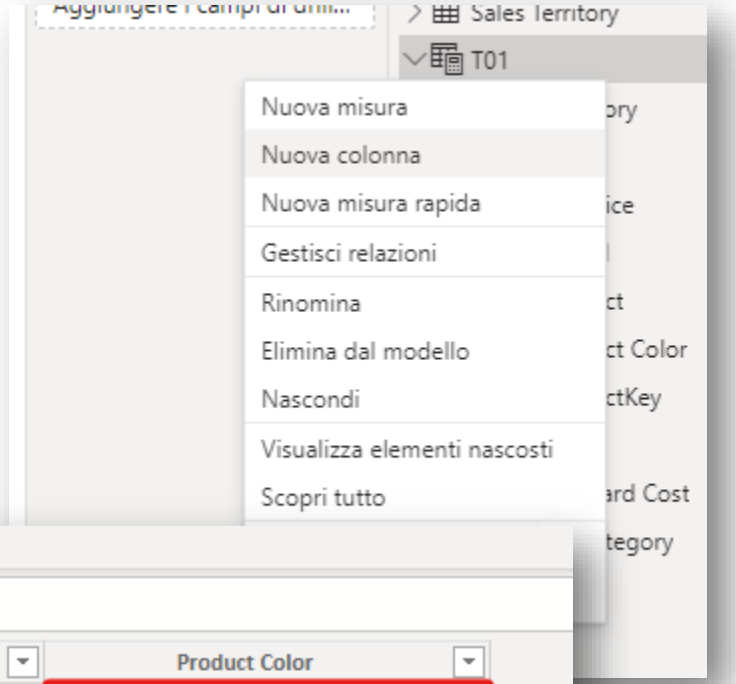
POSSO APPLICARE IL FILTER CONTEXT

A MISURE ESISTENTI E CREARE NUOVE MISURE

Colonne Calcolate

```
Product Color = T01[ProductKey]&" - "&T01[Product]&" - "& T01[Color]
```

- HA IL ROW CONTEXT
- NON HA IL FILTER CONTEXT



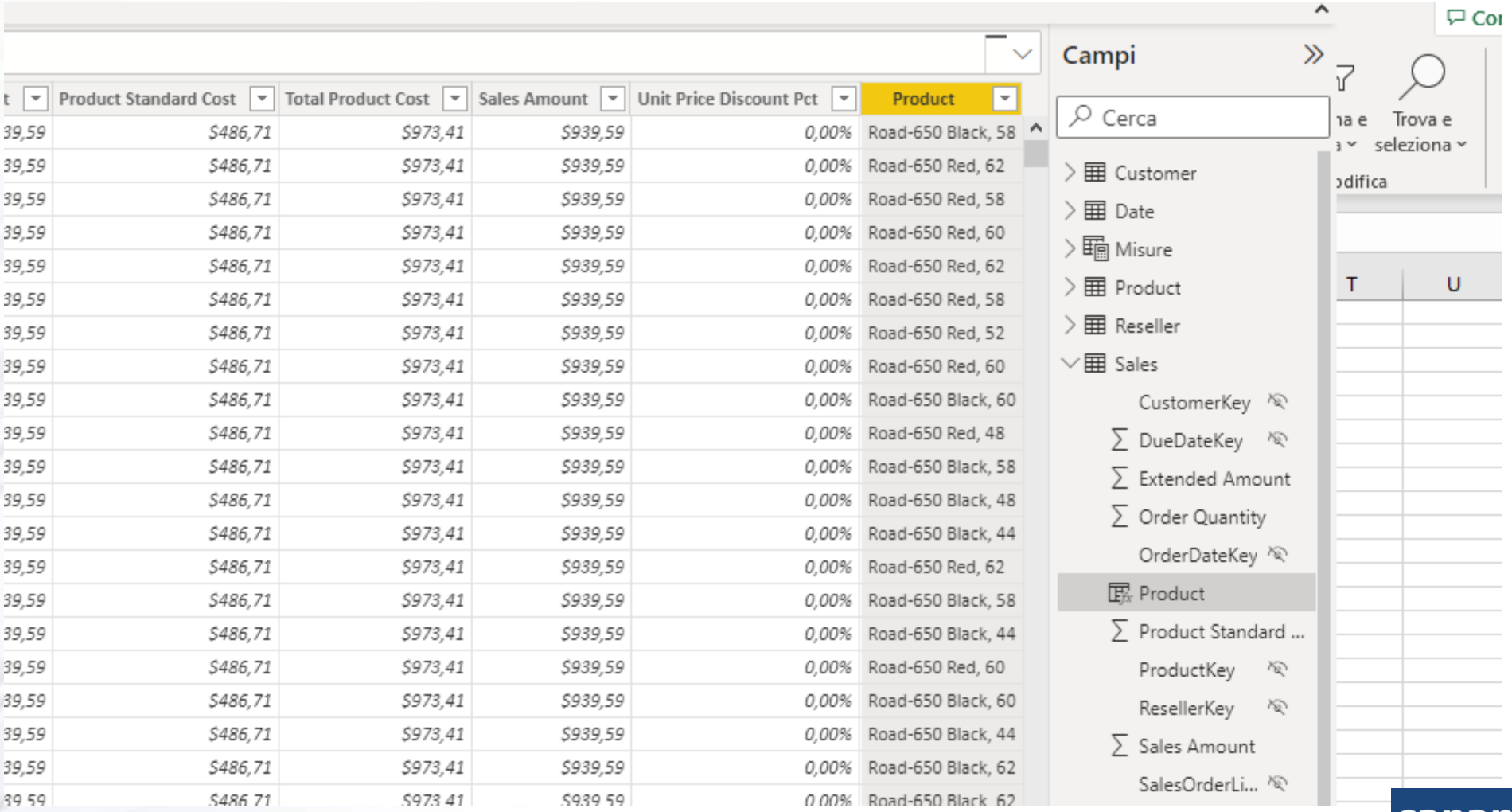
Struttura | Calendari | Relazioni | Calcoli

```
1 T01 = 'Product'
```

ProductKey	Product	Standard Cost	Color	List Price	Model	Subcategory	Category	SKU	Product Color
210	HL Road Frame - Black, 58	868,6342 €	Black	1.431,5 €	HL Road Frame	Road Frames	Components	FR-R92B-58	210 - HL Road Frame - Black, 58 - Black
215	Sport-100 Helmet, Black	12,0278 €	Black	33,6442 €	Sport-100	Helmets	Accessories	HL-U509	215 - Sport-100 Helmet, Black - Black
216	Sport-100 Helmet, Black	13,8782 €	Black	33,6442 €	Sport-100	Helmets	Accessories	HL-U509	216 - Sport-100 Helmet, Black - Black
217	Sport-100 Helmet, Black	13,0863 €	Black	34,99 €	Sport-100	Helmets	Accessories	HL-U509	217 - Sport-100 Helmet, Black - Black
253	LL Road Frame - Black, 58	176,1997 €	Black	297,6346 €	LL Road Frame	Road Frames	Components	FR-R38B-58	253 - LL Road Frame - Black, 58 - Black
254	LL Road Frame - Black, 58	170,1428 €	Black	306,5636 €	LL Road Frame	Road Frames	Components	FR-R38B-58	254 - LL Road Frame - Black, 58 - Black
255	LL Road Frame - Black, 58	204,6251 €	Black	337,22 €	LL Road Frame	Road Frames	Components	FR-R38B-58	255 - LL Road Frame - Black, 58 - Black
256	LL Road Frame - Black, 60	176,1997 €	Black	297,6346 €	LL Road Frame	Road Frames	Components	FR-R38B-60	256 - LL Road Frame - Black, 60 - Black
257	LL Road Frame - Black, 60	170,1428 €	Black	306,5636 €	LL Road Frame	Road Frames	Components	FR-R38B-60	257 - LL Road Frame - Black, 60 - Black
258	LL Road Frame - Black, 60	204,6251 €	Black	337,22 €	LL Road Frame	Road Frames	Components	FR-R38B-60	258 - LL Road Frame - Black, 60 - Black
259	LL Road Frame - Black, 62	176,1997 €	Black	297,6346 €	LL Road Frame	Road Frames	Components	FR-R38B-62	259 - LL Road Frame - Black, 62 - Black
260	LL Road Frame - Black, 62	170,1428 €	Black	306,5636 €	LL Road Frame	Road Frames	Components	FR-R38B-62	260 - LL Road Frame - Black, 62 - Black
261	LL Road Frame - Black, 62	204,6251 €	Black	337,22 €	LL Road Frame	Road Frames	Components	FR-R38B-62	261 - LL Road Frame - Black, 62 - Black
279	LL Road Frame - Black, 44	176,1997 €	Black	297,6346 €	LL Road Frame	Road Frames	Components	FR-R38B-44	279 - LL Road Frame - Black, 44 - Black
280	LL Road Frame - Black, 44	170,1428 €	Black	306,5636 €	LL Road Frame	Road Frames	Components	FR-R38B-44	280 - LL Road Frame - Black, 44 - Black

Colonne Calcolate

```
Product = RELATED('Product'[Product])
```



Product Standard Cost	Total Product Cost	Sales Amount	Unit Price Discount Pct	Product
$486,71	$973,41	$939,59	0,00%	Road-650 Black, 58
$486,71	$973,41	$939,59	0,00%	Road-650 Red, 62
$486,71	$973,41	$939,59	0,00%	Road-650 Red, 58
$486,71	$973,41	$939,59	0,00%	Road-650 Red, 60
$486,71	$973,41	$939,59	0,00%	Road-650 Red, 62
$486,71	$973,41	$939,59	0,00%	Road-650 Red, 58
$486,71	$973,41	$939,59	0,00%	Road-650 Red, 52
$486,71	$973,41	$939,59	0,00%	Road-650 Red, 60
$486,71	$973,41	$939,59	0,00%	Road-650 Black, 60
$486,71	$973,41	$939,59	0,00%	Road-650 Red, 48
$486,71	$973,41	$939,59	0,00%	Road-650 Black, 58
$486,71	$973,41	$939,59	0,00%	Road-650 Black, 48
$486,71	$973,41	$939,59	0,00%	Road-650 Black, 44
$486,71	$973,41	$939,59	0,00%	Road-650 Red, 62
$486,71	$973,41	$939,59	0,00%	Road-650 Black, 58
$486,71	$973,41	$939,59	0,00%	Road-650 Black, 44
$486,71	$973,41	$939,59	0,00%	Road-650 Red, 60
$486,71	$973,41	$939,59	0,00%	Road-650 Black, 60
$486,71	$973,41	$939,59	0,00%	Road-650 Black, 44
$486,71	$973,41	$939,59	0,00%	Road-650 Black, 62
$486,71	$973,41	$939,59	0,00%	Road-650 Black, 62

Colonne Calcolate

UNA COLONNA CALCOLATA

- **HA IL ROW CONTEXT**
- **NON HA IL FILTER CONTEXT**

Calcola Per tutte le righe

Ad ogni riga Associa tutto

```
P01 = SUMX(Sales,
          Sales[Order Quantity]*Sales[Unit Price]
          )
```

Struttura | Formattazione | Proprietà | Ordina | Gruppi | Relazioni | Calcoli

```
1  P01 = SUMX(Sales,
2            Sales[Order Quantity]*Sales[Unit Price]
3           )
```

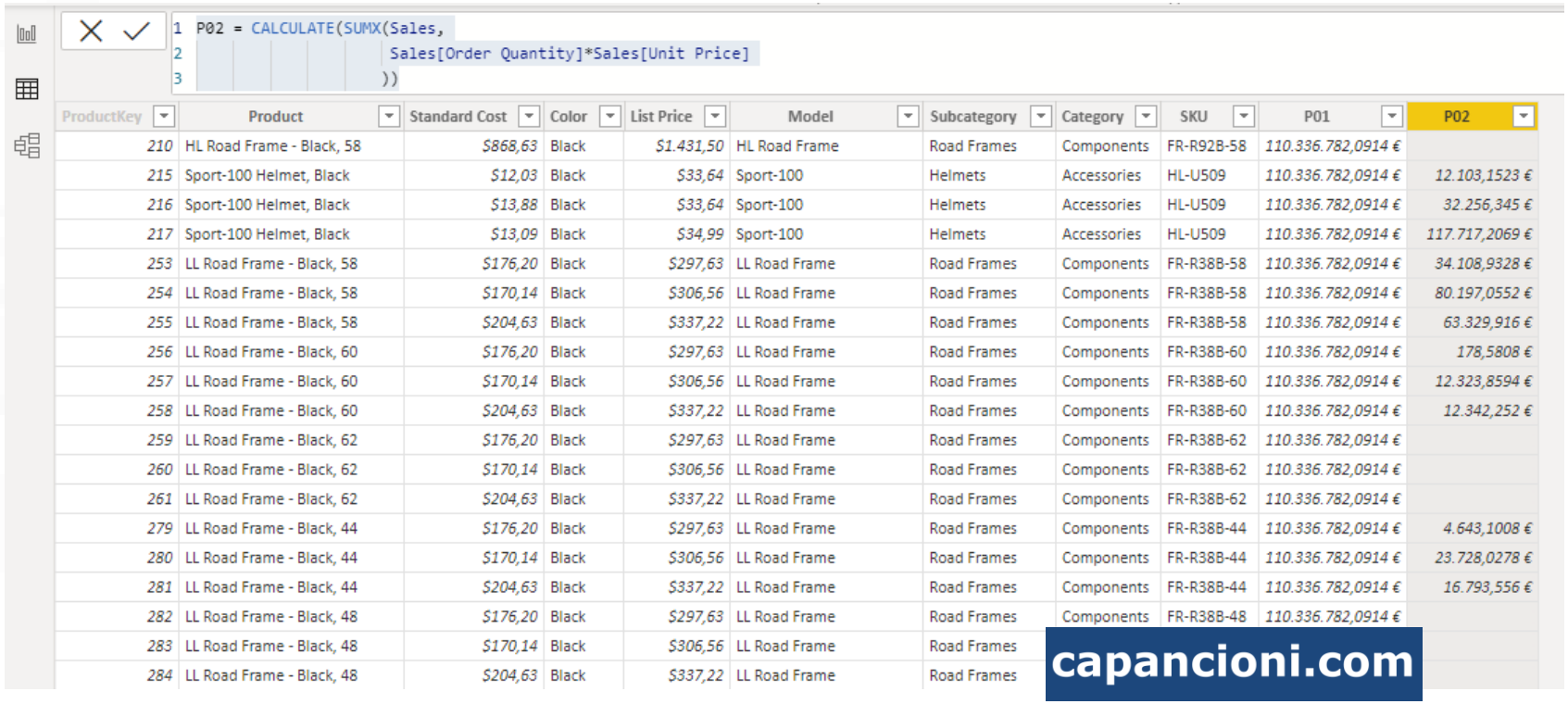
ProductKey	Product	Standard Cost	Color	List Price	Model	Subcategory	Category	SKU	P01
210	HL Road Frame - Black, 58	$868,63	Black	$1.431,50	HL Road Frame	Road Frames	Components	FR-R92B-58	110.336.782,091
215	Sport-100 Helmet, Black	$12,03	Black	$33,64	Sport-100	Helmets	Accessories	HL-U509	110.336.782,091
216	Sport-100 Helmet, Black	$13,88	Black	$33,64	Sport-100	Helmets	Accessories	HL-U509	110.336.782,091
217	Sport-100 Helmet, Black	$13,09	Black	$34,99	Sport-100	Helmets	Accessories	HL-U509	110.336.782,091
253	LL Road Frame - Black, 58	$176,20	Black	$297,63	LL Road Frame	Road Frames	Components	FR-R38B-58	110.336.782,091
254	LL Road Frame - Black, 58	$170,14	Black	$306,56	LL Road Frame	Road Frames	Components	FR-R38B-58	110.336.782,091
255	LL Road Frame - Black, 58	$204,63	Black	$337,22	LL Road Frame	Road Frames	Components	FR-R38B-58	110.336.782,091
256	LL Road Frame - Black, 60	$176,20	Black	$297,63	LL Road Frame	Road Frames	Components	FR-R38B-60	110.336.782,091
257	LL Road Frame - Black, 60	$170,14	Black	$306,56	LL Road Frame	Road Frames	Components	FR-R38B-60	110.336.782,091
258	LL Road Frame - Black, 60	$204,63	Black	$337,22	LL Road Frame	Road Frames	Components	FR-R38B-60	110.336.782,091
259	LL Road Frame - Black, 62	$176,20	Black	$297,63	LL Road Frame	Road Frames	Components	FR-R38B-62	110.336.782,091
260	LL Road Frame - Black, 62	$170,14	Black	$306,56	LL Road Frame	Road Frames	Components	FR-R38B-62	110.336.782,091
261	LL Road Frame - Black, 62	$204,63	Black	$337,22	LL Road Frame	Road Frames	Components	FR-R38B-62	110.336.782,091
279	LL Road Frame - Black, 44	$176,20	Black	$297,63	LL Road Frame	Road Frames	Components	FR-R38B-44	110.336.782,091
280	LL Road Frame - Black, 44	$170,14	Black	$306,56	LL Road Frame	Road Frames	Components	FR-R38B-44	110.336.782,091

Colonne Calcolate

CALCULATE quando si trova in un caso di ROW CONTENT
EFFETTUA LA CONTEXT TRANSITION:

Trasforma la ROW Context in FILTER Context
Nella Colonna Calcolata ne abbiamo un esempio, altri li vedremo con delle misure

```
P02 = CALCULATE(
            SUMX(Sales,
            Sales[Order Quantity]*Sales[Unit Price]
            )
)
```



```
1 P02 = CALCULATE(SUMX(Sales,
2                      Sales[Order Quantity]*Sales[Unit Price]
3                     ))
```

ProductKey	Product	Standard Cost	Color	List Price	Model	Subcategory	Category	SKU	P01	P02
210	HL Road Frame - Black, 58	$868,63	Black	$1.431,50	HL Road Frame	Road Frames	Components	FR-R92B-58	110.336.782,0914 €	
215	Sport-100 Helmet, Black	$12,03	Black	$33,64	Sport-100	Helmets	Accessories	HL-U509	110.336.782,0914 €	12.103,1523 €
216	Sport-100 Helmet, Black	$13,88	Black	$33,64	Sport-100	Helmets	Accessories	HL-U509	110.336.782,0914 €	32.256,345 €
217	Sport-100 Helmet, Black	$13,09	Black	$34,99	Sport-100	Helmets	Accessories	HL-U509	110.336.782,0914 €	117.717,2069 €
253	LL Road Frame - Black, 58	$176,20	Black	$297,63	LL Road Frame	Road Frames	Components	FR-R38B-58	110.336.782,0914 €	34.108,9328 €
254	LL Road Frame - Black, 58	$170,14	Black	$306,56	LL Road Frame	Road Frames	Components	FR-R38B-58	110.336.782,0914 €	80.197,0552 €
255	LL Road Frame - Black, 58	$204,63	Black	$337,22	LL Road Frame	Road Frames	Components	FR-R38B-58	110.336.782,0914 €	63.329,916 €
256	LL Road Frame - Black, 60	$176,20	Black	$297,63	LL Road Frame	Road Frames	Components	FR-R38B-60	110.336.782,0914 €	178,5808 €
257	LL Road Frame - Black, 60	$170,14	Black	$306,56	LL Road Frame	Road Frames	Components	FR-R38B-60	110.336.782,0914 €	12.323,8594 €
258	LL Road Frame - Black, 60	$204,63	Black	$337,22	LL Road Frame	Road Frames	Components	FR-R38B-60	110.336.782,0914 €	12.342,252 €
259	LL Road Frame - Black, 62	$176,20	Black	$297,63	LL Road Frame	Road Frames	Components	FR-R38B-62	110.336.782,0914 €	
260	LL Road Frame - Black, 62	$170,14	Black	$306,56	LL Road Frame	Road Frames	Components	FR-R38B-62	110.336.782,0914 €	
261	LL Road Frame - Black, 62	$204,63	Black	$337,22	LL Road Frame	Road Frames	Components	FR-R38B-62	110.336.782,0914 €	
279	LL Road Frame - Black, 44	$176,20	Black	$297,63	LL Road Frame	Road Frames	Components	FR-R38B-44	110.336.782,0914 €	4.643,1008 €
280	LL Road Frame - Black, 44	$170,14	Black	$306,56	LL Road Frame	Road Frames	Components	FR-R38B-44	110.336.782,0914 €	23.728,0278 €
281	LL Road Frame - Black, 44	$204,63	Black	$337,22	LL Road Frame	Road Frames	Components	FR-R38B-44	110.336.782,0914 €	16.793,556 €
282	LL Road Frame - Black, 48	$176,20	Black	$297,63	LL Road Frame	Road Frames	Components	FR-R38B-48	110.336.782,0914 €	
283	LL Road Frame - Black, 48	$170,14	Black	$306,56	LL Road Frame	Road Frames				
284	LL Road Frame - Black, 48	$204,63	Black	$337,22	LL Road Frame	Road Frames				

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Colonne Calcolate

UNA MISURA HA IMPLICITAMENTE IL CALCULATE:
P02, P03 e P04 sono equivalenti

```
M04 = SUMX(Sales,
                Sales[Order Quantity]*Sales[Unit Price]
           )
P02 = CALCULATE(
                SUMX(Sales,
                Sales[Order Quantity]*Sales[Unit Price]
                 )
                )
```

```
P03 = [M04]
P04 = CALCULATE([M04])
```

Model	Subcategory	Category	SKU	P01	P02	P03	P04
oad Frame	Road Frames	Components	FR-R92B-58	110.336.782,0914 €			
rt-100	Helmets	Accessories	HL-U509	110.336.782,0914 €	12.103,1523 €	12.103,1523 €	12.103,1523 €
rt-100	Helmets	Accessories	HL-U509	110.336.782,0914 €	32.256,345 €	32.256,345 €	32.256,345 €
rt-100	Helmets	Accessories	HL-U509	110.336.782,0914 €	117.717,2069 €	117.717,2069 €	117.717,2069 €
oad Frame	Road Frames	Components	FR-R38B-58	110.336.782,0914 €	34.108,9328 €	34.108,9328 €	34.108,9328 €
oad Frame	Road Frames	Components	FR-R38B-58	110.336.782,0914 €	80.197,0552 €	80.197,0552 €	80.197,0552 €
oad Frame	Road Frames	Components	FR-R38B-58	110.336.782,0914 €	63.329,916 €	63.329,916 €	63.329,916 €
oad Frame	Road Frames	Components	FR-R38B-60	110.336.782,0914 €	178,5808 €	178,5808 €	178,5808 €
oad Frame	Road Frames	Components	FR-R38B-60	110.336.782,0914 €	12.323,8594 €	12.323,8594 €	12.323,8594 €
oad Frame	Road Frames	Components	FR-R38B-60	110.336.782,0914 €	12.342,252 €	12.342,252 €	12.342,252 €
oad Frame	Road Frames	Components	FR-R38B-62	110.336.782,0914 €			
oad Frame	Road Frames	Components	FR-R38B-62	110.336.782,0914 €			
oad Frame	Road Frames	Components	FR-R38B-62	110.336.782,0914 €			
oad Frame	Road Frames	Components	FR-R38B-44	110.336.782,0914 €	4.643,1008 €	4.643,1008 €	4.643,1008 €
oad Frame	Road Frames	Components	FR-R38B-44	110.336.782,0914 €	23.728,0278 €	23.728,0278 €	23.728,0278 €
oad Frame	Road Frames	Components	FR-R38B-44	110.336.782,0914 €	16.793,556 €	16.793,556 €	16.793,556 €
oad Frame	Road Frames	Components	FR-R38B-48	110.336.782,0914 €			
oad Frame	Road Frames	Components	FR-R38B-48	110.336.782,0914 €			
oad Frame	Road Frames	Components	FR-R38B-48	110.336.782,0914 €			
oad Frame	Road Frames	Components	FR-R38B-52	110.336.782,0914 €	54.109,9824 €	54.109,9824 €	54.109,9824 €
oad Frame	Road Frames	Components	FR-R38B-52	110.336.782,0914 €	126.298,0991		

Ancora Misure

```
M04 = SUMX(Sales,
           Sales[Order Quantity]*Sales[Unit Price]
          )
```

Color	M04
Black	38.349.263,26
Blue	9.661.162,95
Multi	651.581,57
NA	1.102.189,73
Red	21.634.659,26
Silver	19.866.655,77
Silver/Black	147.530,88
White	30.029,43
Yellow	18.893.709,24
Totale	**110.336.782,09**

Se volessi solo I valori di M04 il cui TOTALE PER COLORE > 18 M ?

Ancora Misure

```
M09 = CALCULATE(
                    [M04],
                    FILTER(ALL('Product'[Color]),
                        [M04] > 18000000
                    )
                )
```

CONTEXT TRANSITION
trasforma il ROW context di FILTER in FILTER context in modo da soddisfare la richiesta

Color	M04	M09
Black	38.349.263,26	98.744.287,53
Blue	9.661.162,95	98.744.287,53
Grey		98.744.287,53
Multi	651.581,57	98.744.287,53
NA	1.102.189,73	98.744.287,53
Red	21.634.659,26	98.744.287,53
Silver	19.866.655,77	98.744.287,53
Silver/Black	147.530,88	98.744.287,53
White	30.029,43	98.744.287,53
Yellow	18.893.709,24	98.744.287,53
Totale	**110.336.782,09**	**98.744.287,53**

Non Dimentichiamo il KEEPFILTERS

Ancora Misure

```
M09 = CALCULATE(
                [M04],
                FILTER(ALL('Product'[Color]),
                       [M04] > 18000000
                      )
               )

M10 = CALCULATE(
                [M04],
                KEEPFILTERS(
                            FILTER(ALL('Product'[Color]),
                                   [M04] > 18000000
                                  )
                           )
               )
```

Color	M04	M09	M10
Black	38.349.263,26	98.744.287,53	38.349.263,26
Blue	9.661.162,95	98.744.287,53	
Grey		98.744.287,53	
Multi	651.581,57	98.744.287,53	
NA	1.102.189,73	98.744.287,53	
Red	21.634.659,26	98.744.287,53	21.634.659,26
Silver	19.866.655,77	98.744.287,53	19.866.655,77
Silver/Black	147.530,88	98.744.287,53	
White	30.029,43	98.744.287,53	
Yellow	18.893.709,24	98.744.287,53	18.893.709,24
Totale	**110.336.782,09**	**98.744.287,53**	**98.744.287,53**