Introducción a Tableau

MSc. Evelyn Valenzano
Data Scientist – AI Developer

tableau

Evelyn Valenzano

- Científica de Datos y Desarrolladora AI-ML
- Master en Visual Analytics and Big Data
- Especialista en IA y Big Data
- Especialista en AI Engineering
- Docente de Inteligencia Artificial en el Centro de Innovación TIC

¿Qué es Tableau?

- Herramienta de visualización de datos.
- Gran capacidad para procesar datos y generar visualizaciones en muy poco tiempo.
- Permite el formateo y la organización de datos antes de generar las visualizaciones.

¿Qué es Tableau?

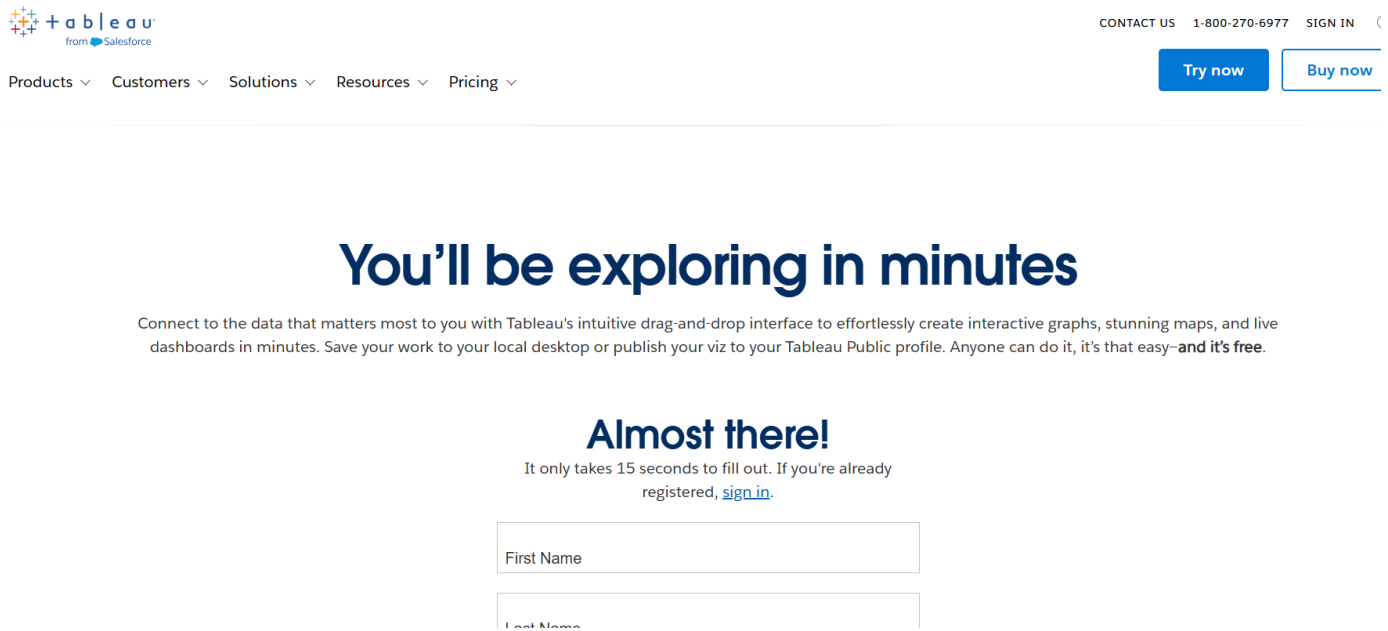
- Tableau Desktop
- Tableau Public (este utilizaremos)
- Tableau Online
- Tableau Server

Instalando Tableau

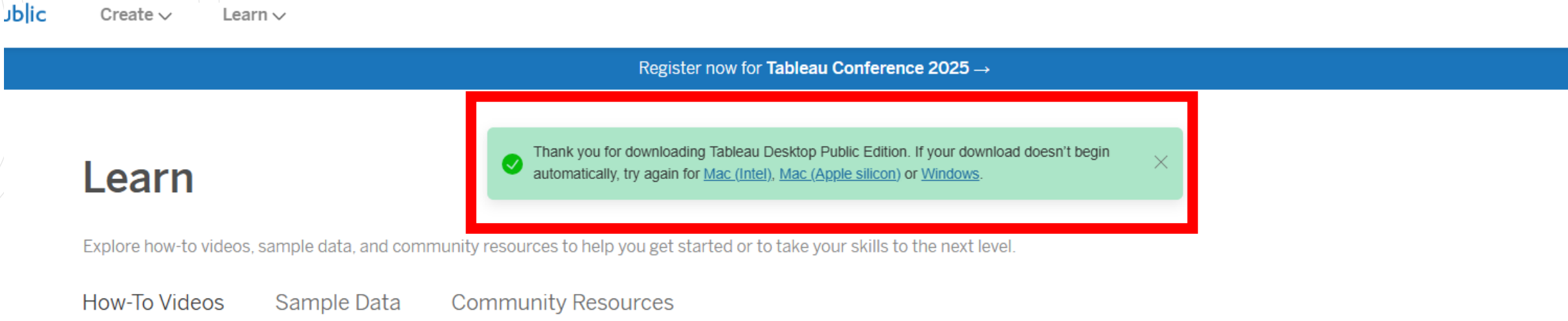
- **Link para la descarga:**

https://www.tableau.com/products/public/download

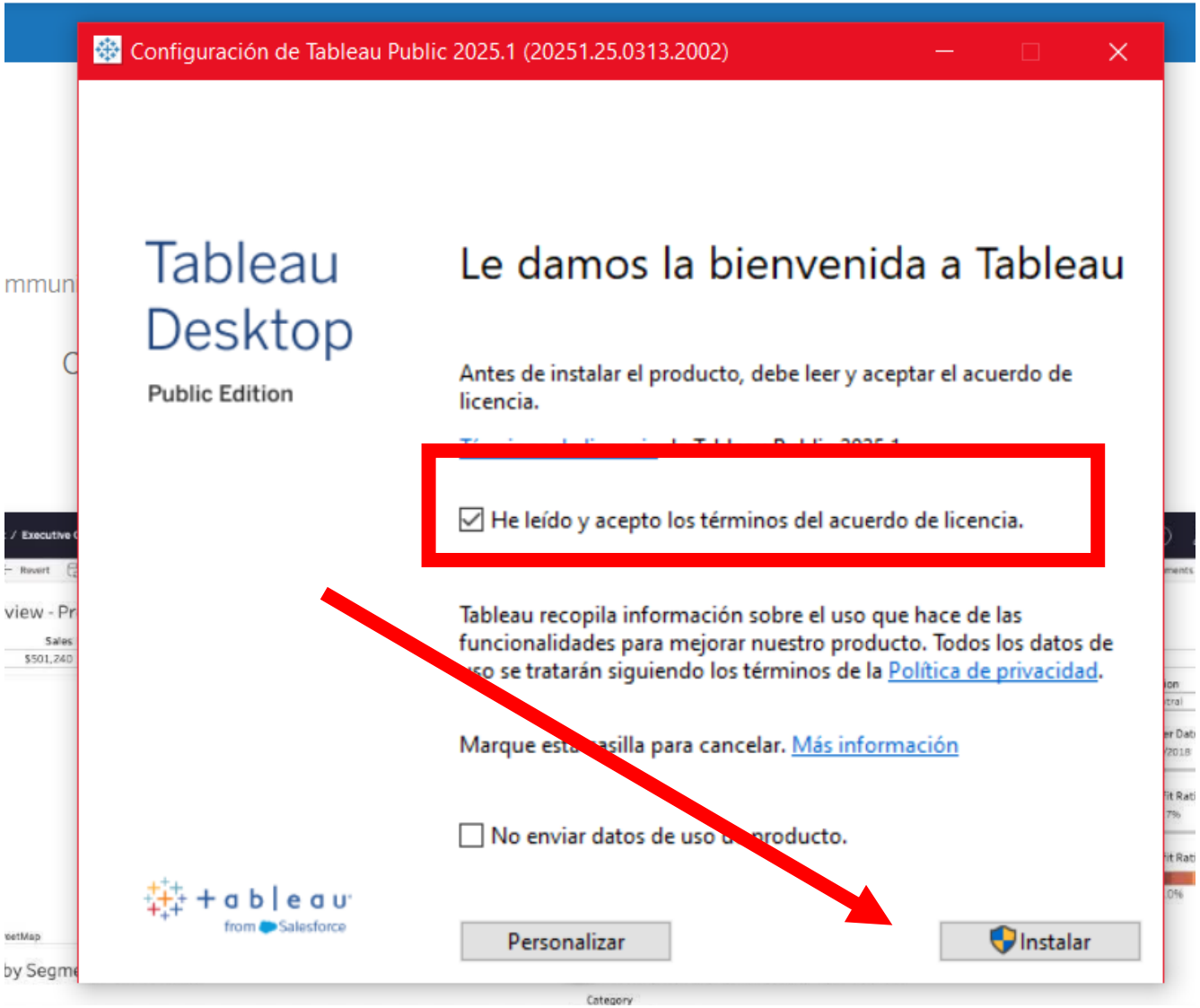
- **Pide que se registren para descargar**



Instalando Tableau



Instalando Tableau



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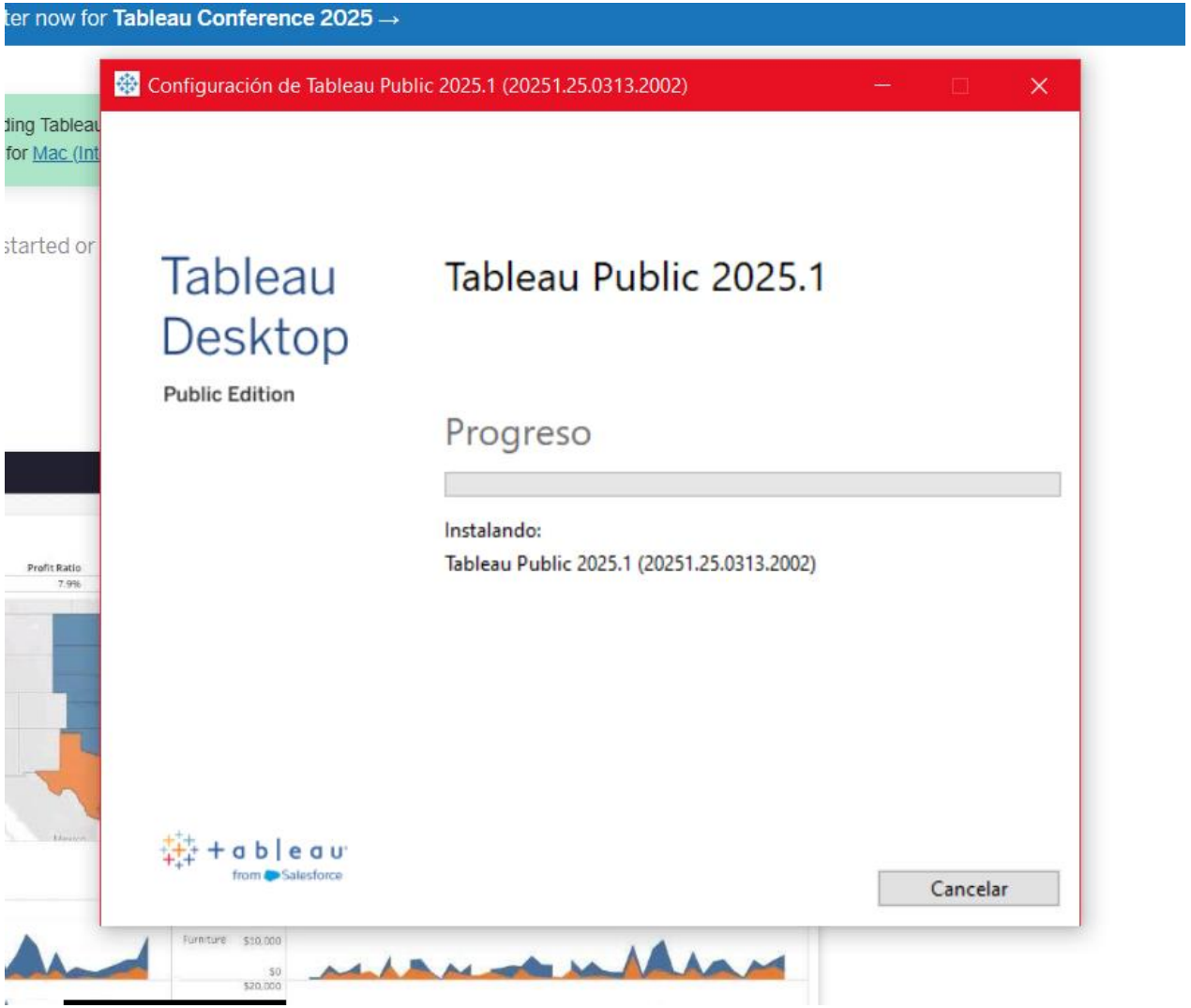
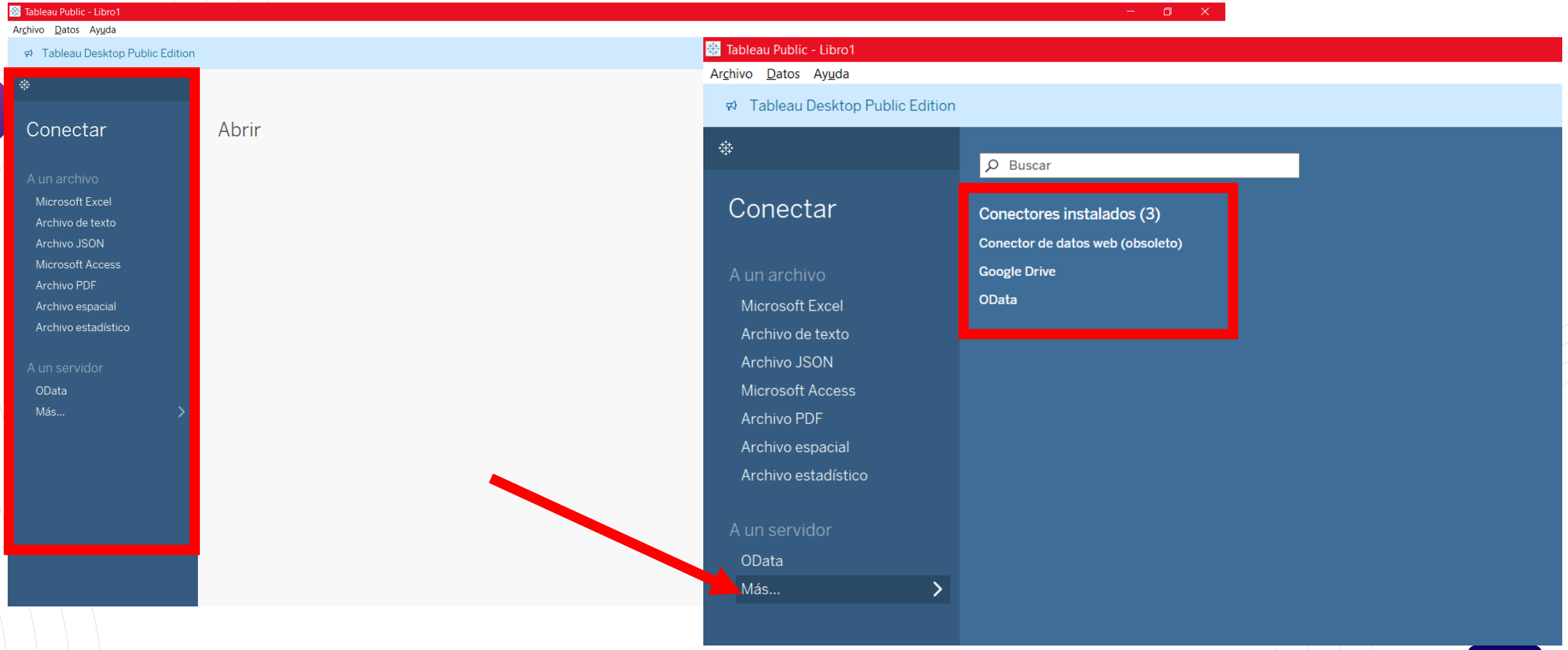
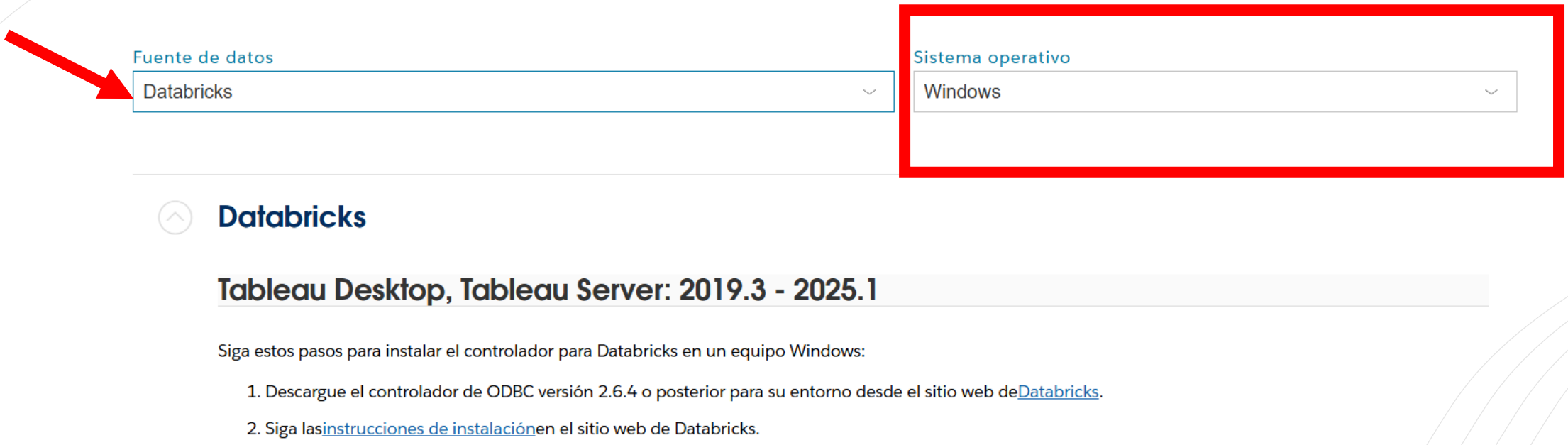


Iniciando con Tableau

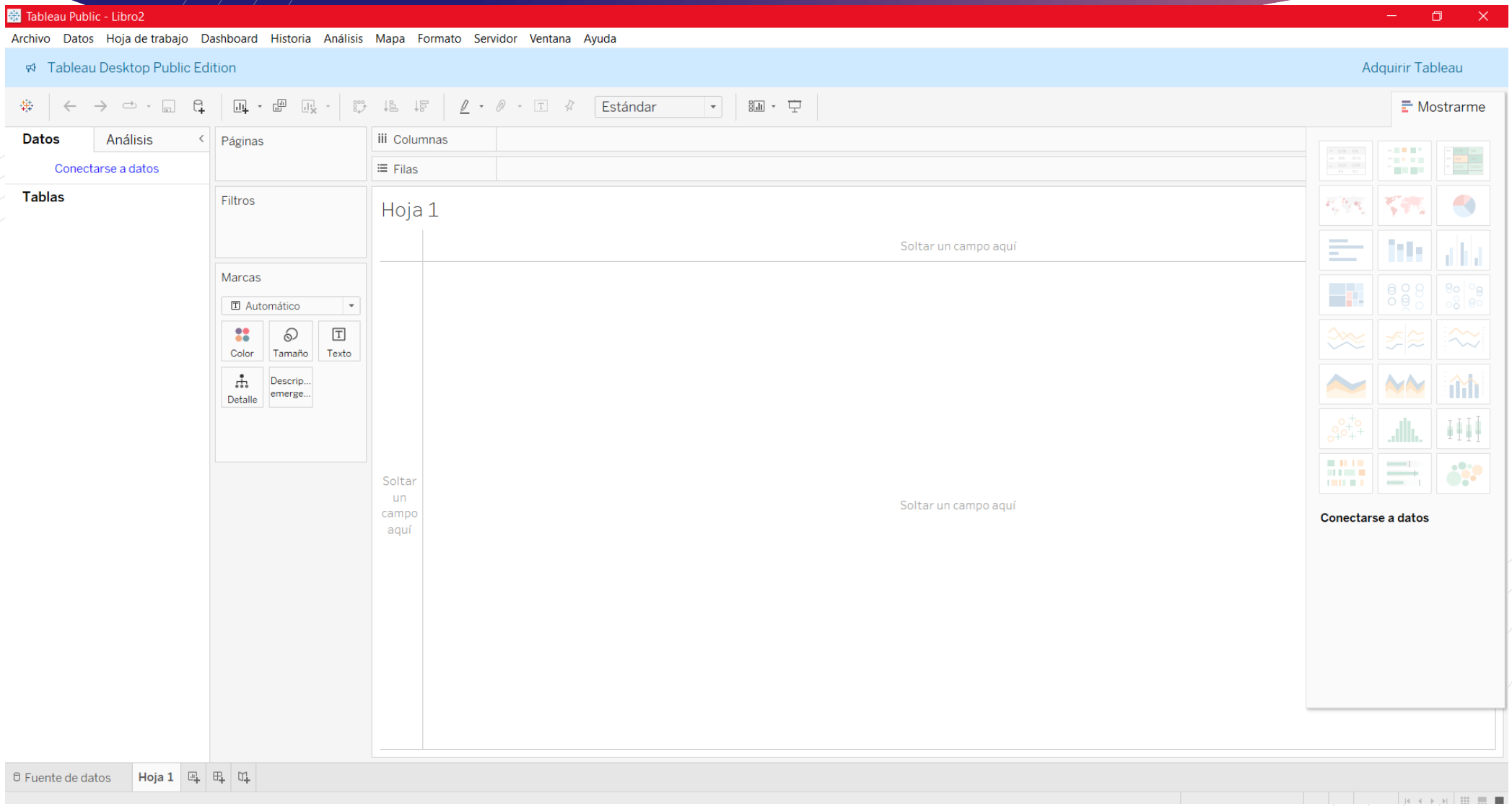


Descargar conectores

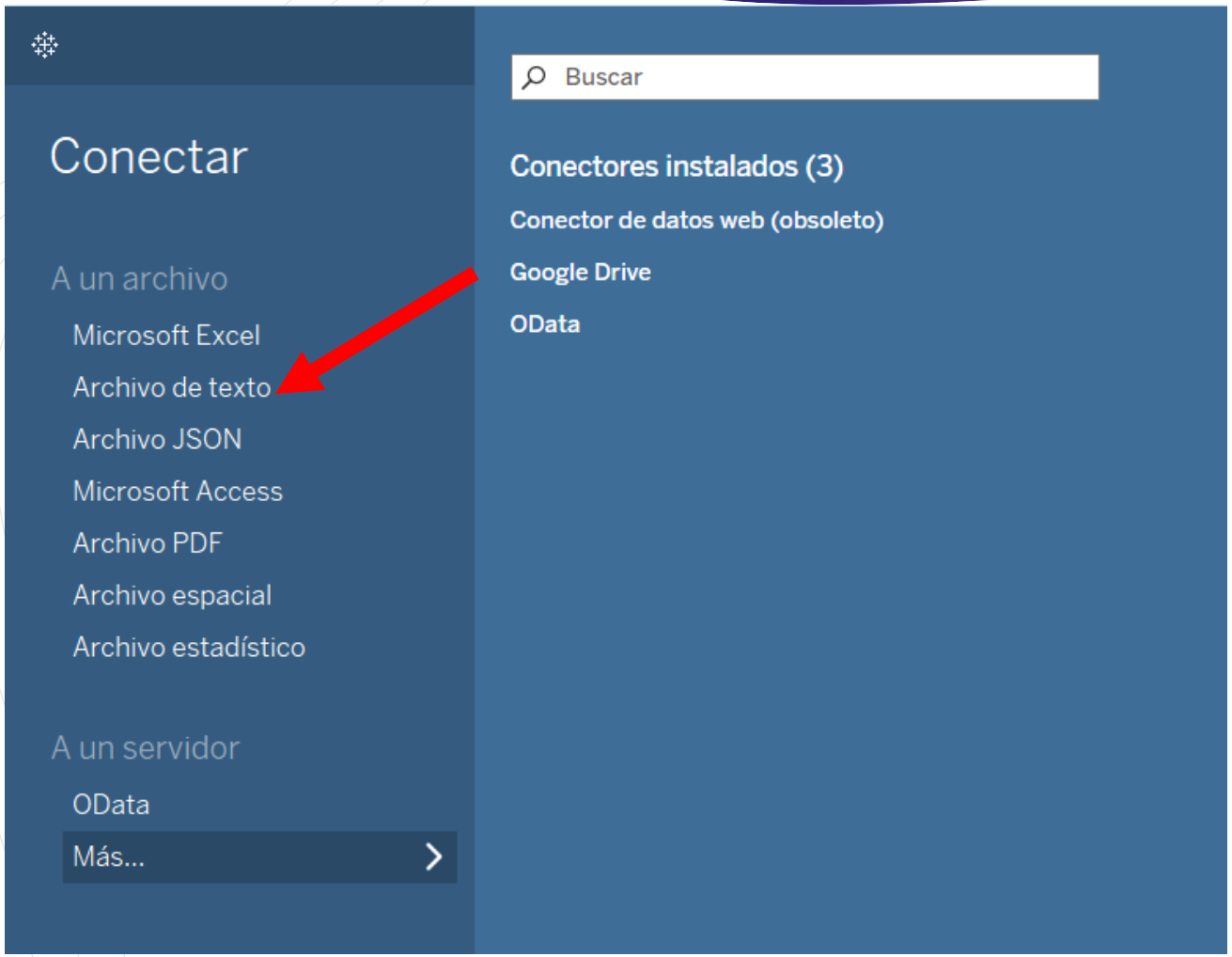
https://www.tableau.com/es-es/support



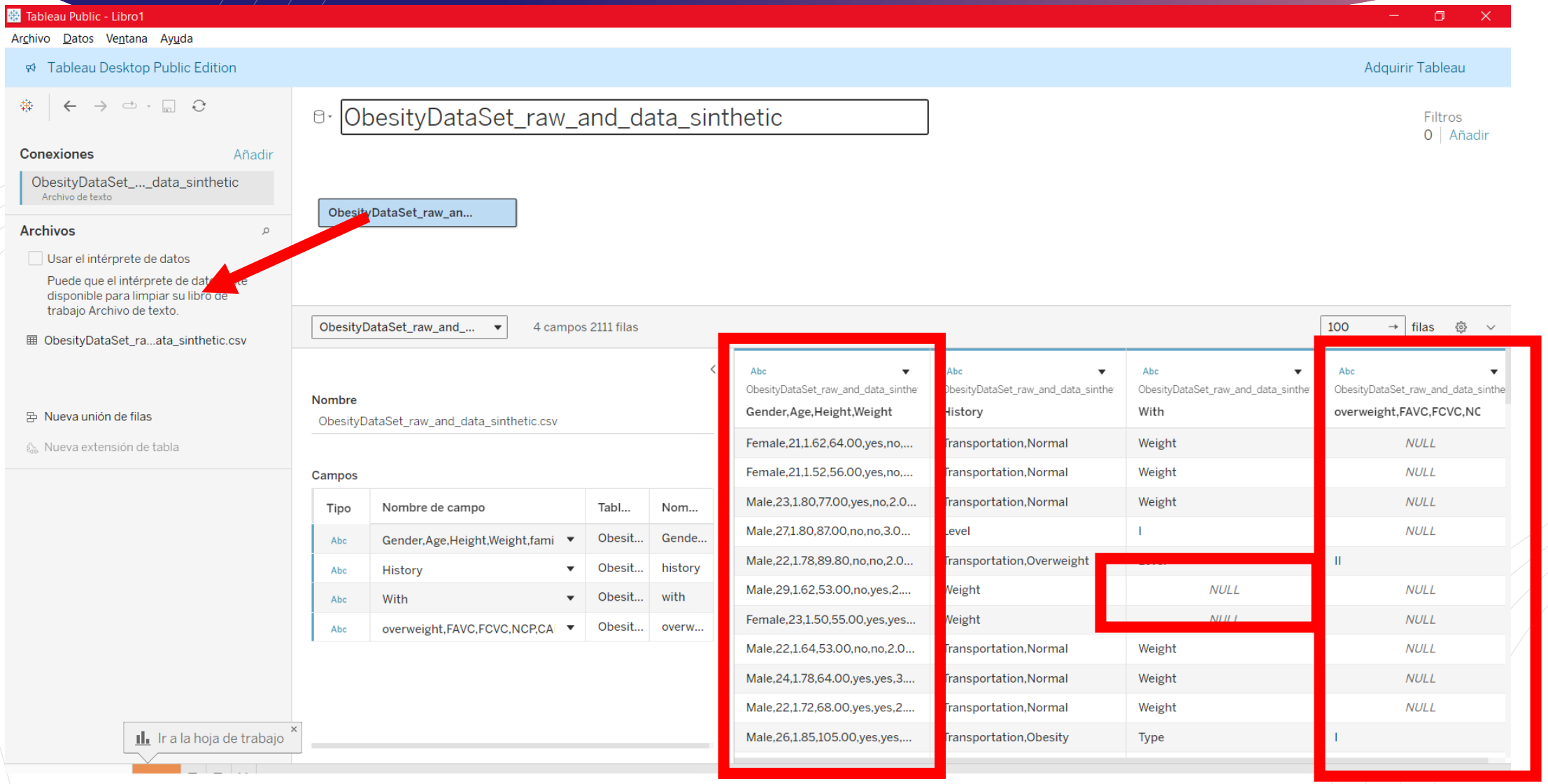
Conociendo Tableau



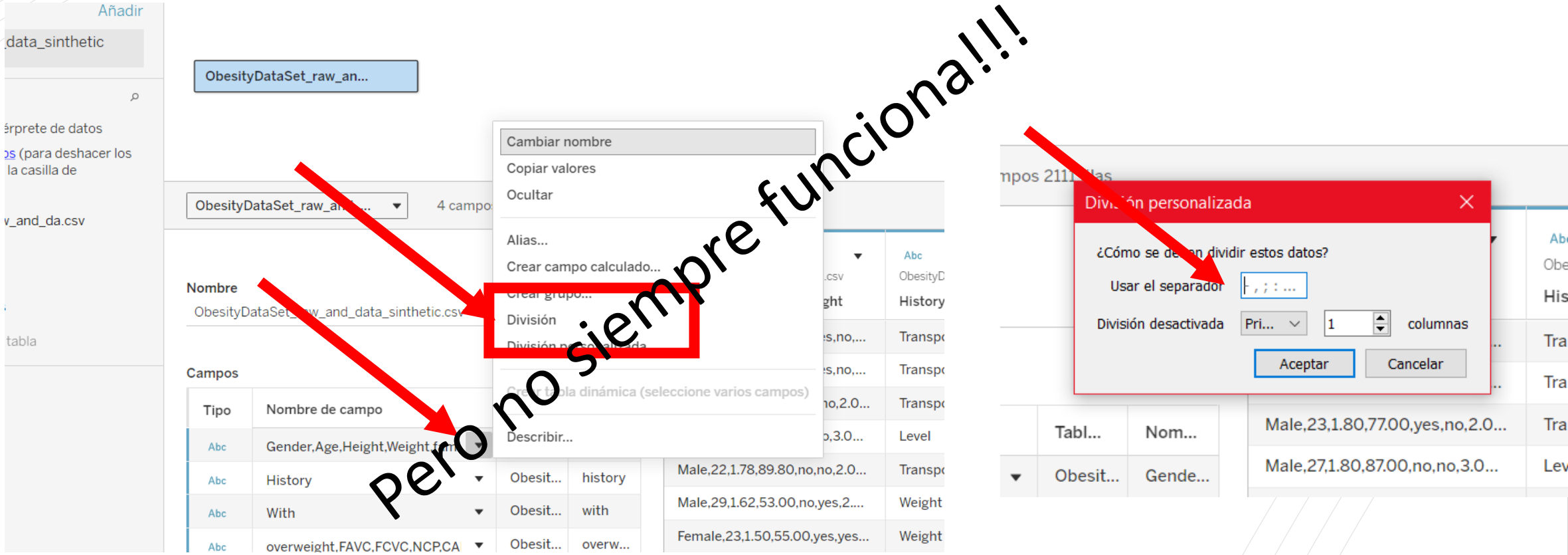
Conociendo Tableau



Análisis de Datos



Análisis de Datos

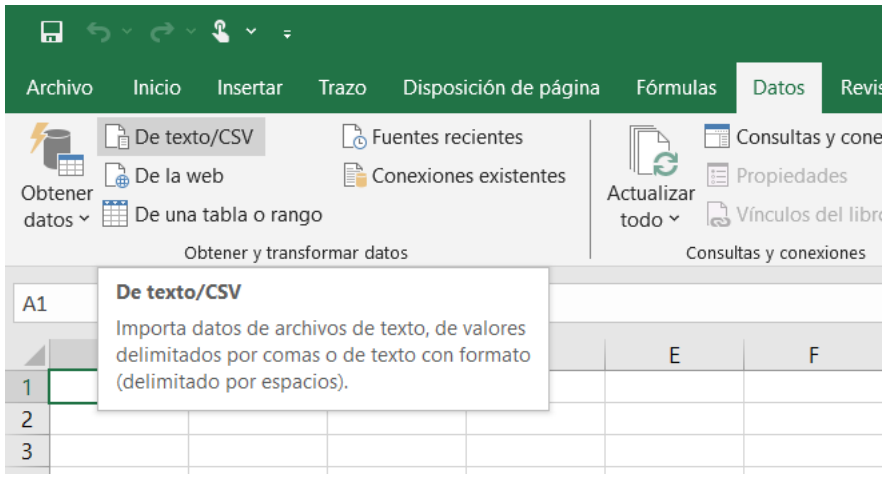


Análisis de Datos

¿Soluciones?

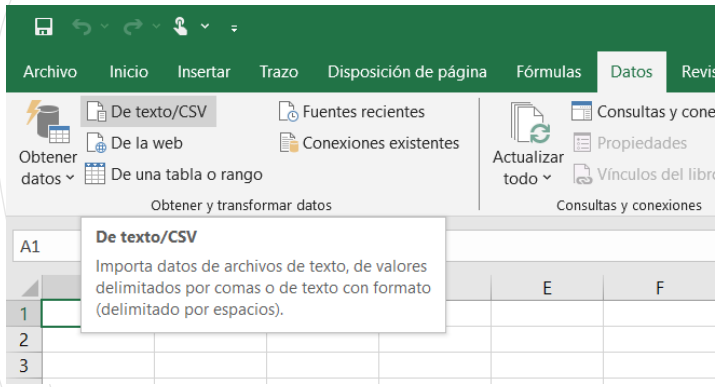
Tableau Prep Builder: Download

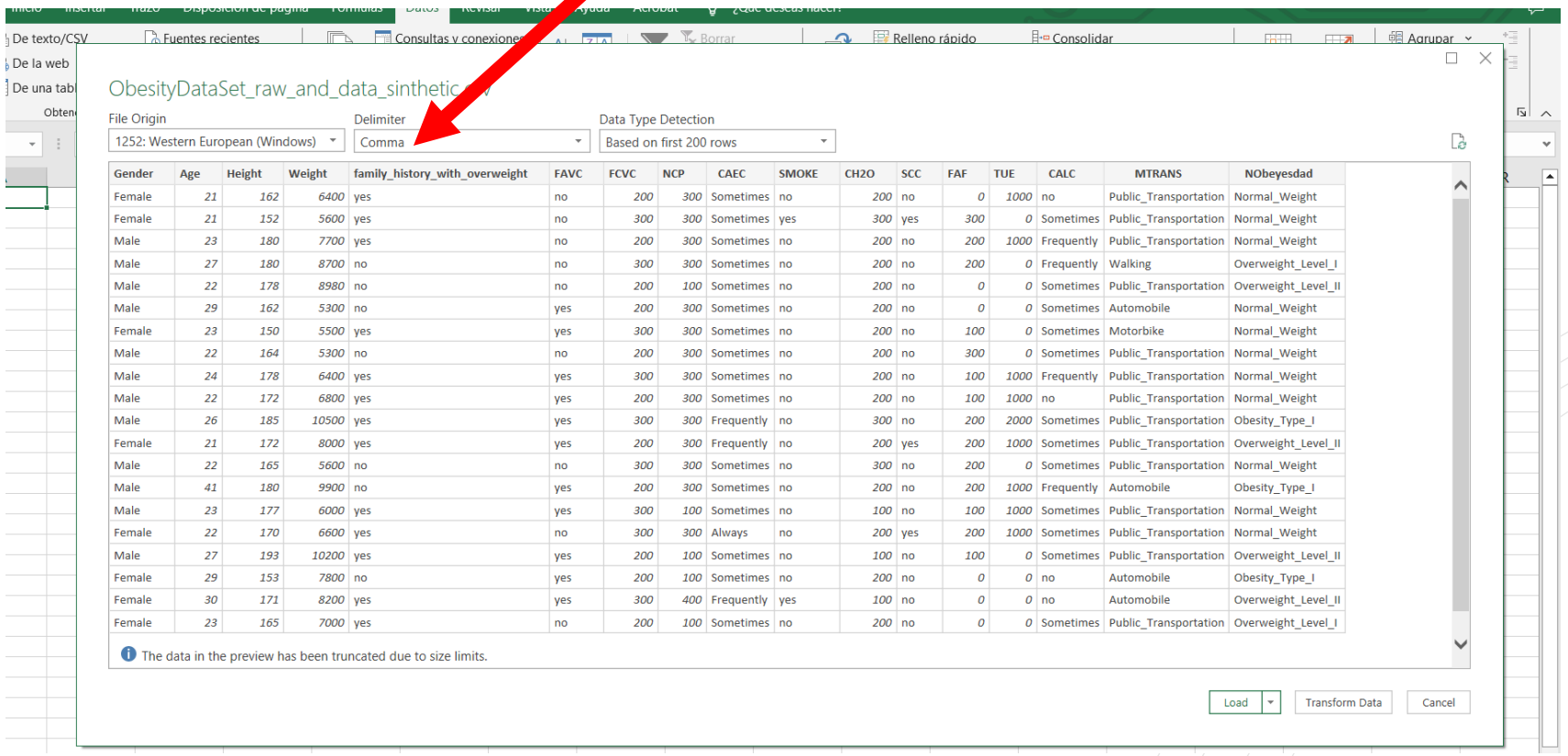
Almost there!



Análisis de Datos

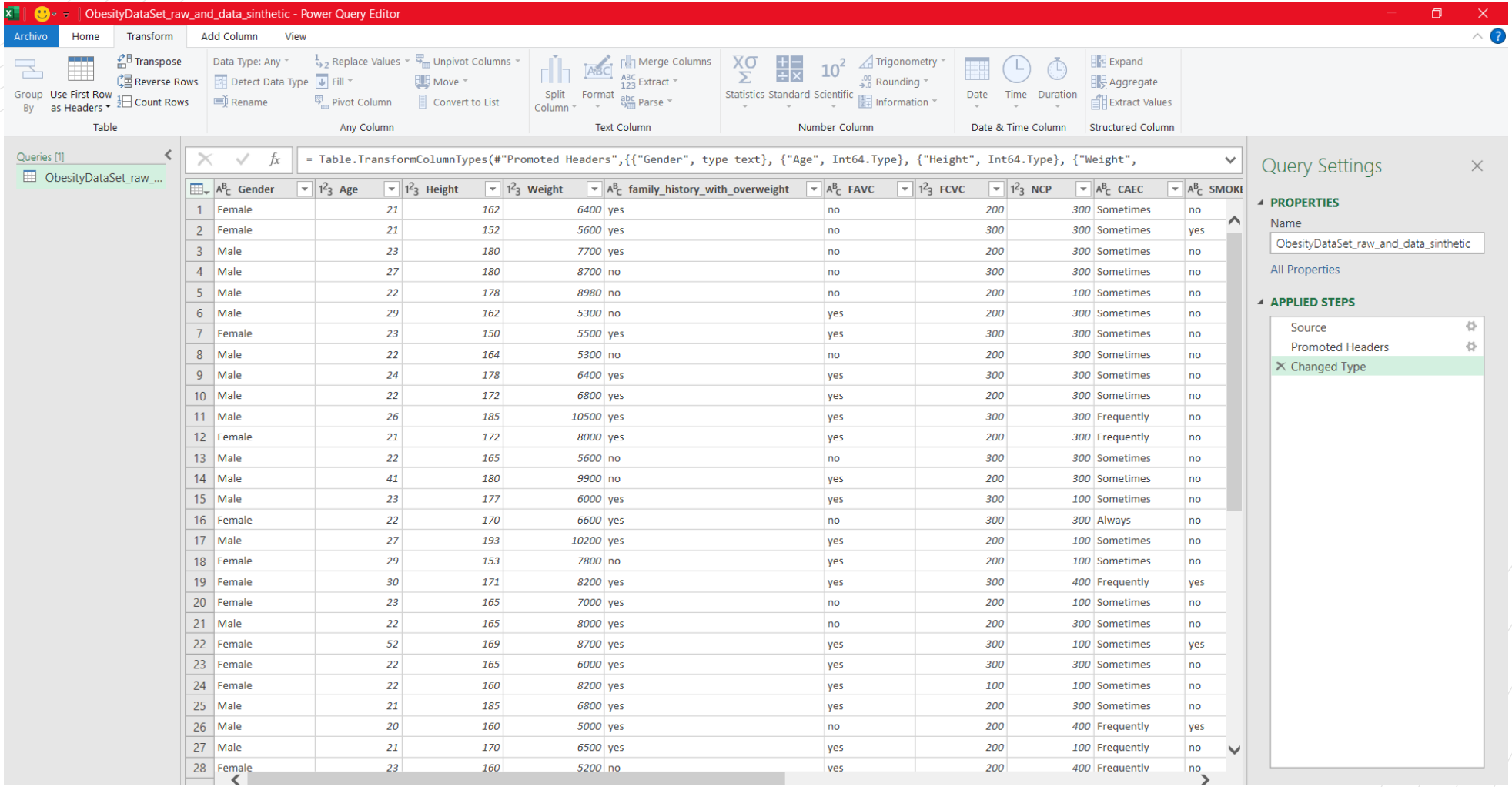
¿Soluciones?





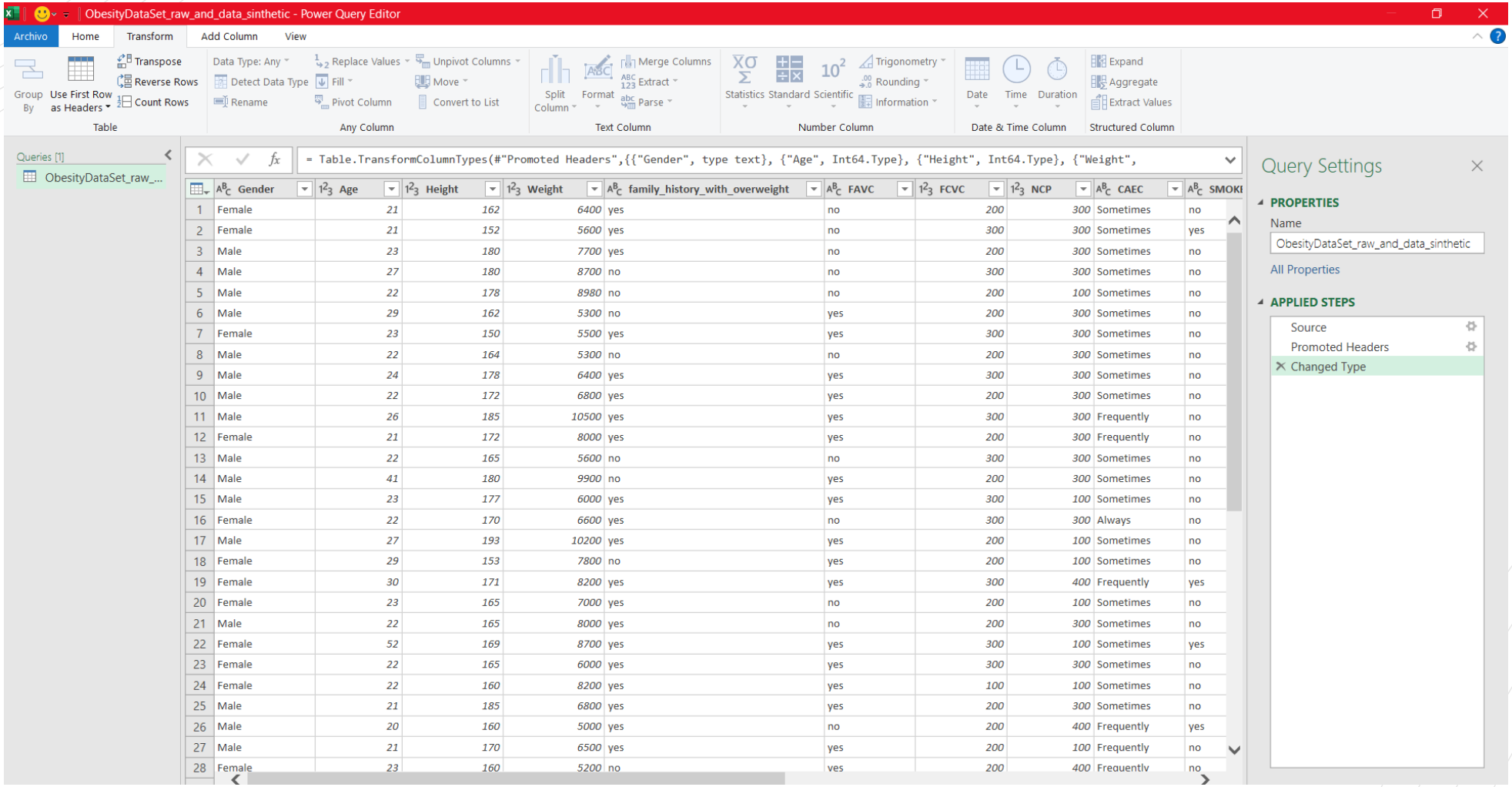
Gender	Age	Height	Weight	family_history_with_overweight	FAVC	FCVC	NCP	CAEC	SMOKE	CH2O	SCC	FAF	TUE	CALC	MTRANS	NObeyesdad
Female	21	162	6400	yes	no	200	300	Sometimes	no	200	no	0	1000	no	Public_Transportation	Normal_Weight
Female	21	152	5600	yes	no	300	300	Sometimes	yes	300	yes	300	0	Sometimes	Public_Transportation	Normal_Weight
Male	23	180	7700	yes	no	200	300	Sometimes	no	200	no	200	1000	Frequently	Public_Transportation	Normal_Weight
Male	27	180	8700	no	no	300	300	Sometimes	no	200	no	200	0	Frequently	Walking	Overweight_Level_I
Male	22	178	8980	no	no	200	100	Sometimes	no	200	no	0	0	Sometimes	Public_Transportation	Overweight_Level_II
Male	29	162	5300	no	yes	200	300	Sometimes	no	200	no	0	0	Sometimes	Automobile	Normal_Weight
Female	23	150	5500	yes	yes	300	300	Sometimes	no	200	no	100	0	Sometimes	Motorbike	Normal_Weight
Male	22	164	5300	no	no	200	300	Sometimes	no	200	no	300	0	Sometimes	Public_Transportation	Normal_Weight
Male	24	178	6400	yes	yes	300	300	Sometimes	no	200	no	100	1000	Frequently	Public_Transportation	Normal_Weight
Male	22	172	6800	yes	yes	200	300	Sometimes	no	200	no	100	1000	no	Public_Transportation	Normal_Weight
Male	26	185	10500	yes	yes	300	300	Frequently	no	300	no	200	2000	Sometimes	Public_Transportation	Obesity_Type_I
Female	21	172	8000	yes	yes	200	300	Frequently	no	200	yes	200	1000	Sometimes	Public_Transportation	Overweight_Level_II
Male	22	165	5600	no	no	300	300	Sometimes	no	300	no	200	0	Sometimes	Public_Transportation	Normal_Weight
Male	41	180	9900	no	yes	200	300	Sometimes	no	200	no	200	1000	Frequently	Automobile	Obesity_Type_I
Male	23	177	6000	yes	yes	300	100	Sometimes	no	100	no	100	1000	Sometimes	Public_Transportation	Normal_Weight
Female	22	170	6600	yes	no	300	300	Always	no	200	yes	200	1000	Sometimes	Public_Transportation	Normal_Weight
Male	27	193	10200	yes	yes	200	100	Sometimes	no	100	no	100	0	Sometimes	Public_Transportation	Overweight_Level_II
Female	29	153	7800	no	yes	200	100	Sometimes	no	200	no	0	0	no	Automobile	Obesity_Type_I
Female	30	171	8200	yes	yes	300	400	Frequently	yes	100	no	0	0	no	Automobile	Overweight_Level_II
Female	23	165	7000	yes	no	200	100	Sometimes	no	200	no	0	0	Sometimes	Public_Transportation	Overweight_Level_I

Análisis de Datos



	Gender	Age	Height	Weight	family_history_with_overweight	FAVC	FCVC	NCP	CAEC	SMOKI
1	Female	21	162	6400	yes	no	200	300	Sometimes	no
2	Female	21	152	5600	yes	no	300	300	Sometimes	yes
3	Male	23	180	7700	yes	no	200	300	Sometimes	no
4	Male	27	180	8700	no	no	300	300	Sometimes	no
5	Male	22	178	8980	no	no	200	100	Sometimes	no
6	Male	29	162	5300	no	yes	200	300	Sometimes	no
7	Female	23	150	5500	yes	yes	300	300	Sometimes	no
8	Male	22	164	5300	no	no	200	300	Sometimes	no
9	Male	24	178	6400	yes	yes	300	300	Sometimes	no
10	Male	22	172	6800	yes	yes	200	300	Sometimes	no
11	Male	26	185	10500	yes	yes	300	300	Frequently	no
12	Female	21	172	8000	yes	yes	200	300	Frequently	no
13	Male	22	165	5600	no	no	300	300	Sometimes	no
14	Male	41	180	9900	no	yes	200	300	Sometimes	no
15	Male	23	177	6000	yes	yes	300	100	Sometimes	no
16	Female	22	170	6600	yes	no	300	300	Always	no
17	Male	27	193	10200	yes	yes	200	100	Sometimes	no
18	Female	29	153	7800	no	yes	200	100	Sometimes	no
19	Female	30	171	8200	yes	yes	300	400	Frequently	yes
20	Female	23	165	7000	yes	no	200	100	Sometimes	no
21	Male	22	165	8000	yes	no	200	300	Sometimes	no
22	Female	52	169	8700	yes	yes	300	100	Sometimes	yes
23	Female	22	165	6000	yes	yes	300	300	Sometimes	no
24	Female	22	160	8200	yes	yes	100	100	Sometimes	no
25	Male	21	185	6800	yes	yes	200	300	Sometimes	no
26	Male	20	160	5000	yes	no	200	400	Frequently	yes
27	Male	21	170	6500	yes	yes	200	100	Frequently	no
28	Female	23	160	5200	no	yes	200	400	Frequently	no

Análisis de Datos



	Gender	Age	Height	Weight	family_history_with_overweight	FAVC	FCVC	NCP	CAEC	SMOKI
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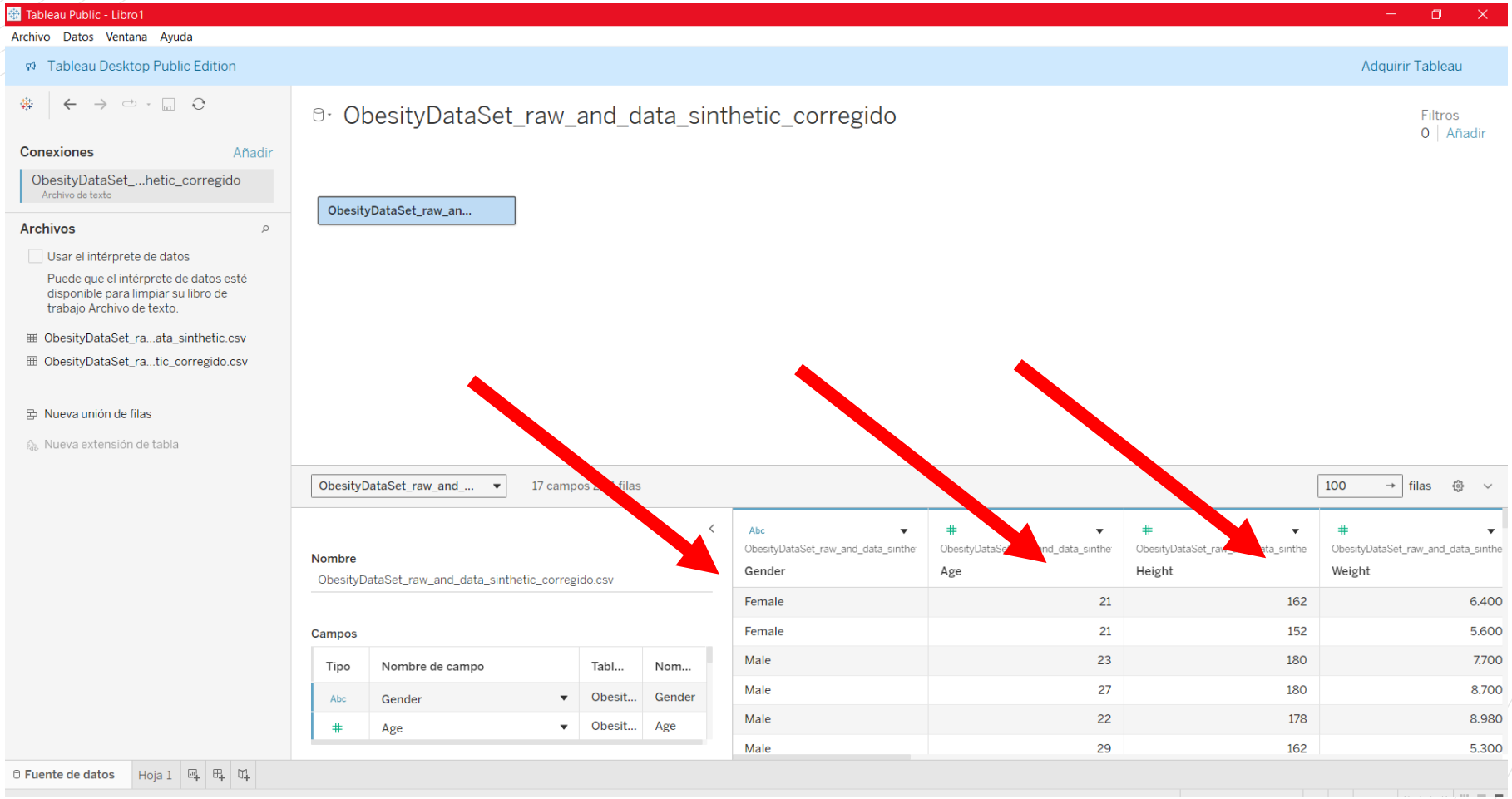
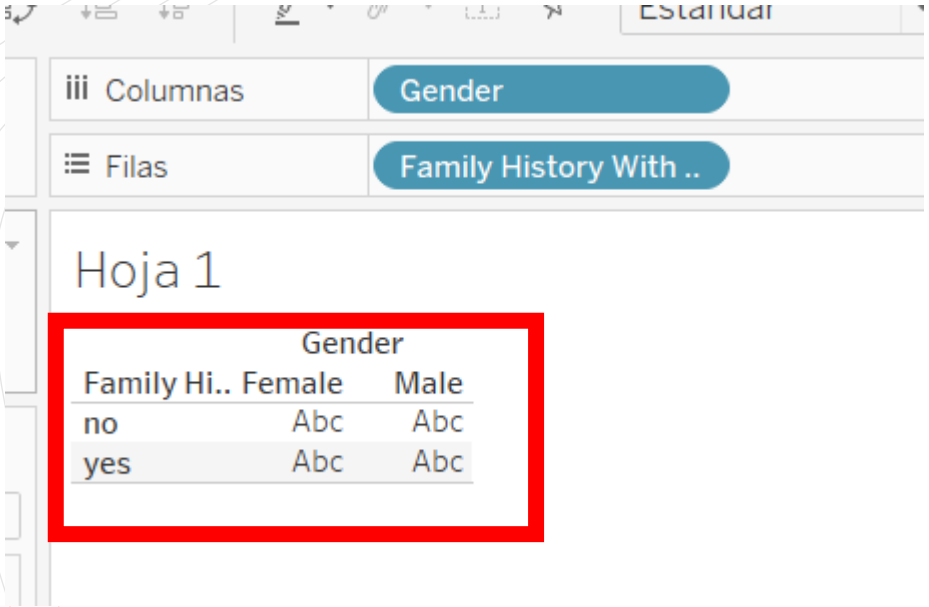
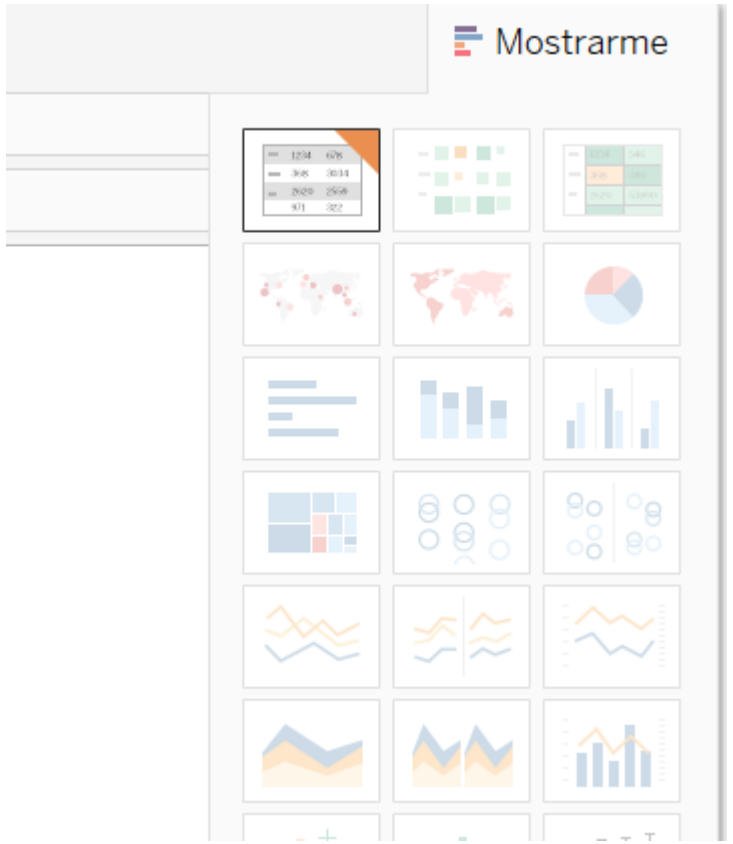
26	Male	20	160	5000	yes	no	200	400	Frequently	yes
27	Male	21	170	6500	yes	yes	200	100	Frequently	no
28	Female	23	160	5200	no	yes	200	400	Frequently	no

Creando visualizaciones



Creando visualizaciones

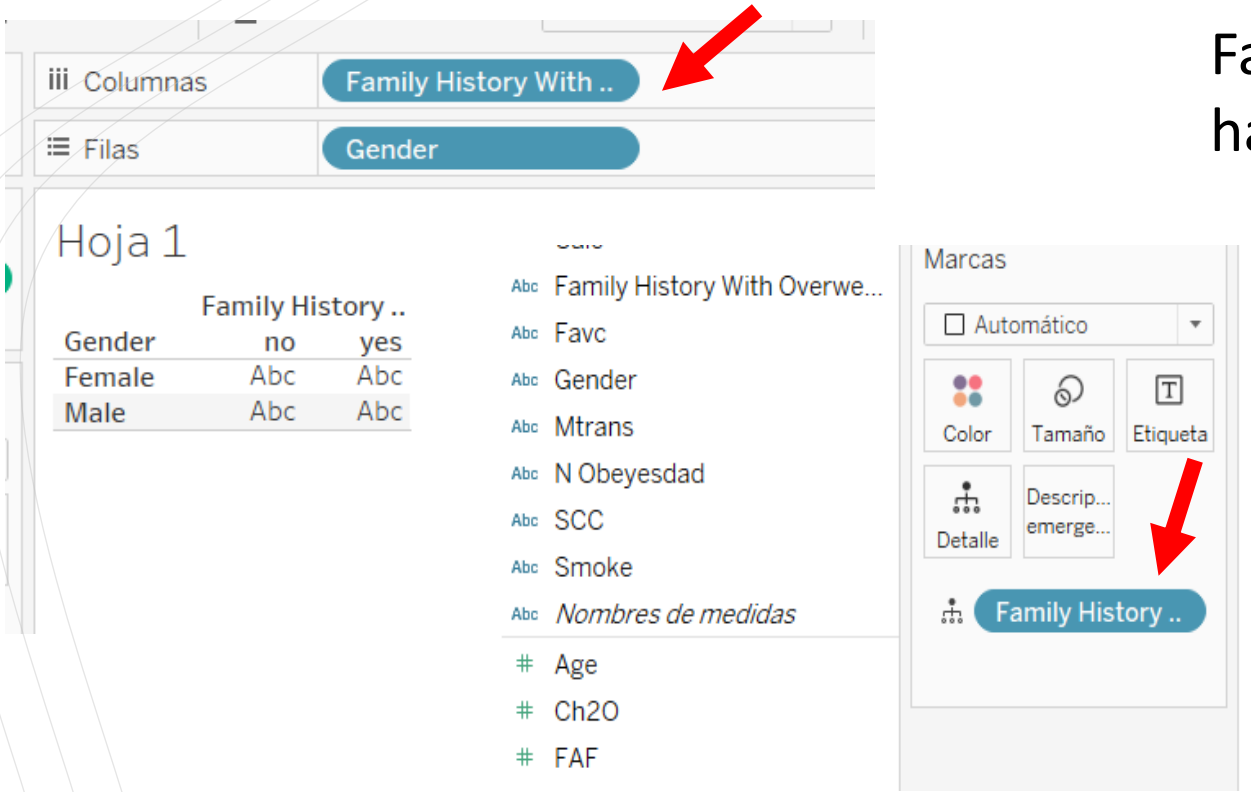


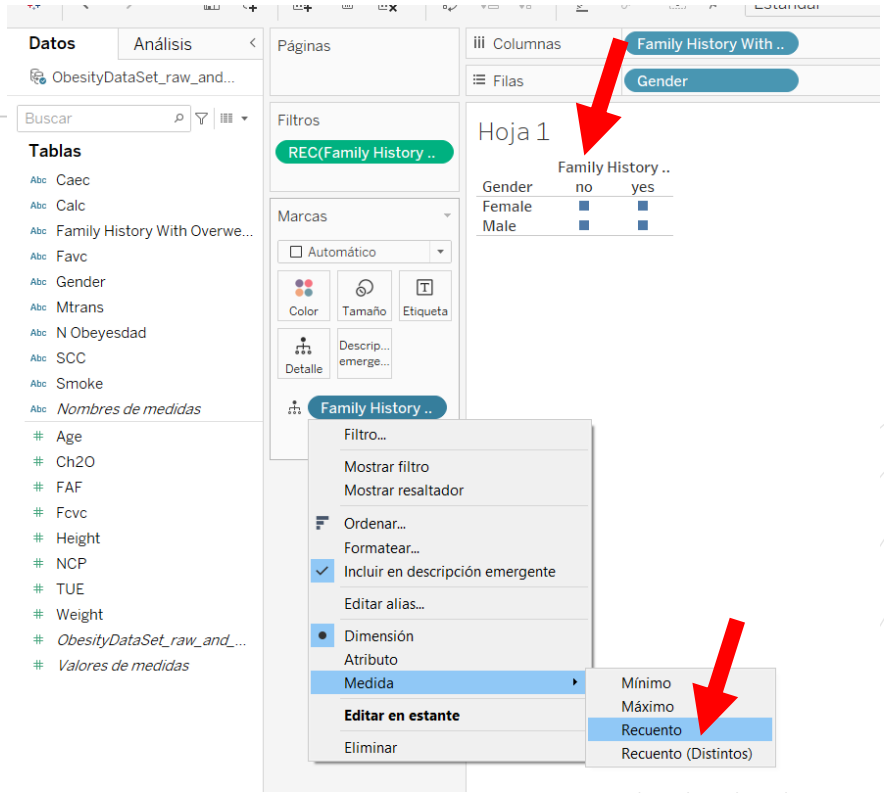


Si queremos graficar el recuento de Historial Familiar de obesidad por género, tenemos que cambiar el tipo de dato de “Family History”

Creando visualizaciones

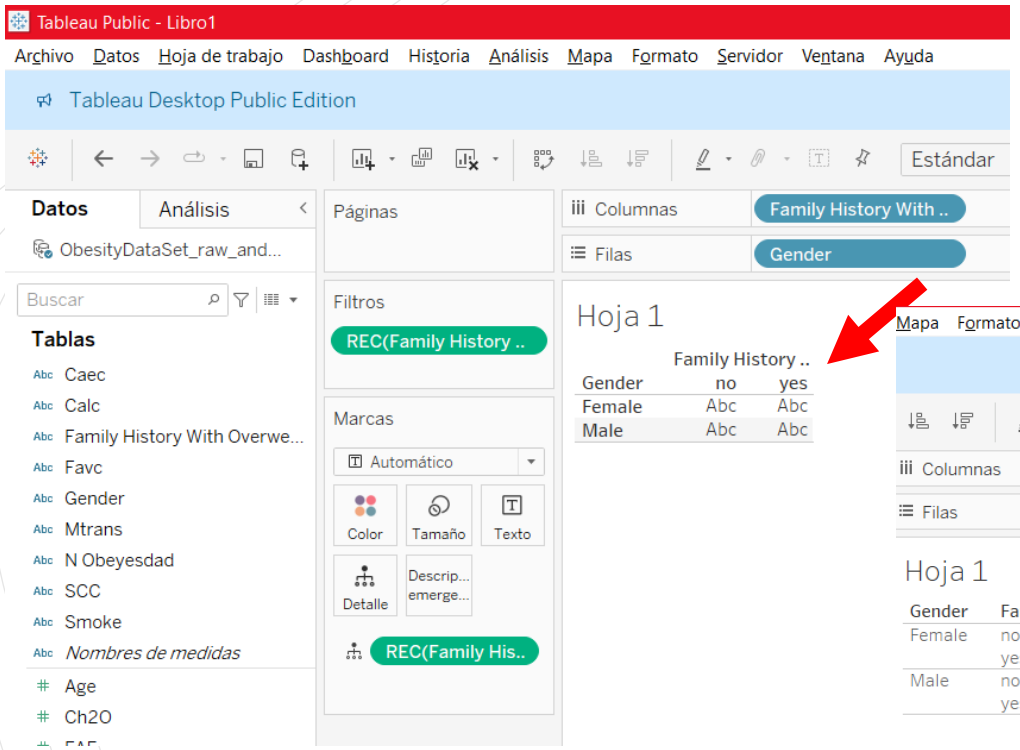
Si queremos graficar el recuento de Historial Familiar de obesidad por género, tenemos que hacer lo siguiente:

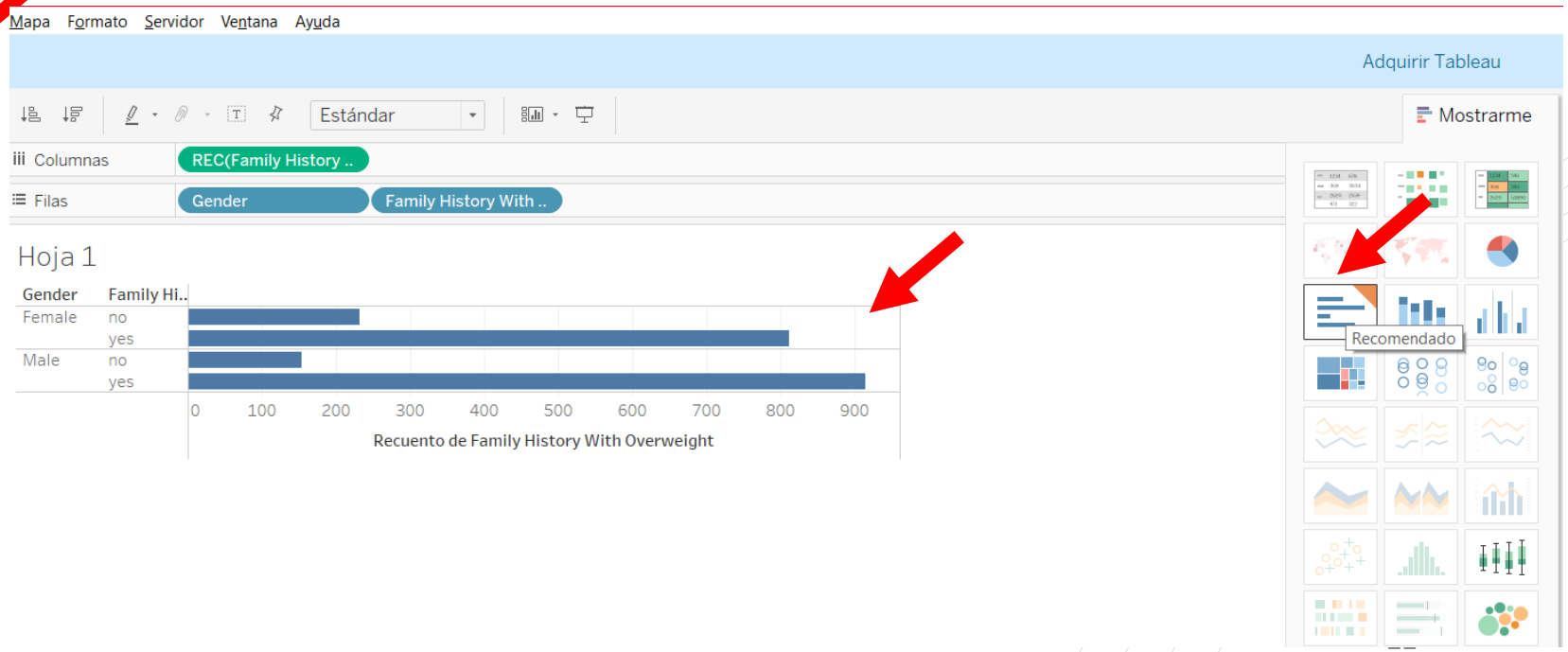




Creando visualizaciones

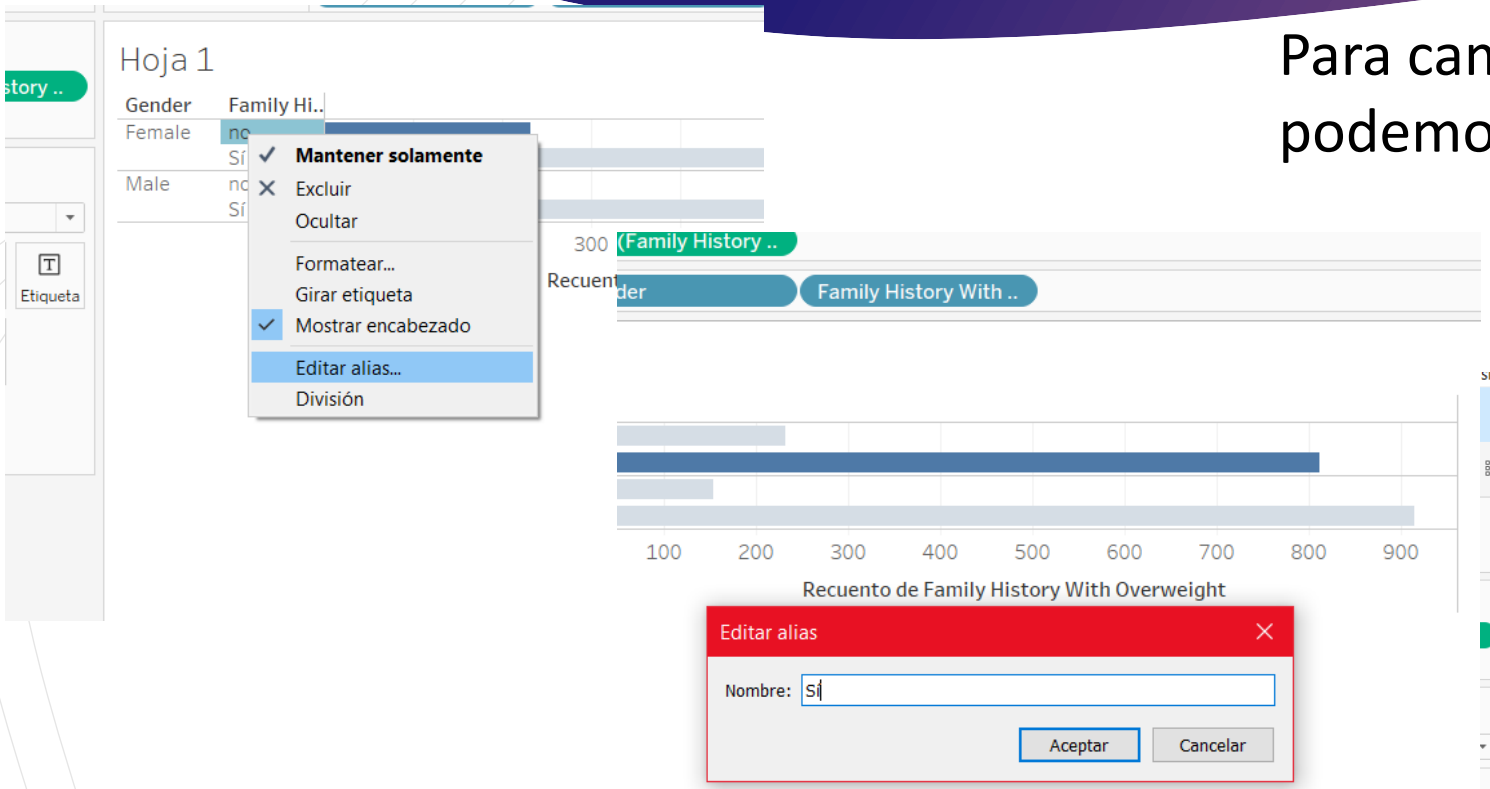
Si queremos graficar el recuento de Historial Familiar de obesidad por género, tenemos que hacer lo siguiente:

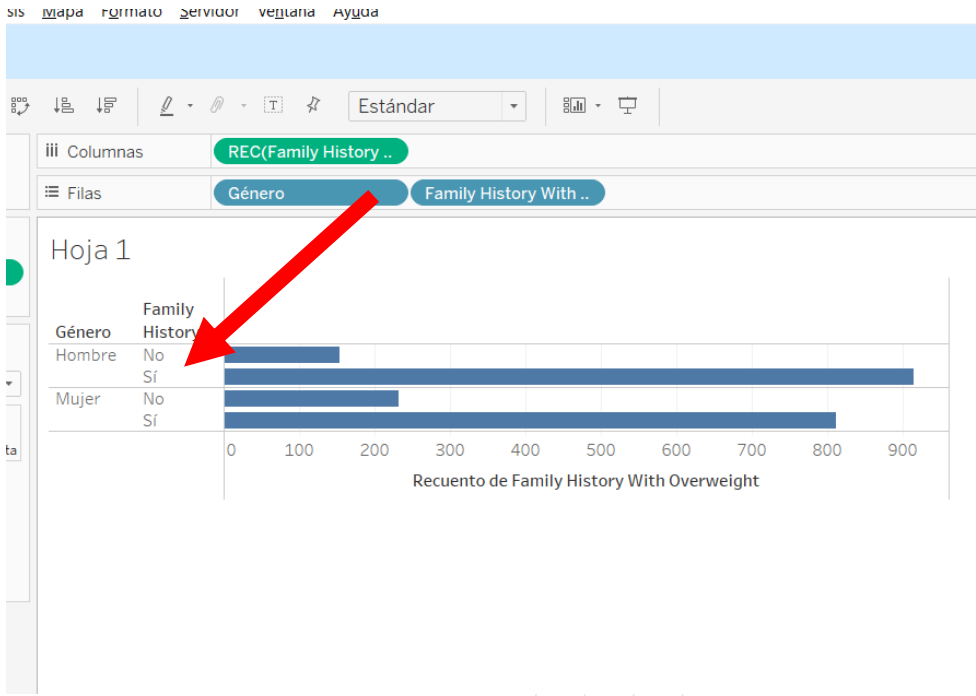




Creando visualizaciones

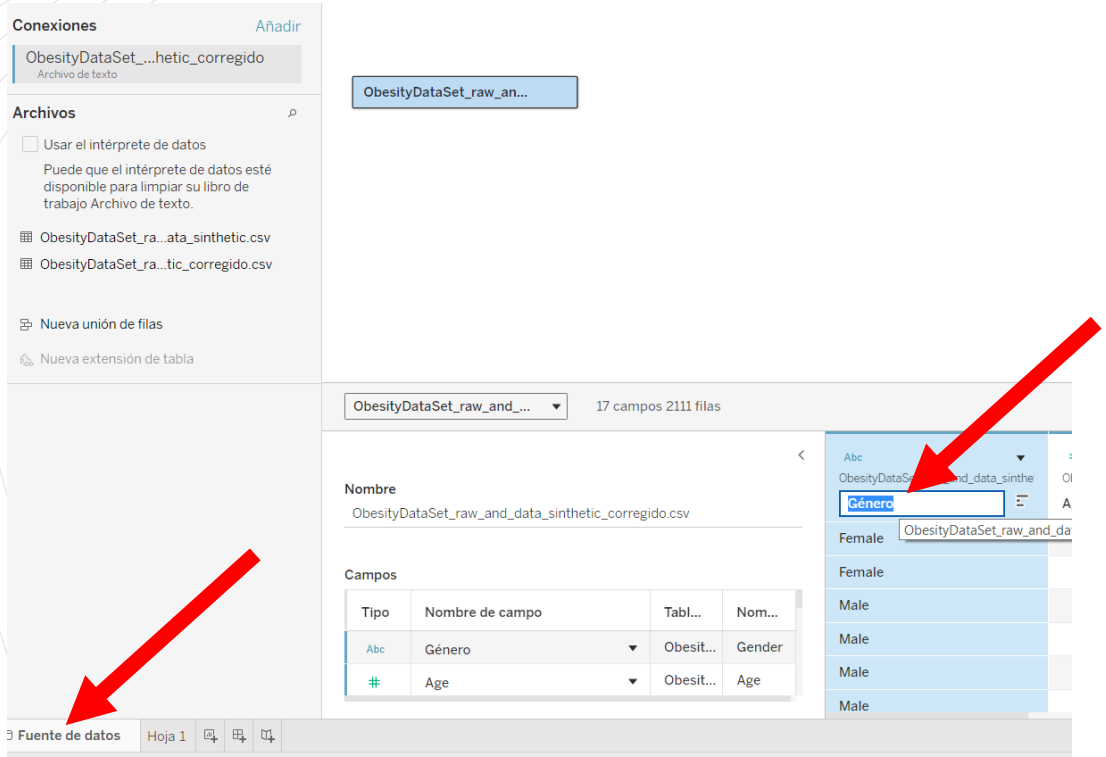
Para cambiar el nombre de las variables podemos utilizar “Alias”



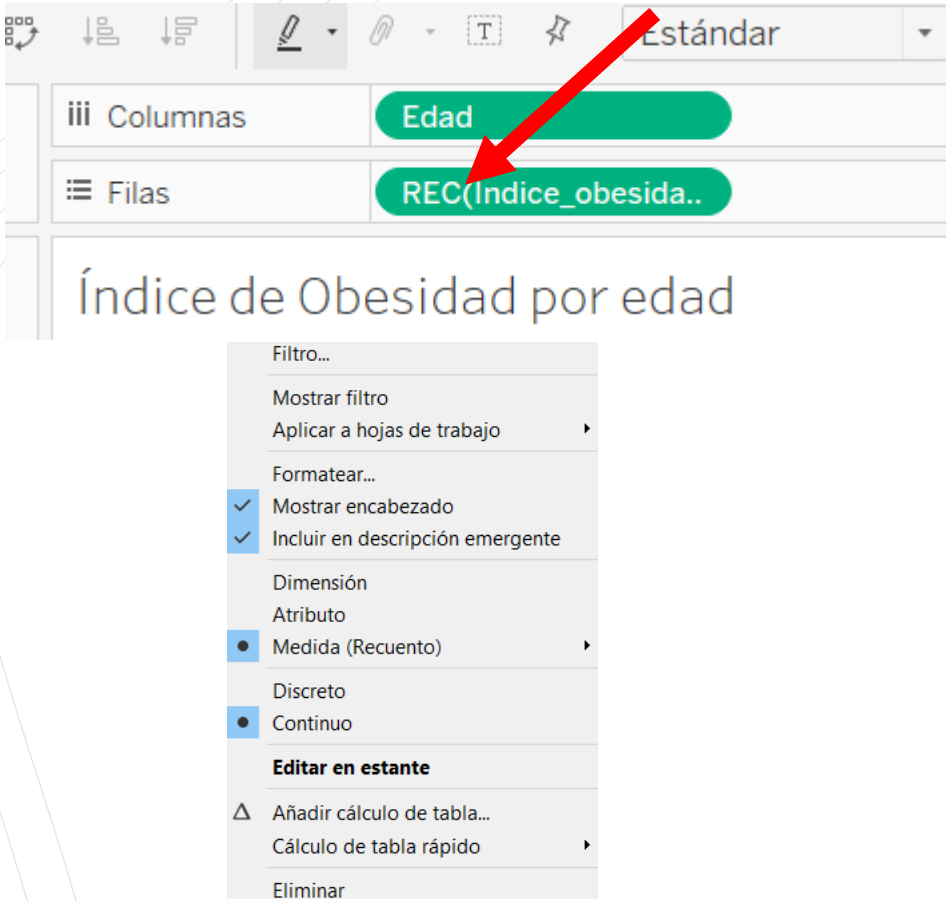


Creando visualizaciones

Para cambiar el nombre de las variables podemos utilizar “Alias”



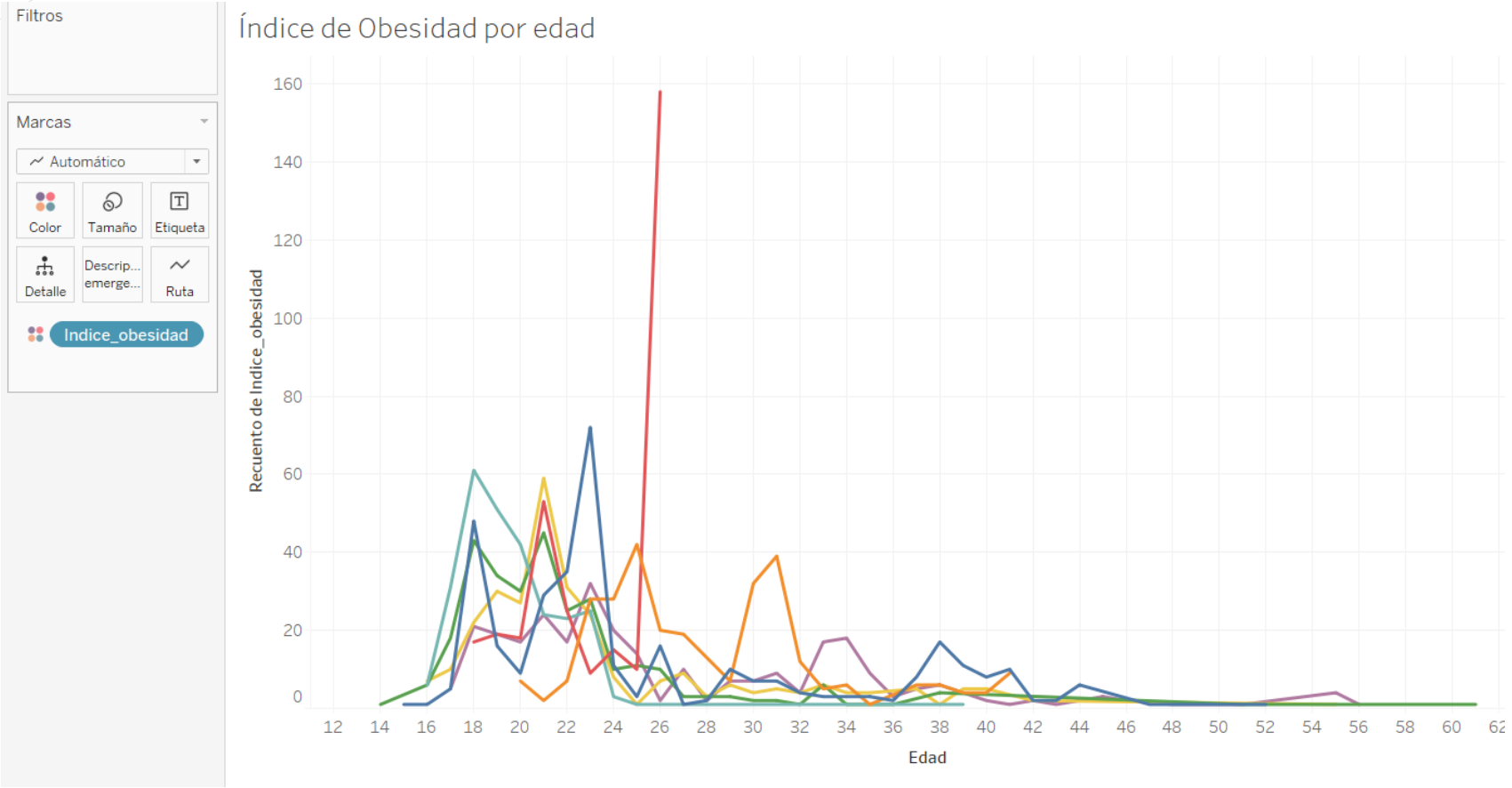
Creando visualizaciones



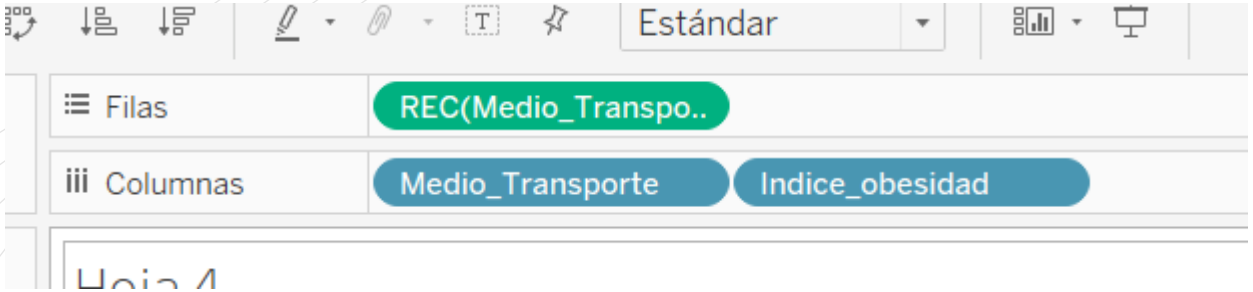
Probemos con el índice de obesidad a través de las edades

Creando visualizaciones

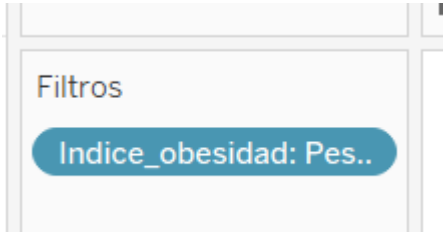
Probemos con el índice de obesidad a través de las edades



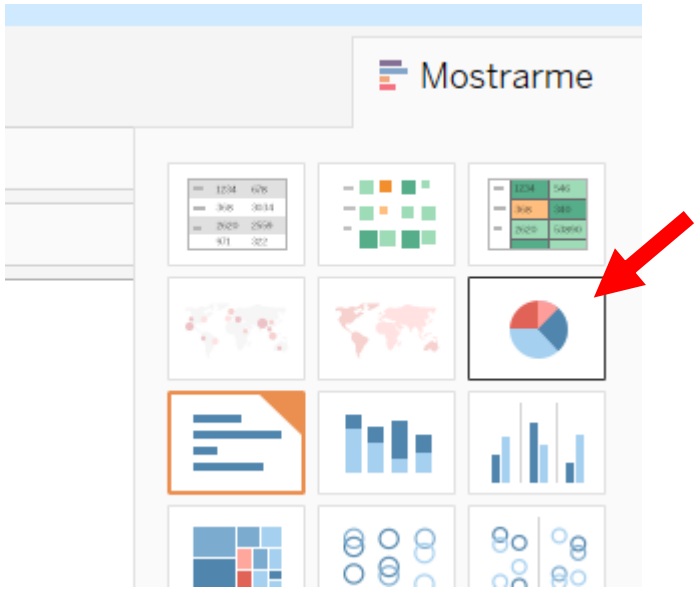
Creando visualizaciones



Ahora quisiéramos saber en qué medios de transporte se mueven las personas que tienen peso “normal”

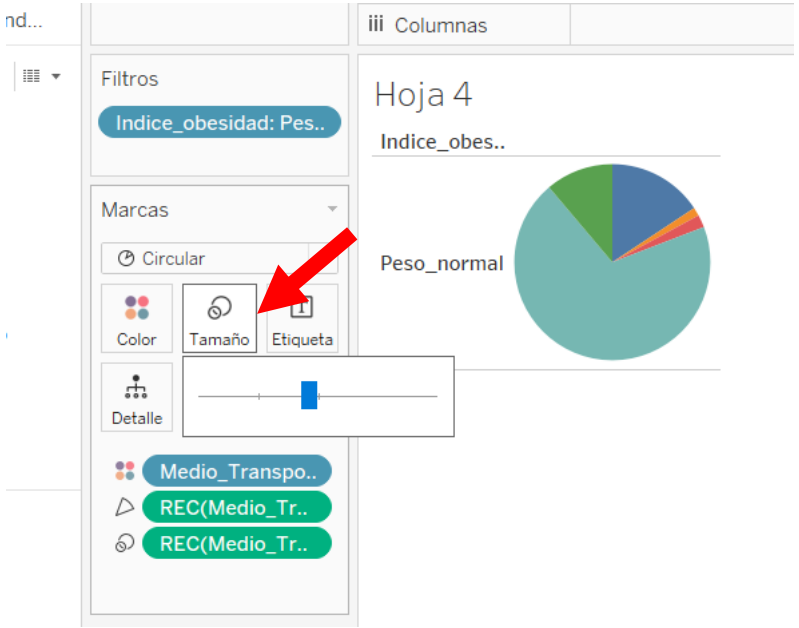


Nuestro filtro será de “Peso Normal”

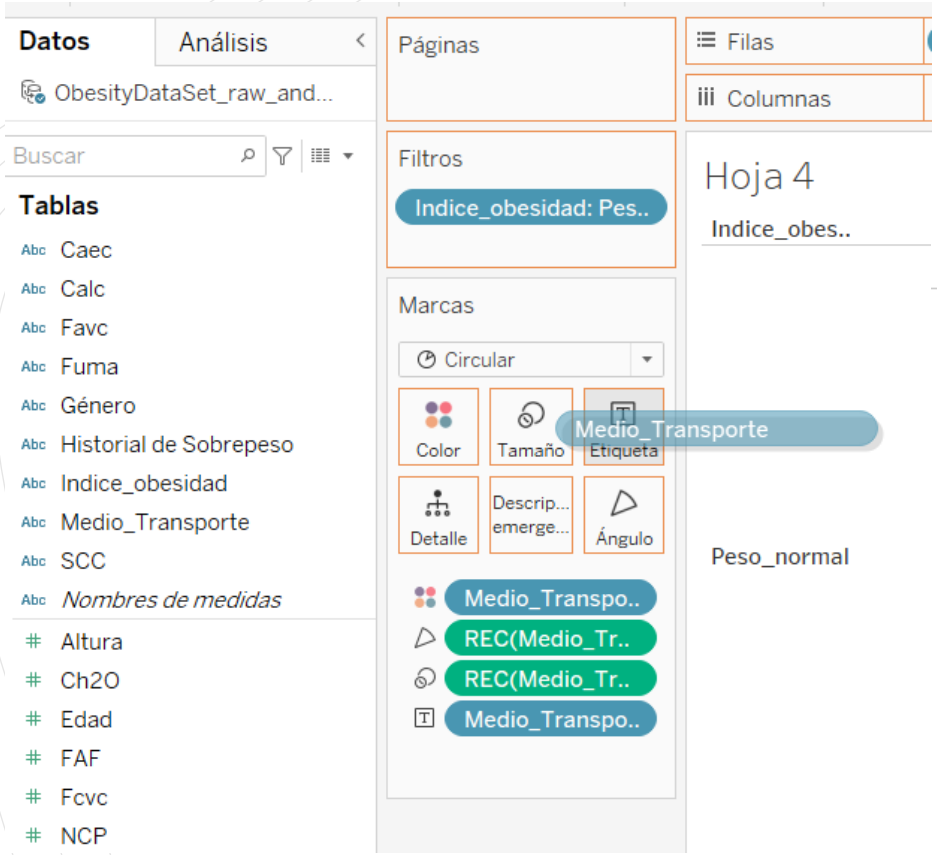


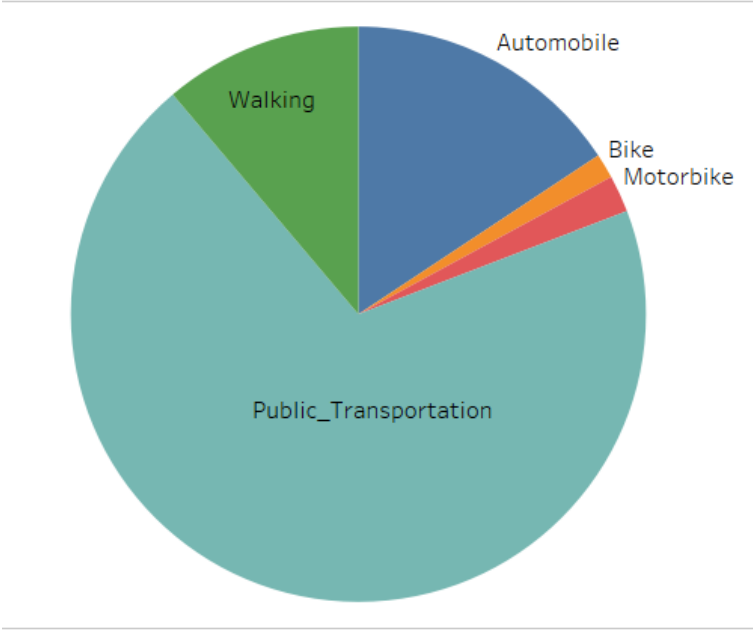
Creando visualizaciones

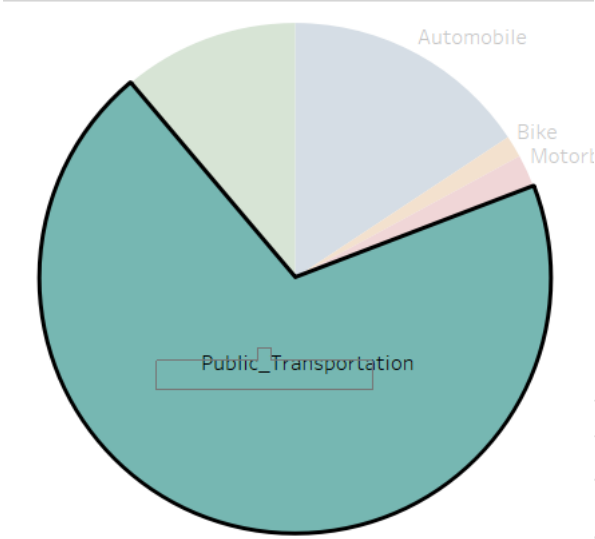
Ojo con las marcas!!!



Creando visualizaciones

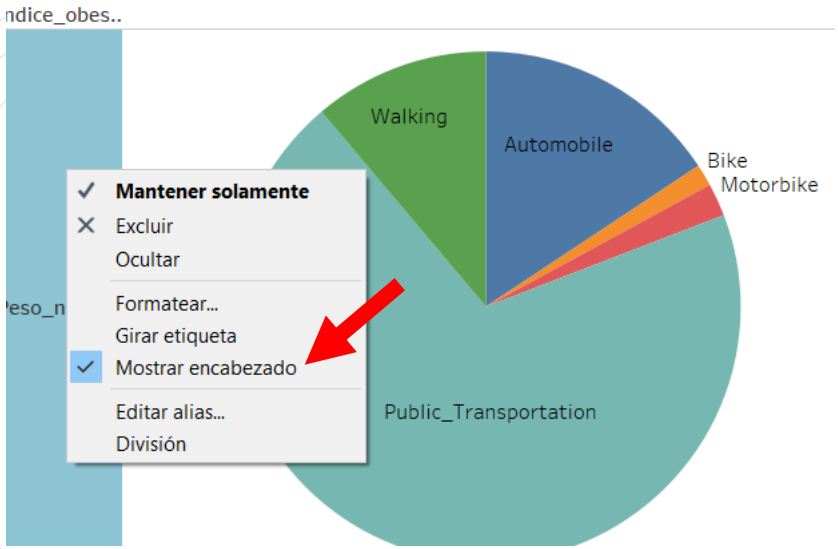




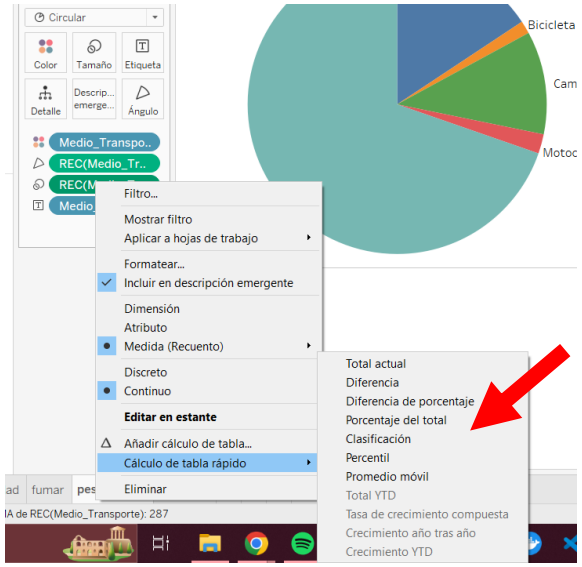


Creando visualizaciones

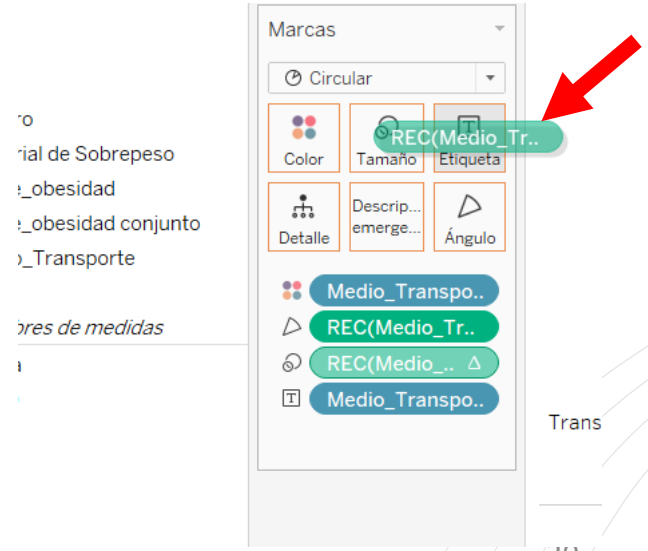
Ocultar encabezado



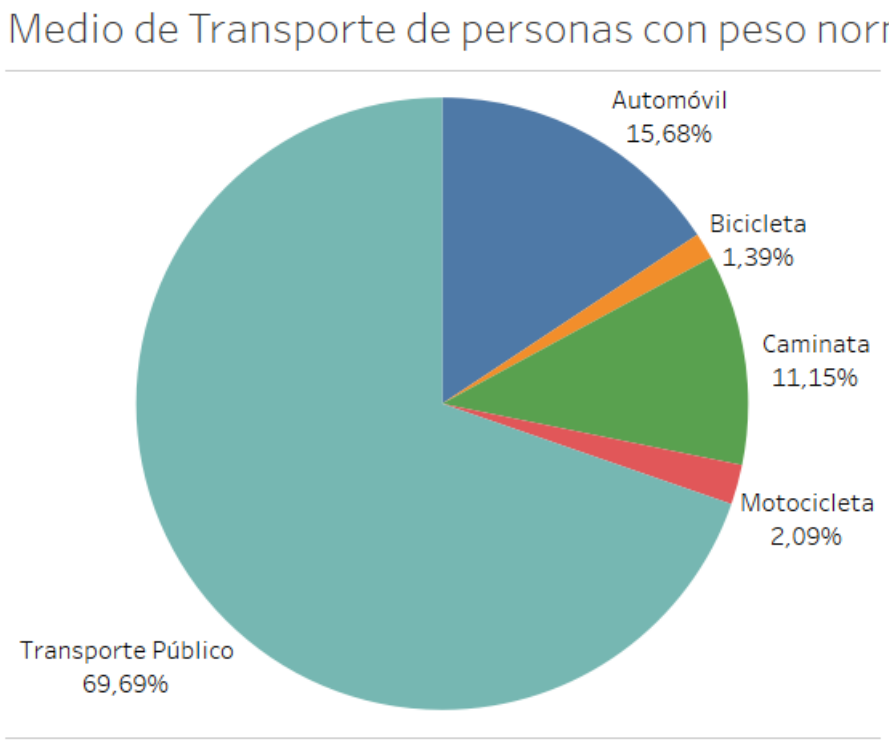
Mostrar % del total



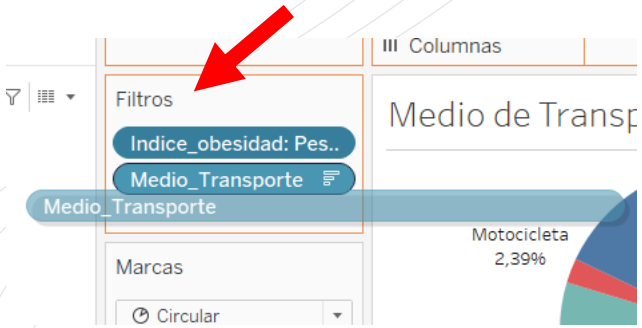
Mover el REC a Etiqueta



Creando visualizaciones

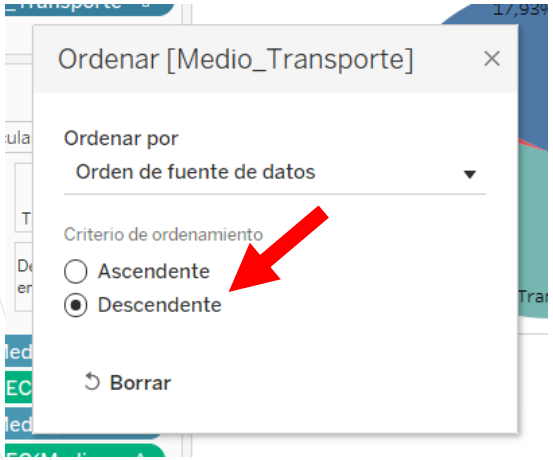


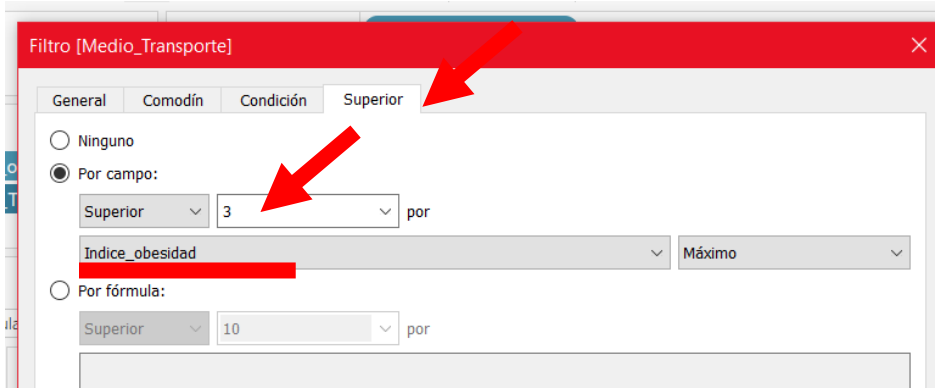
Creando visualizaciones

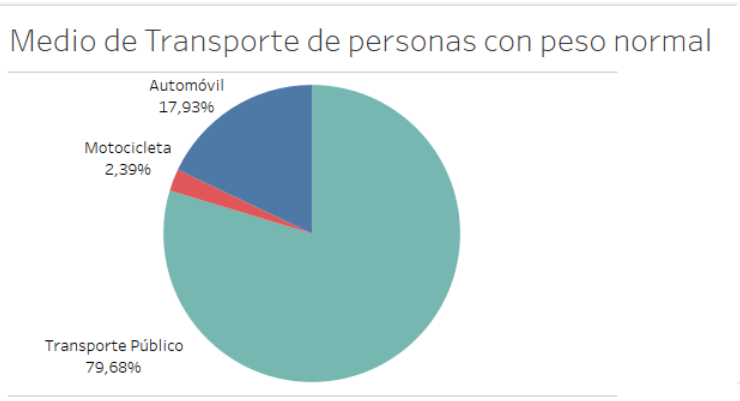


Ojo con las marcas!!!

Ahora quisiéramos saber en qué medios de transporte se mueven las personas que tienen peso “normal”
→ Pero con filtro de los 3 medios de transporte principales



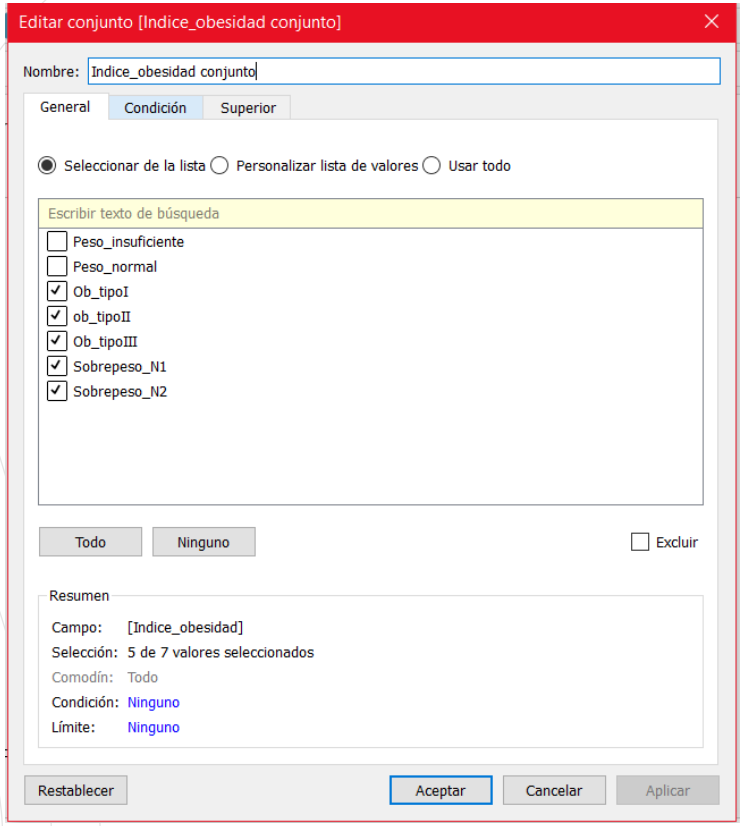


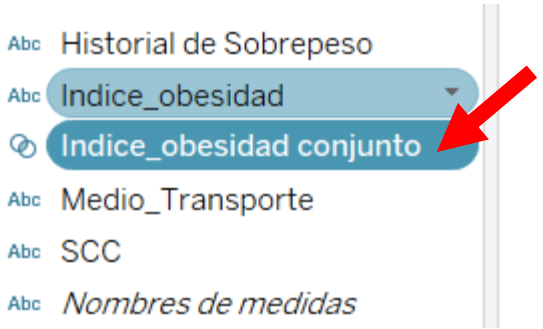


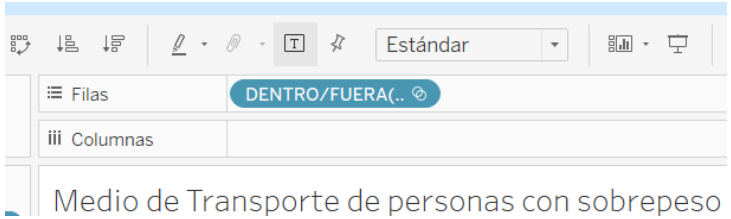
Creando visualizaciones

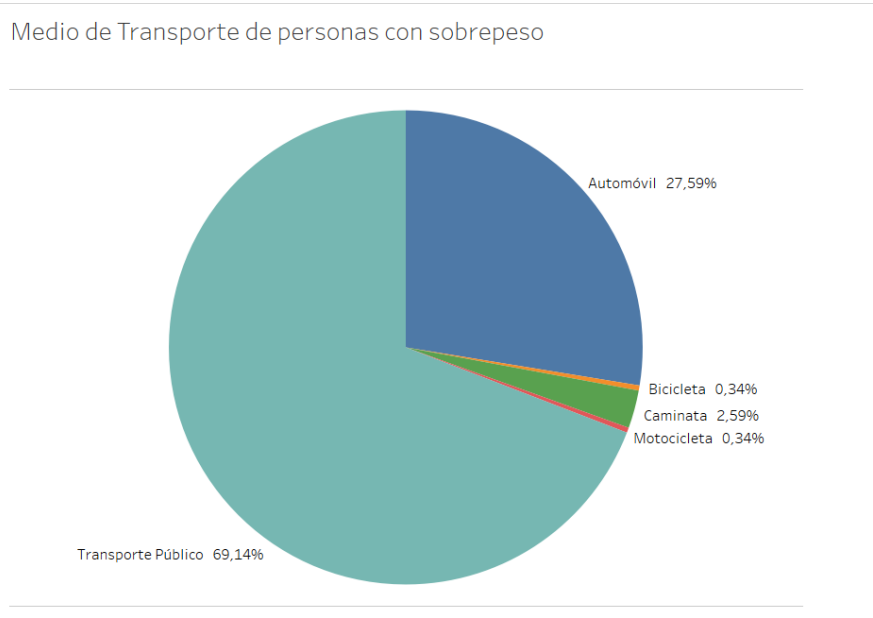
Podemos hacer algo similar para personas con obesidad/sobrepeso

Vamos a crear un “Conjunto”

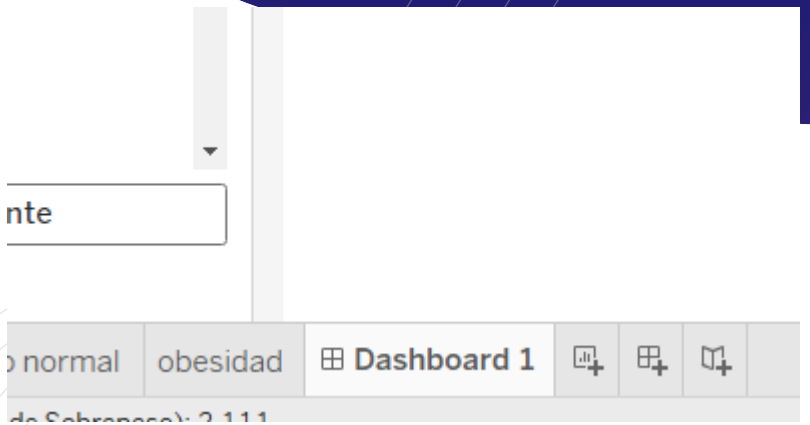


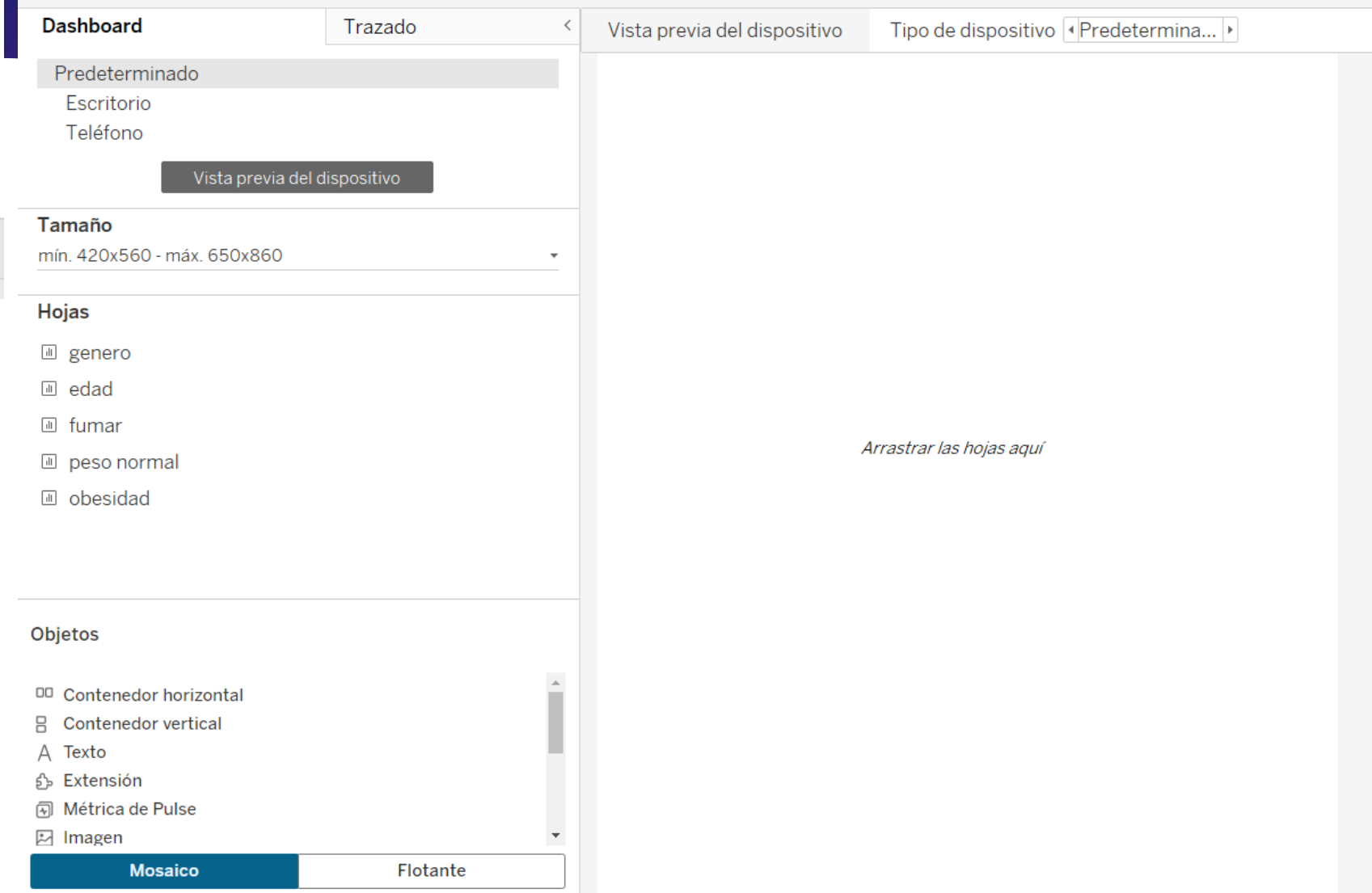




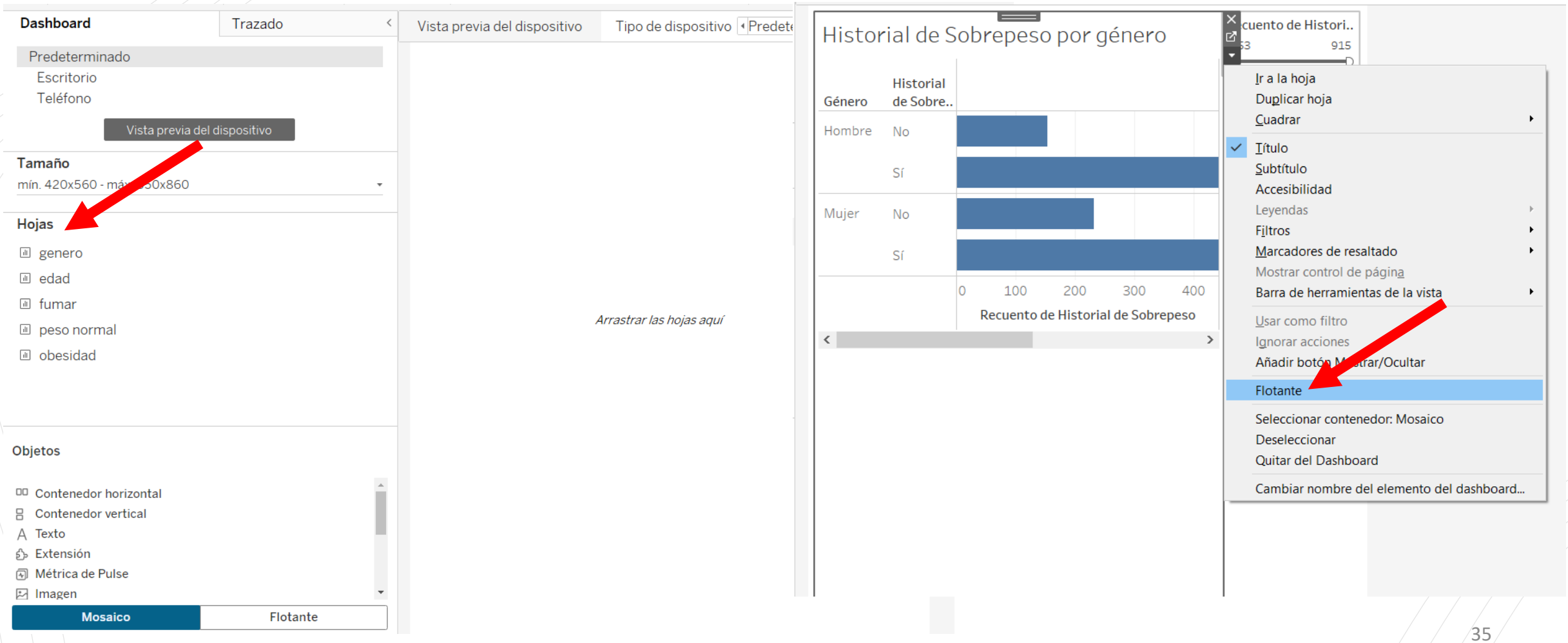


Creando nuestro dashboard

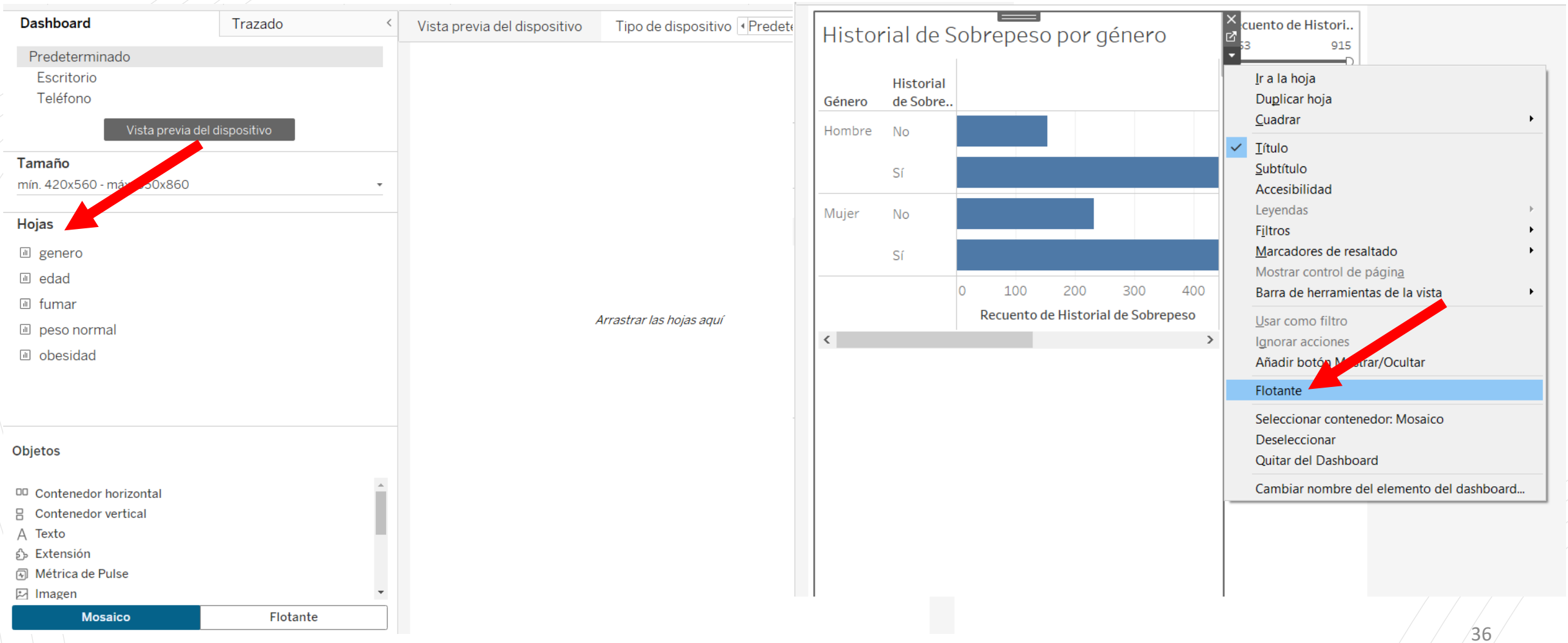




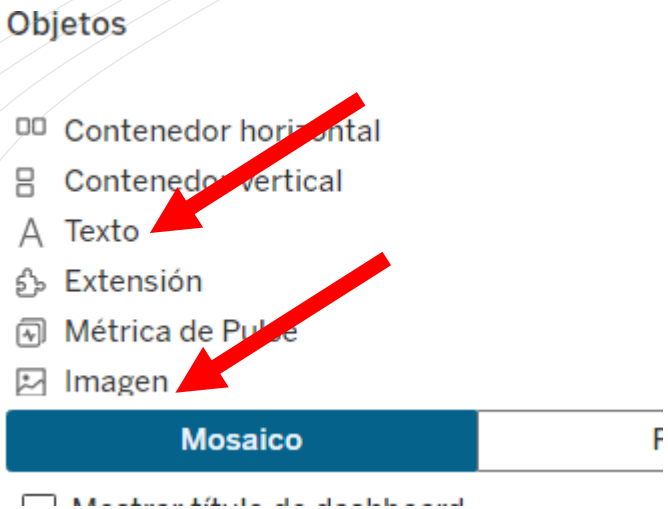
Creando nuestro dashboard

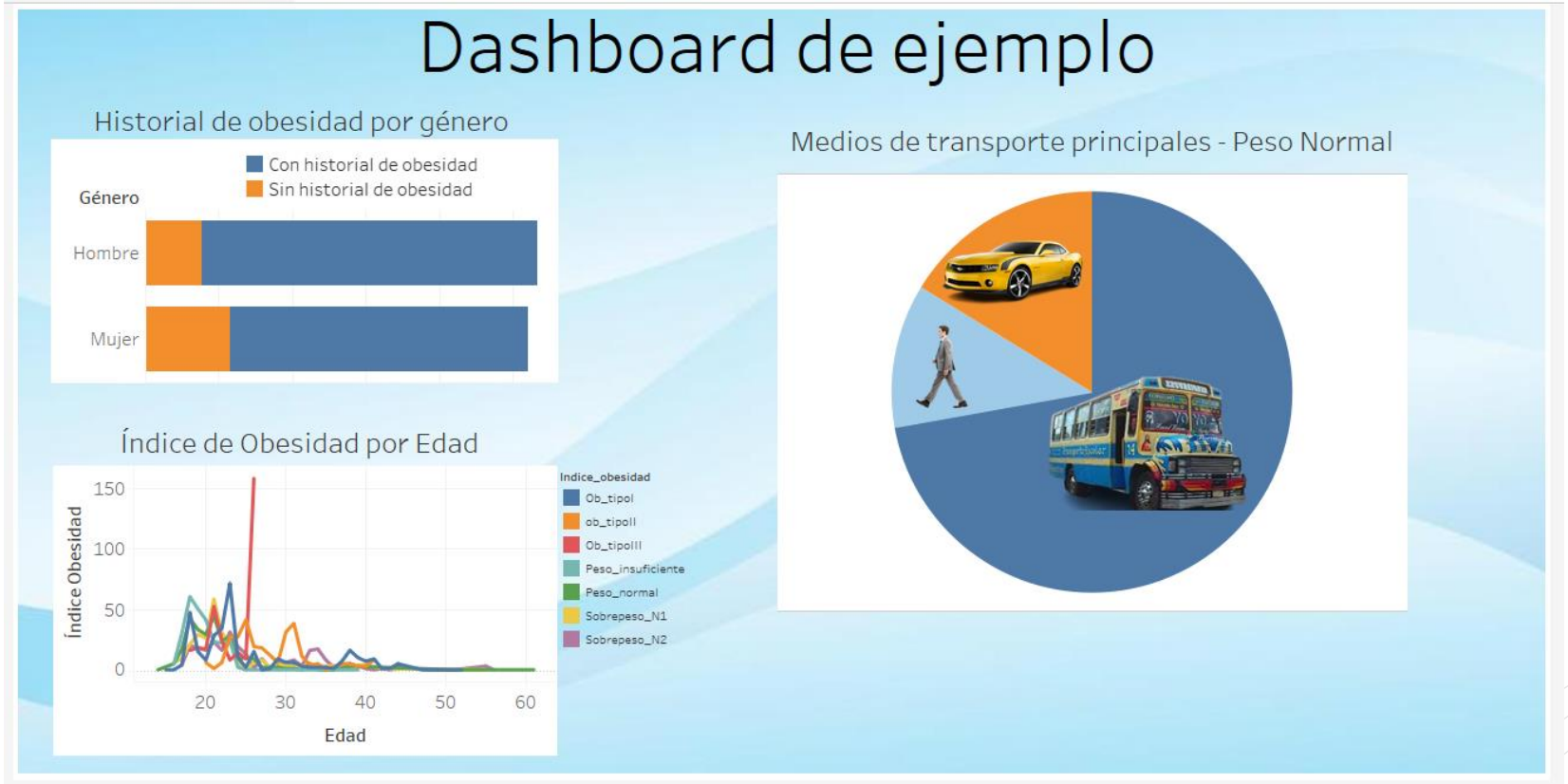


Creando nuestro dashboard

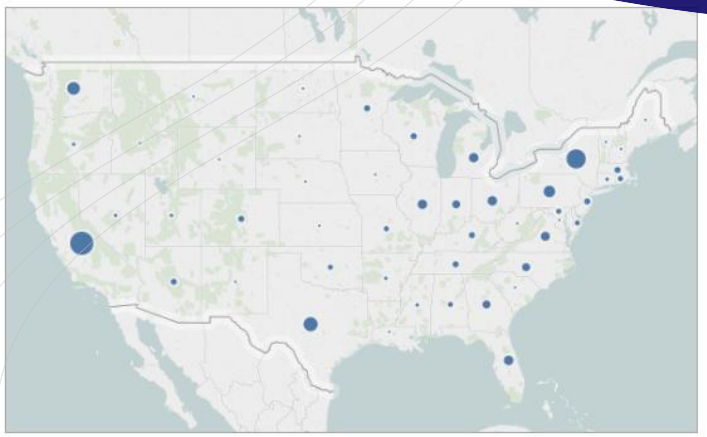


Creando nuestro dashboard



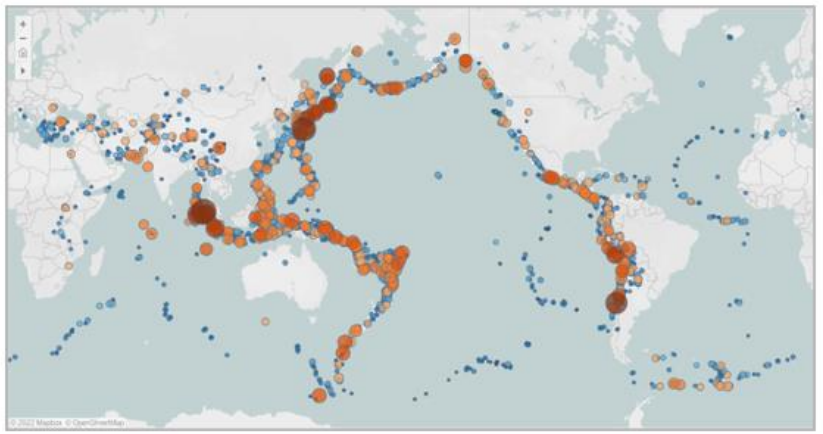


Mapas - Introducción



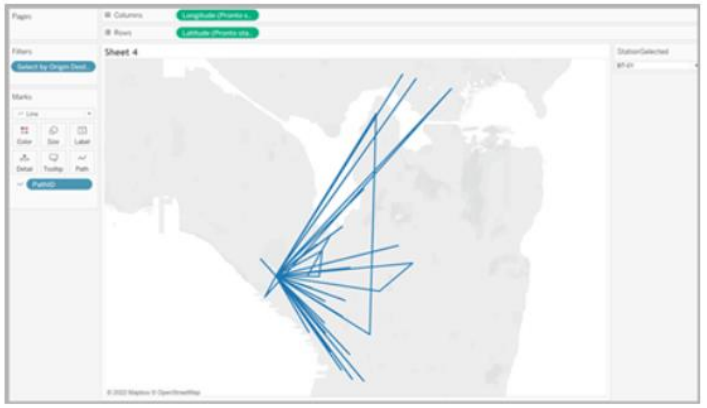
Mapas Simples

Mapas con archivos geoespaciales



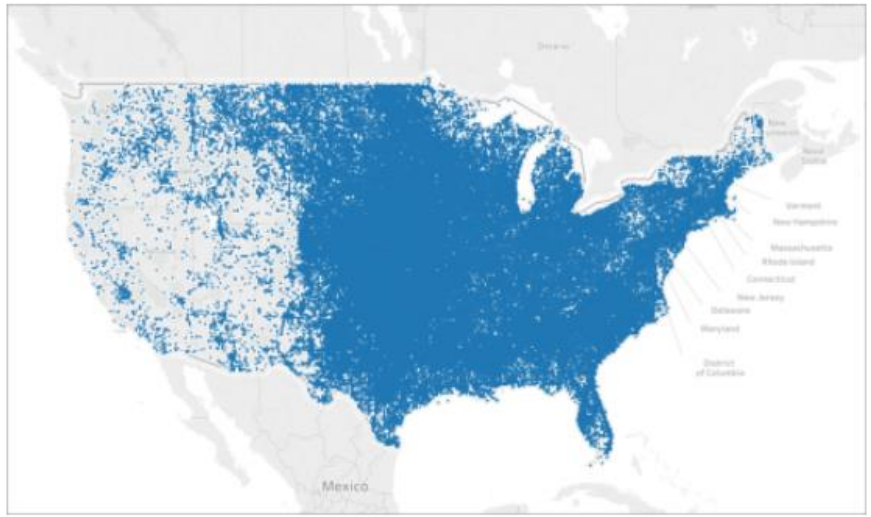
Mapas de símbolos proporcionales

Mapas de flujos o rutas

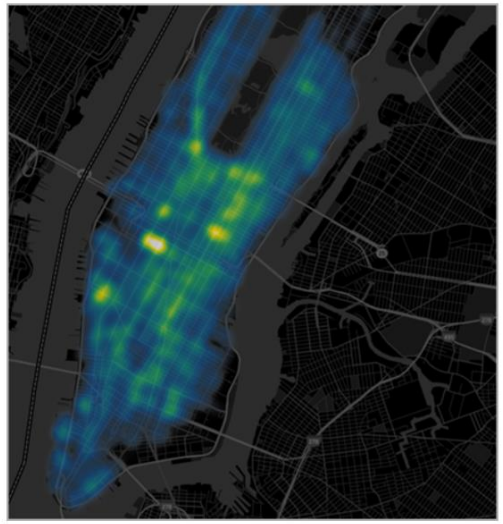


Mapas origen-destino

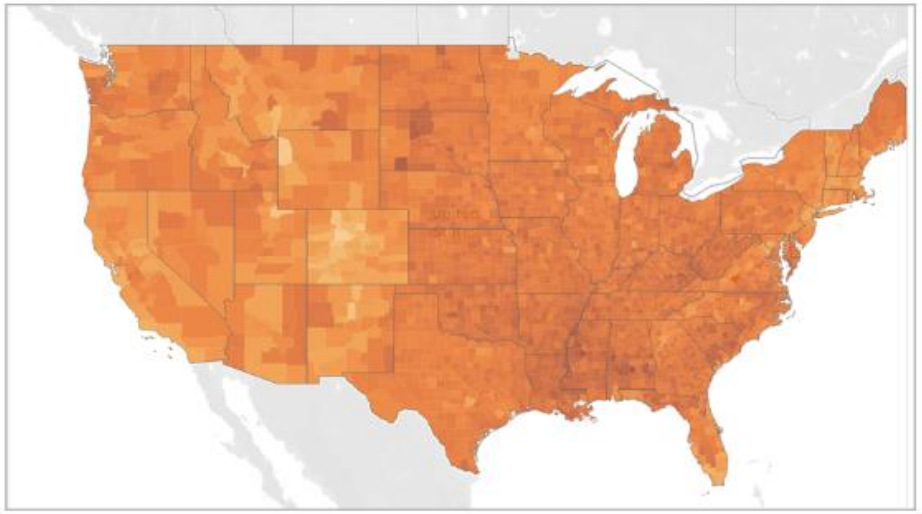
Mapas - Introducción



Mapas de distribución de puntos

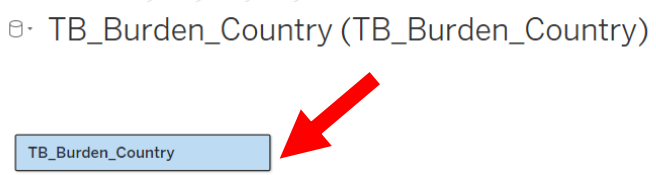


Mapas de calor o densidad

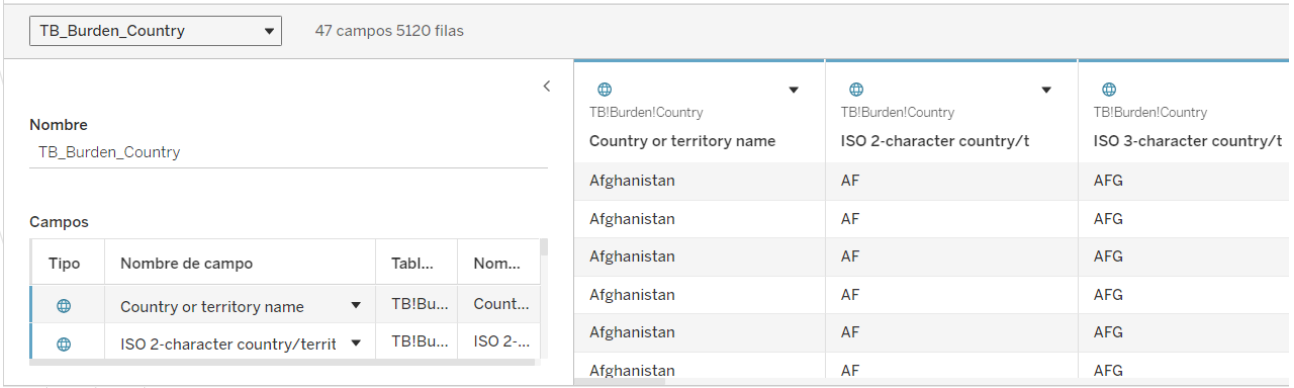


Mapas coroplético o relleno

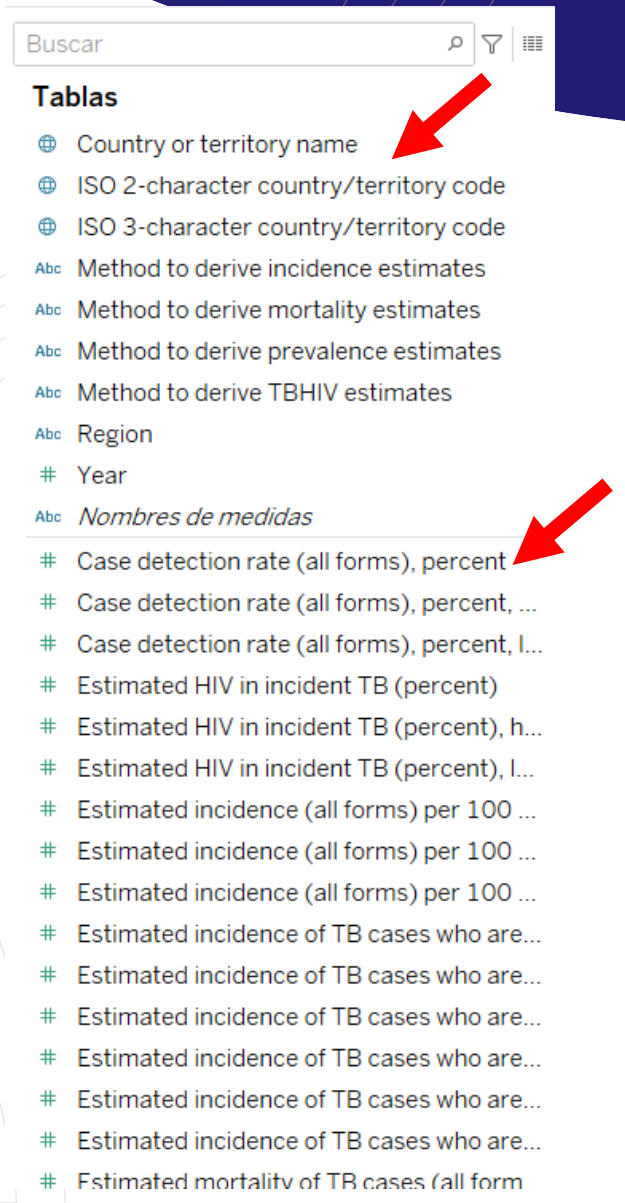
Creando mapas



Vamos a crear un mapa donde veamos la detección de casos de tuberculosis a nivel mundial y su distribución por continentes/países.



Creando mapas



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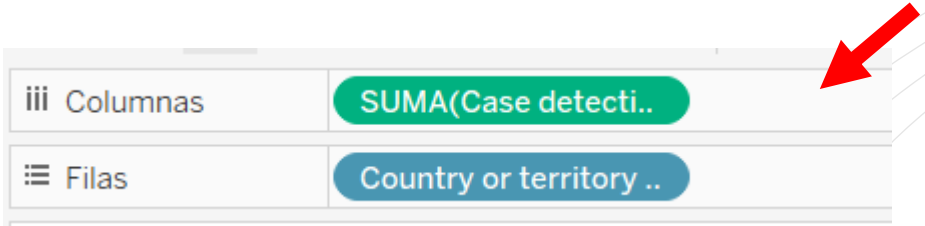
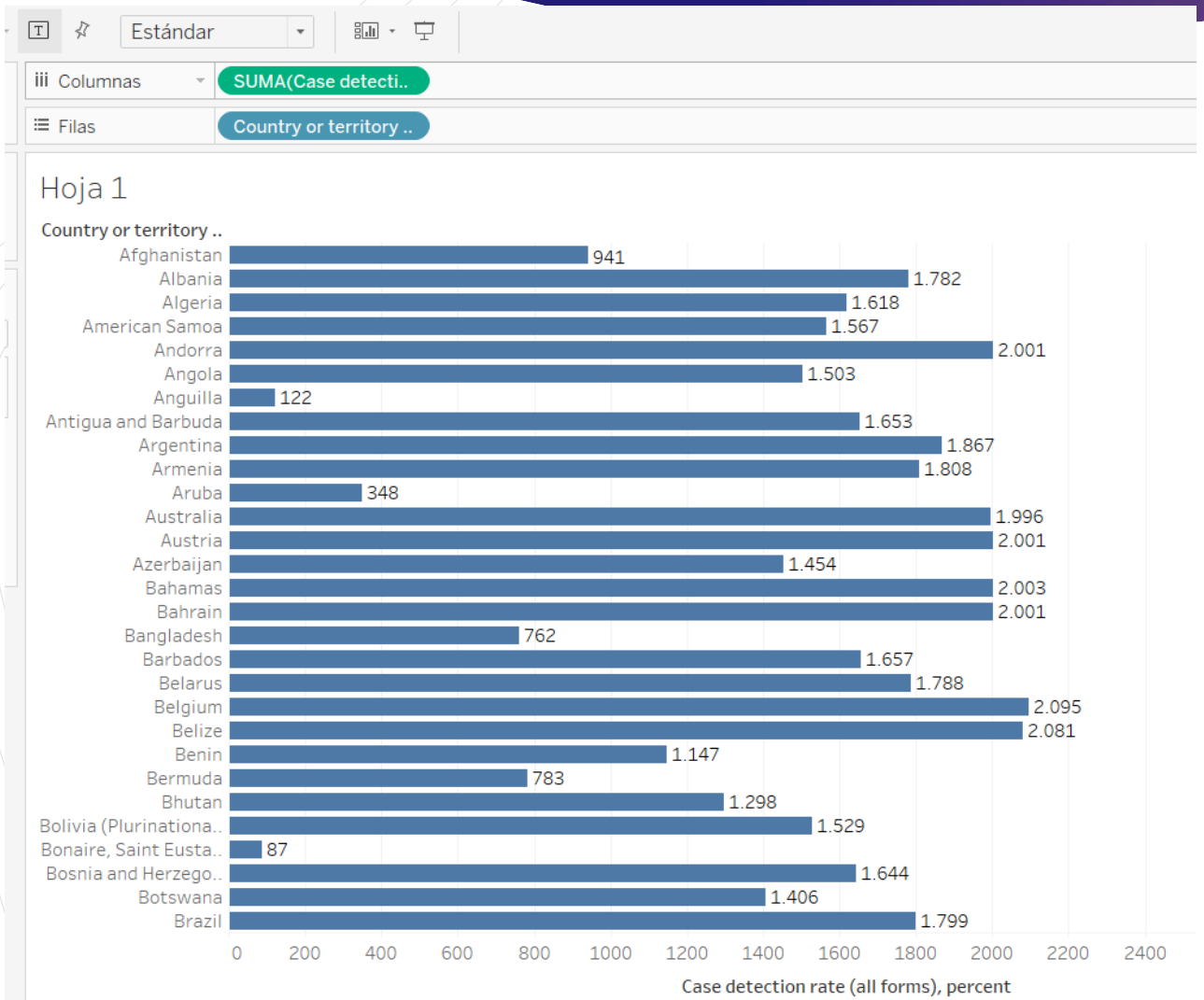
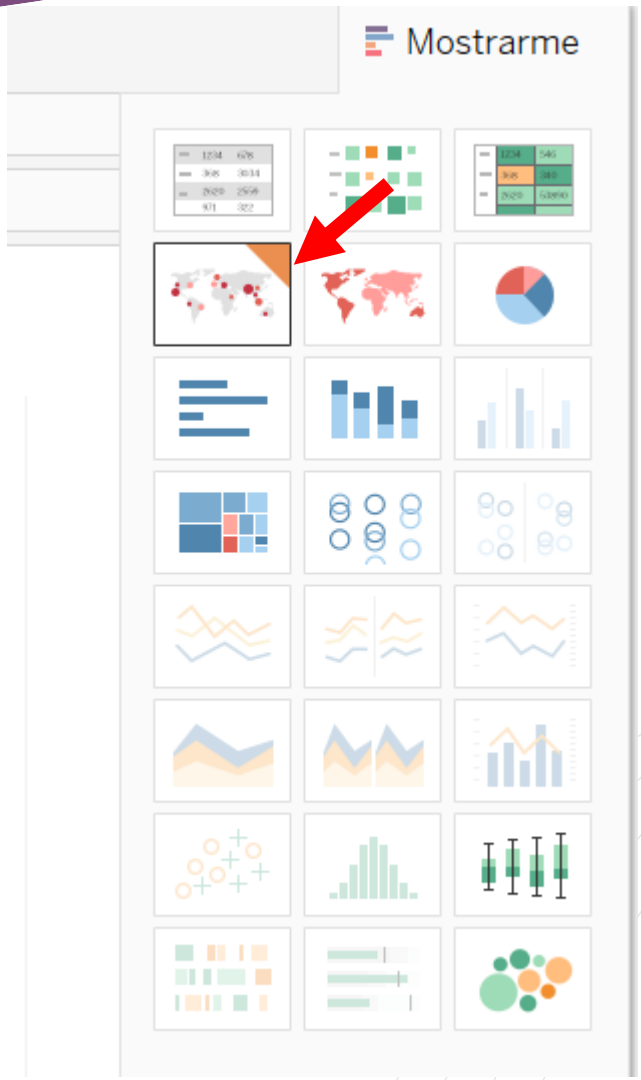
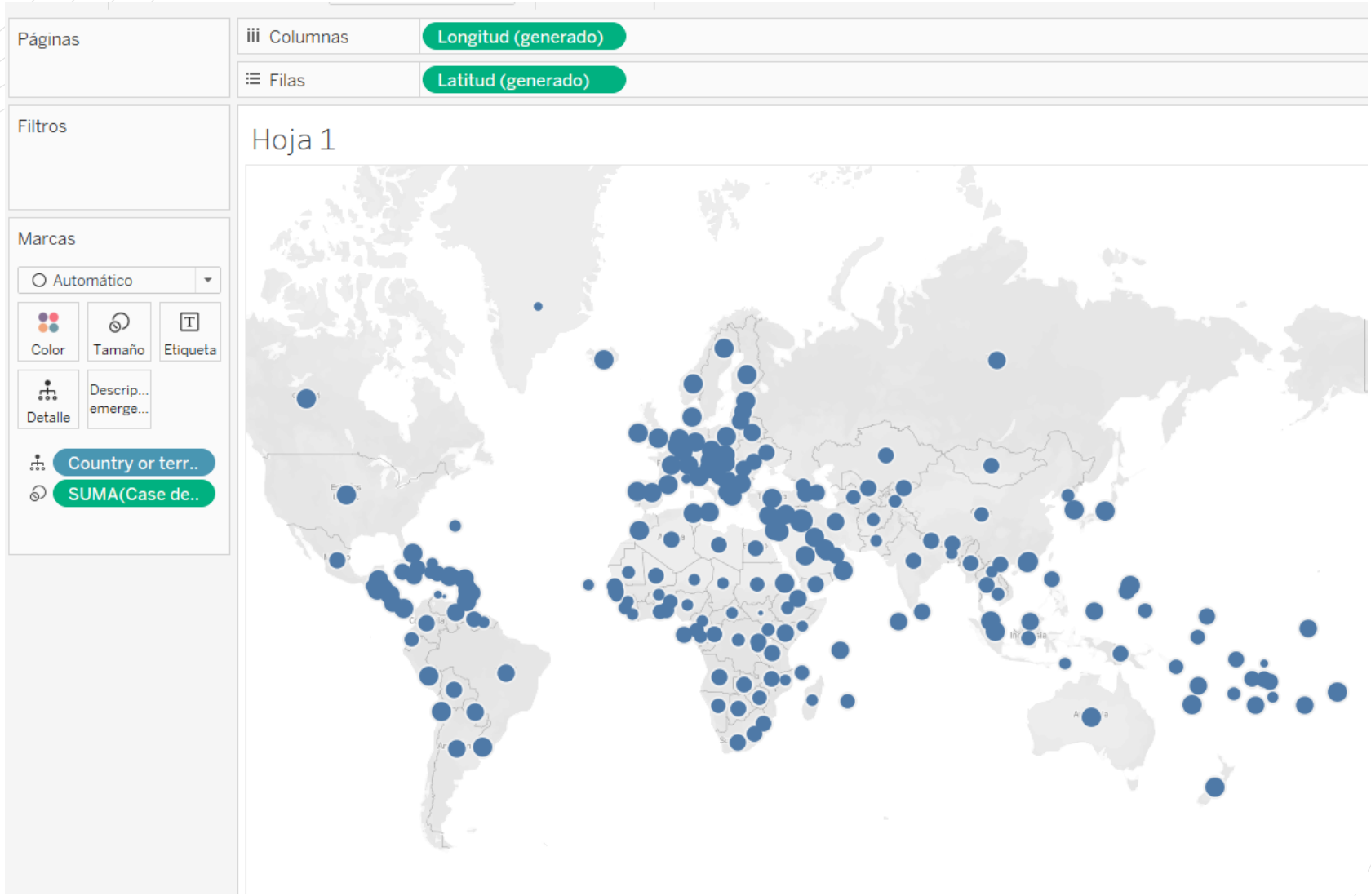


Creando mapas

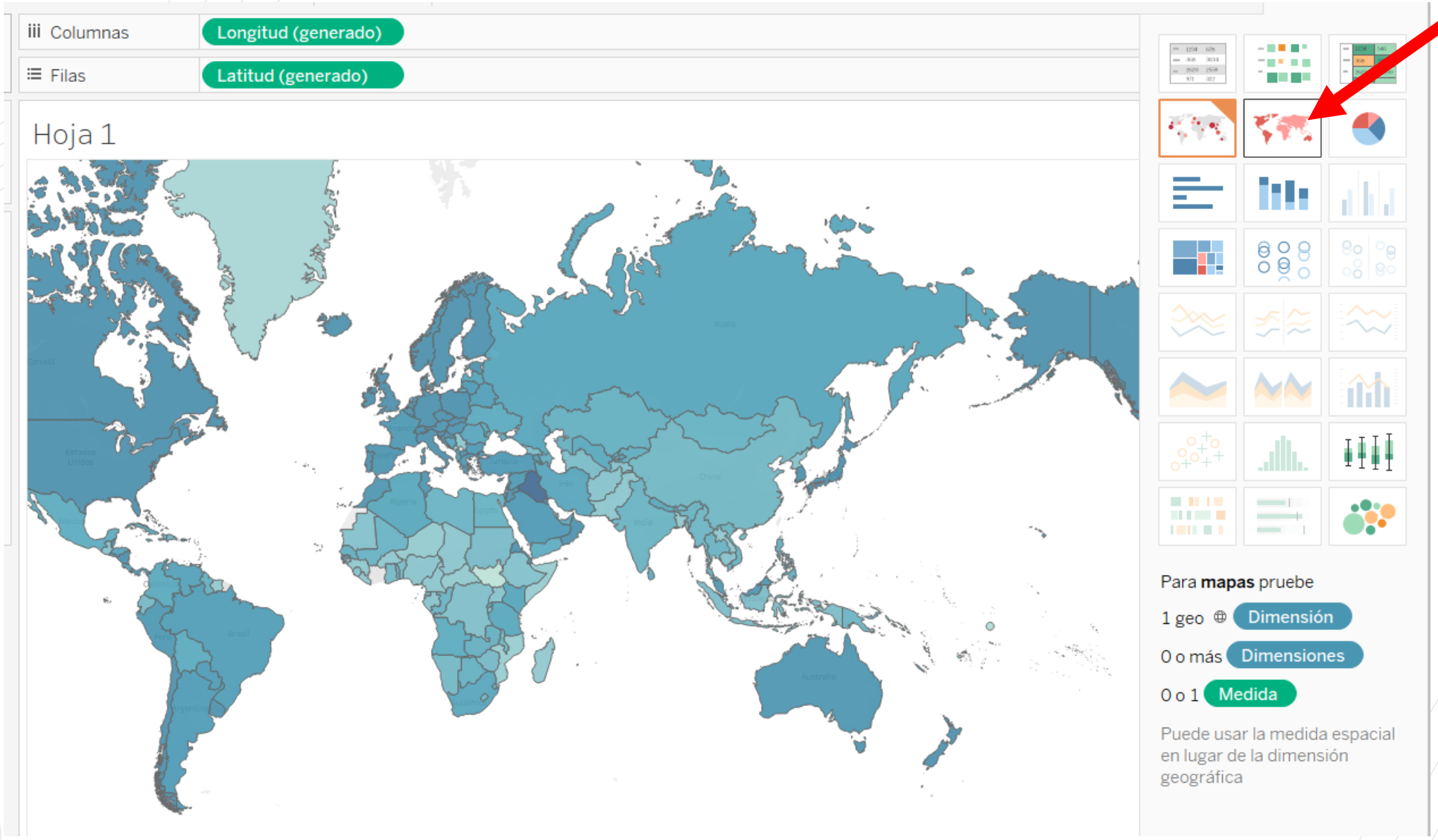




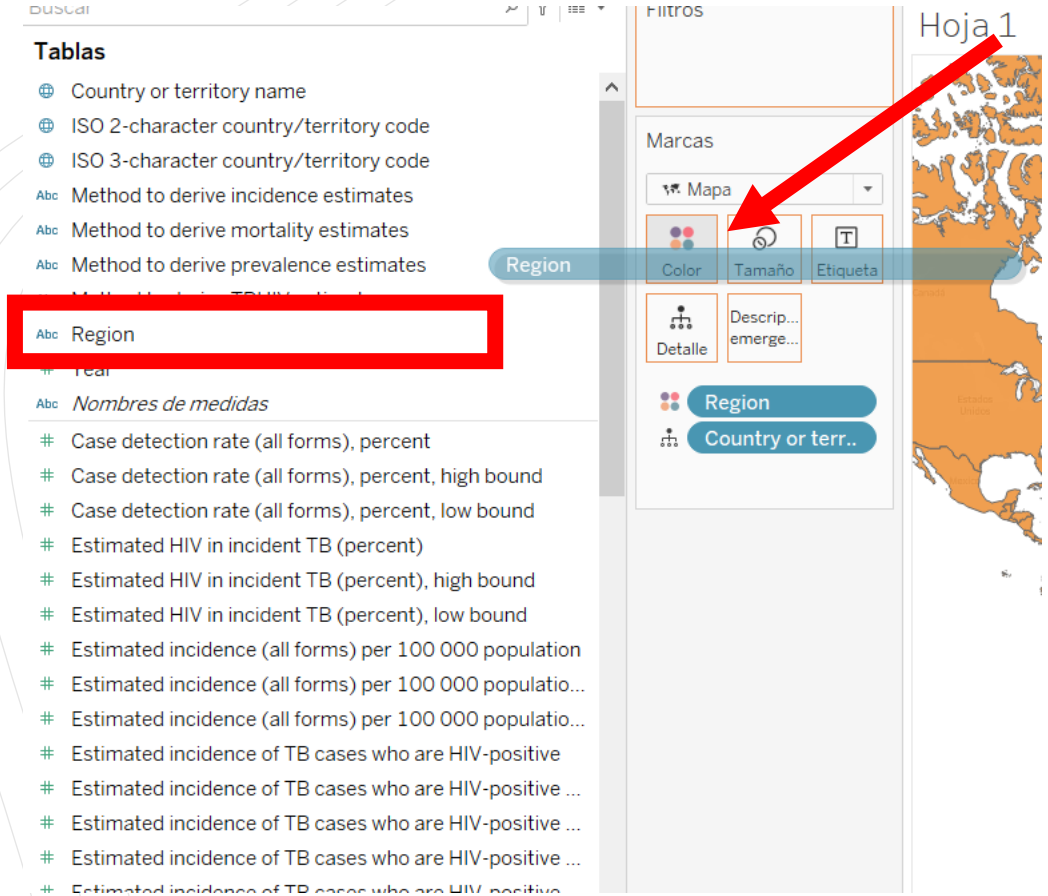
Creando mapas



Creando mapas

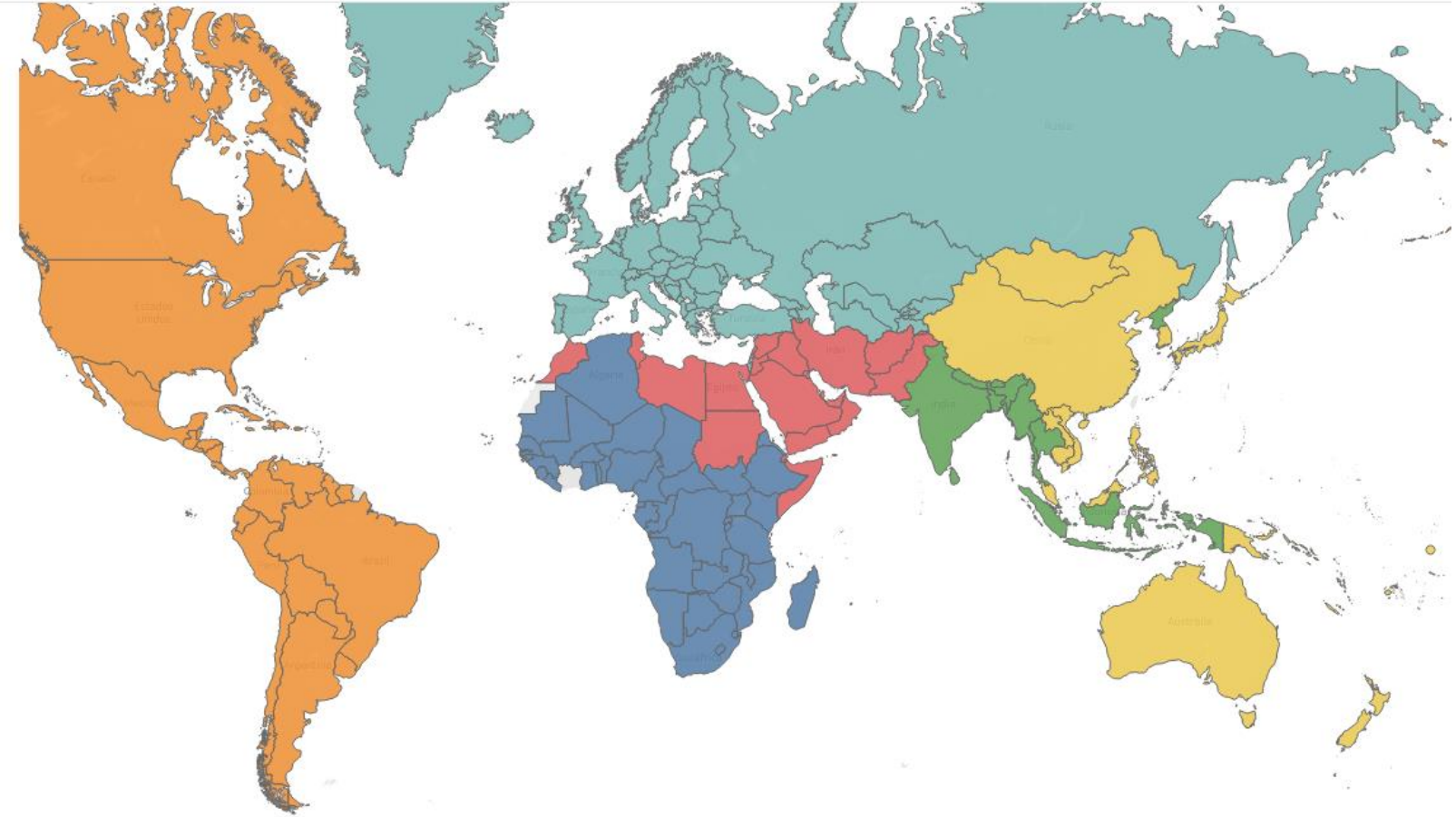


Creando mapas



Si yo quisiera agrupar colores por región para mejor visualización, puedo arrastrar “Región” a la sección de color.

Creando mapas



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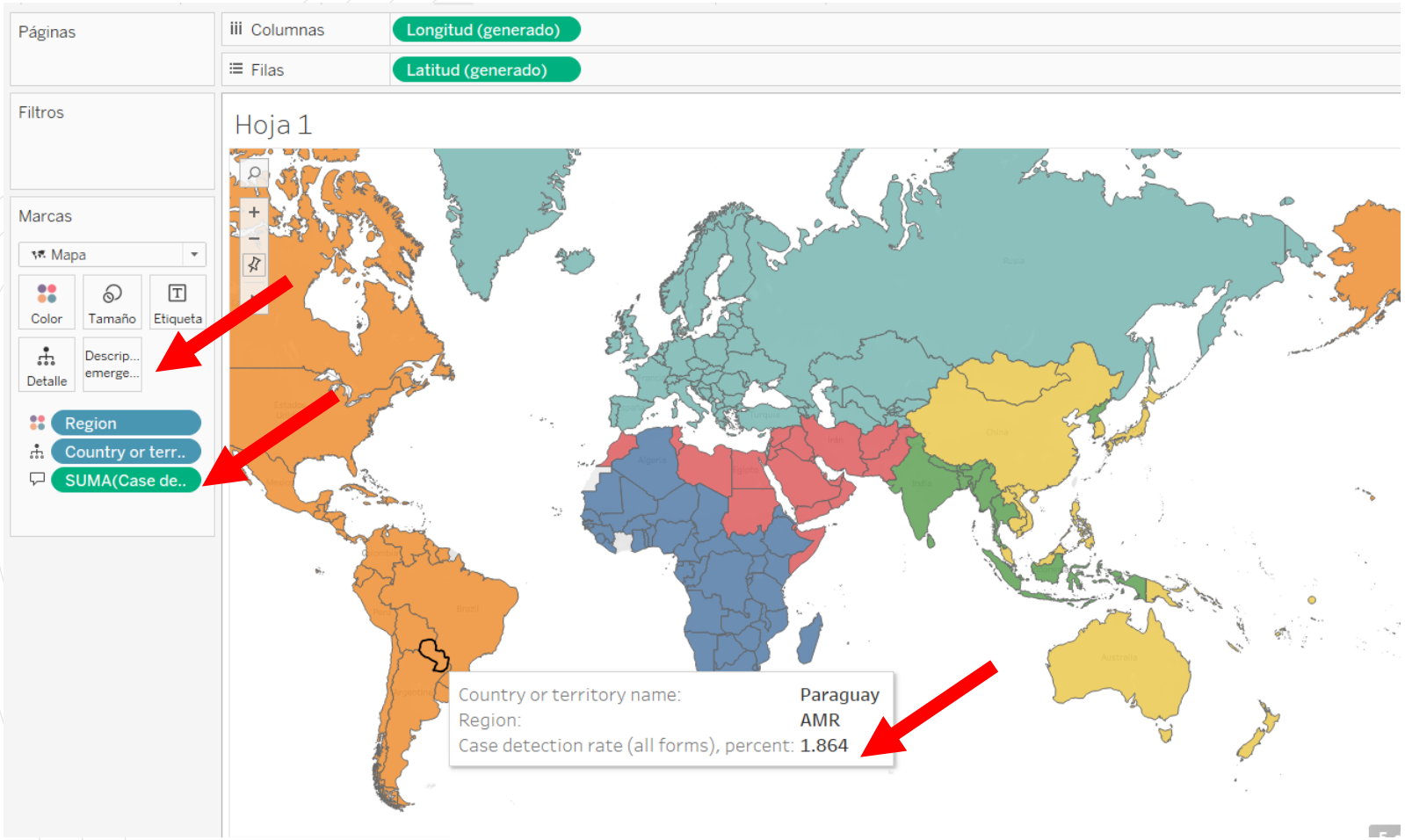
Creando mapas

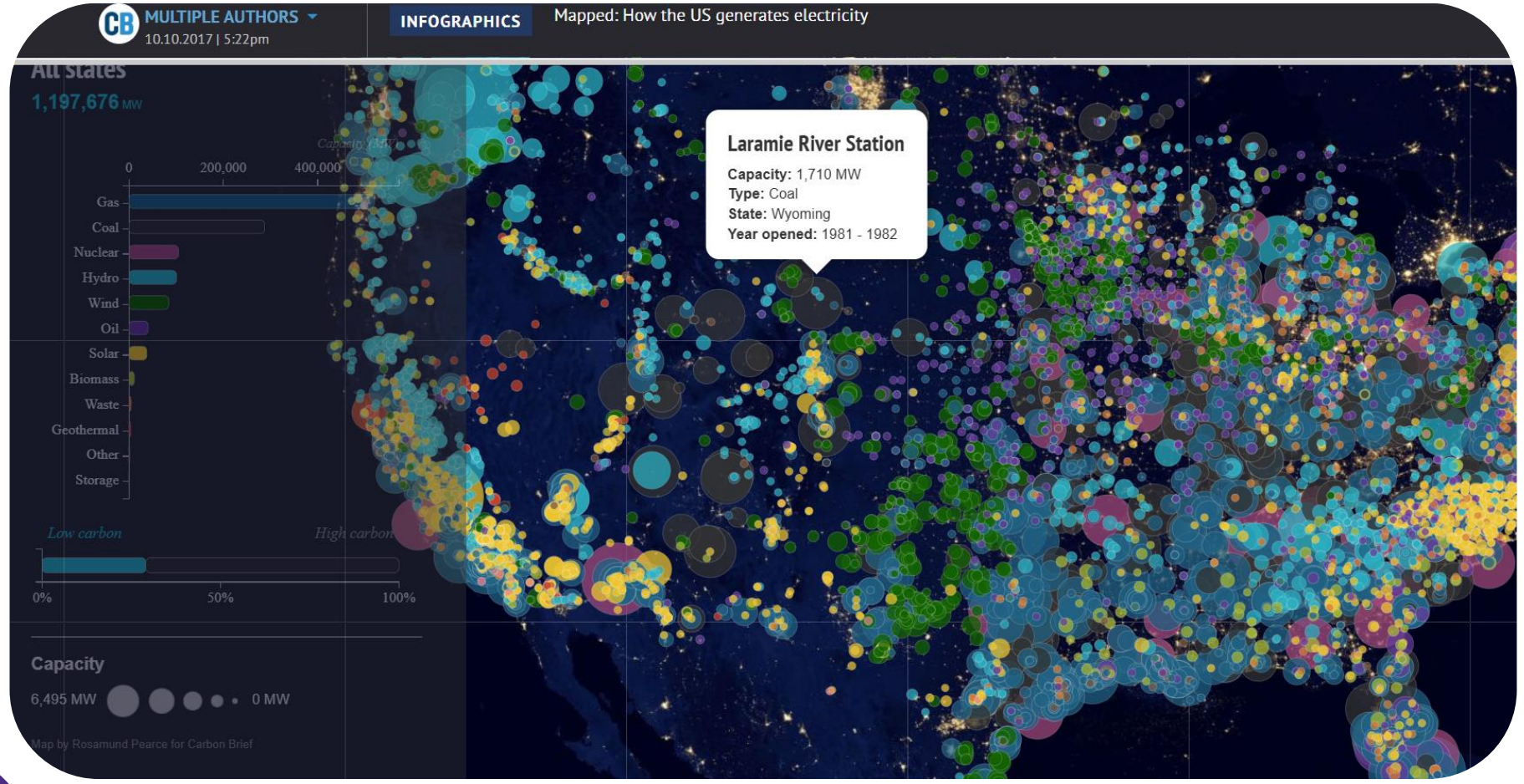


No olvidar “Case detection” que debe estar en la marca para que interactivamente pueda mostrar la cantidad de casos.

¿Tableau permite mapas interactivos?

https://manpopex.us/

¿Tableau permite mapas interactivos?



https://www.carbonbrief.org/mapped-how-the-us-generates-electricity/

Muchas Gracias

Consultas y contacto

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