



## MAESTRÍA EN CIENCIA DE DATOS

COHORTE 2024-2025

BUENOS AIRES

### INTRODUCCIÓN A DATA WAREHOUSING

#### TRABAJO PRÁCTICO FINAL

Docentes: - Mg. Eduardo A. Poggi - CC. Esteban J. Alonso - Dr. Hernán Etiennot

#### Alumnos:

- **GALLARDO, Ezequiel**
- **FILIPUZZI, Juan Manuel**

## Contenido

TPG01 – Flujo de datos en un DWA .....	4
Objetivos de trabajo y Entregables .....	4
1. Arquitectura de la solución .....	6
1.1 Estructura de Pipelines.....	7
1.2 Estrategia de Control de Cambios .....	8
1.3 Orquestación de procesos .....	9
2. Procesos de ingesta de Schema TMP .....	10
2.1 Proceso Schema TMP 1: CATEGORIES.....	10
2.2 Proceso Schema TMP 2: REGIONS .....	12
2.3 Proceso Schema TMP 3: SHIPPERS.....	14
2.4 Proceso Schema TMP 4: TERRITORIES .....	16
2.5 Proceso Schema TMP 5: CUSTOMERS.....	19
2.6 Proceso Schema TMP 6: EMPLOYEE TERRITORIES .....	21
2.7 Proceso Schema TMP 7: EMPLOYEE.....	23
2.8 Proceso Schema TMP 8: EMPLOYEE TERRITORIES .....	25
2.9 Proceso Schema TMP 9: ORDERS .....	27
2.10 Proceso Schema TMP 10: ORDERS.....	29
2.11 Proceso Schema TMP 11: SUPPLIERS.....	31
2.12 Proceso Schema TMP 12: COUNTRIES .....	34
2.13 Proceso Schema TMP 13: PRODUCTS .....	36
3. Procesos de ingesta de Schema STG .....	38
3.1 Proceso Schema STG 1: CATEGORIES.....	38
3.2 Proceso Schema STG 2: REGIONS.....	41
3.3 Proceso Schema STG 3: SHIPPERS.....	43
3.4 Proceso Schema STG 4: TERRITORIES.....	46
3.5 Proceso Schema STG 5: COUNTRIES .....	48
3.6 Proceso Schema STG 6: EMPLOYEES .....	50
3.7 Proceso Schema STG 7: SUPPLIERS .....	54
3.8 Proceso Schema STG 8: SUPPLIERS DATOS CONTACTO .....	57

3.9 Proceso Schema STG 9: PRODUCTS .....	60
3.10 Proceso Schema STG 10: EMPLOYEE_TERRITORIES .....	63
3.11 Proceso Schema STG 11: CUSTOMERS.....	65
3.12 Proceso Schema STG 12: ORDERS .....	68
3.13 Proceso Schema STG 13: ORDERS DETAILS .....	72
4. Procesos de ingesta de Schema DWH (Dimensiones).....	75
4.1 Proceso Schema DWH 1: CATEGORIES.....	75
4.2 Proceso Schema DWH 2: REGIONS .....	77
4.3 Proceso Schema DWH 3: SHIPPERS.....	80
4.4 Proceso Schema DWH 4: TERRITORIES .....	82
4.5 Proceso Schema DWH 5: COUNTRIES .....	84
4.6 Proceso Schema DWH 6: EMPLOYEES.....	87
4.7 Proceso Schema DWH 7: SUPPLIERS .....	91
4.8 Proceso Schema DWH 8: SUPPLIERS DATOS CONTACTO.....	94
4.9 Proceso Schema DWH 9: PRODUCTS .....	97
4.10 Proceso Schema DWH 10: EMPLOYEES TERRITORIES .....	100
4.11 Proceso Schema DWH 11: LK_TIEMPO .....	102
5. Procesos de ingesta de Schema ODS .....	104
5.1 Proceso Schema ODS 1: CUSTOMERS .....	104
5.2 Proceso Schema ODS 2: ORDERS .....	107
5.3 Proceso Schema ODS 3: ORDERS DETAILS .....	110
6. Gestión de METADATA.....	113
7. Gestión de LOGS.....	<b> Error! Marcador no definido.</b>

# TPG01 – Flujo de datos en un DWA

## Objetivos de trabajo y Entregables

El objetivo de este trabajo práctico es desarrollar todas las capas de datos y ejecutar los procesos correspondientes del flujo end-to-end en un DWA (Data Warehouse Analítico), desde la ingesta hasta la publicación y la explotación.

El material básico para la elaboración del presente trabajo se encuentra publicado en la plataforma del curso, además de lo expuesto en clase.

### Aclaraciones

- Este trabajo debe elaborarse por equipos según los grupos establecidos para la materia. Los grupos de más de tres integrantes serán penalizados.
- La entrega de este TP consiste en publicar un documento resumiendo lo realizado según se especifica más abajo, además de los componentes desarrollados.
- Cada grupo deberá exponer en clase una síntesis del trabajo realizado con una duración máxima de 10'. Podría reemplazarse con un video.
- Las fechas de publicación y presentación serán indicadas en la plataforma
- Incluyan en los archivos a entregar la lista de los integrantes. Se recomienda considerar una carátula en donde se identifique el posgrado, la materia, el título del informe, los integrantes del equipo y la fecha.
- La evaluación se realizará según la rúbrica descrita más abajo.
- Los integrantes de cada grupo obtendrán la misma calificación.
- Los docentes evalúan el trabajo realizado por lo que se manifiesta en la presentación y en los documentos entregados, por lo tanto se recomienda una elaboración cuidada y comentada. El contenido debe transmitir las tareas realizadas con la especificidad suficiente para comprenderlas pero sin entrar en detalles irrelevantes. No copien textos externos, si fuera necesario, citen la fuente.

### Informe y presentación exponiendo:

1. Entrega de un informe y/o presentación (.PDF/.PPTX) con un resumen de lo realizado. Esto permitirá evaluar el resultado sin necesariamente abrir ningún entorno de base de datos.
2. Se deben incluir como anexos todos los scripts desarrollados, los DER y estructuras correspondientes.
3. Entregar como .ZIP la base resultante con todos los componentes (.db, .sql, etc. y los tableros) para verificación de autoría si fuera necesario.

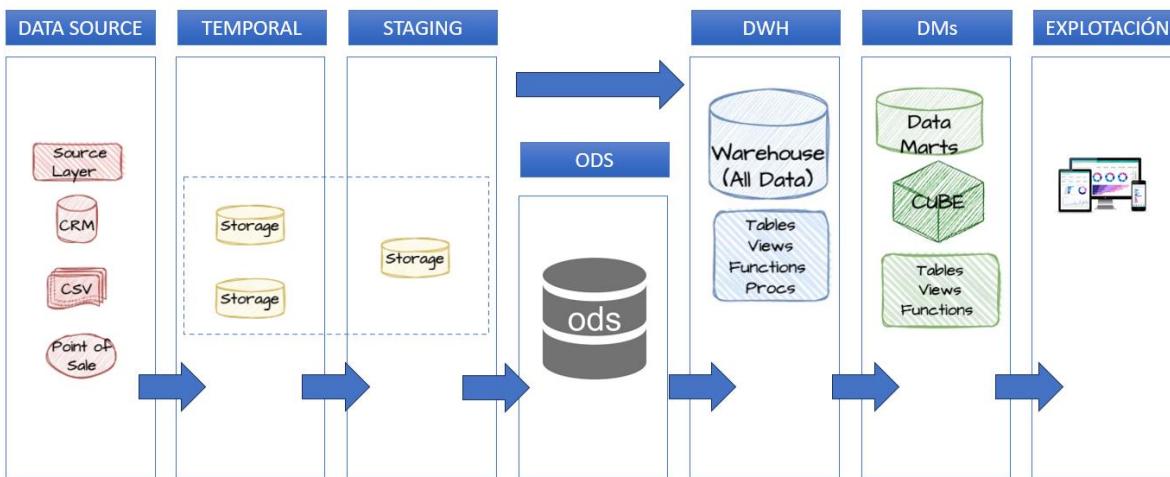
4. Entregar el tablero desarrollado (por ejemplo, Tablero.PBIX).
5. En la presentación en clase deberán ejecutar los tableros desarrollados.
6. Salvo el informe que debe ser publicado en el aula viryual, los demás objetos pueden ser publicados en un drive con libre acceso.

## 1. Arquitectura de la solución

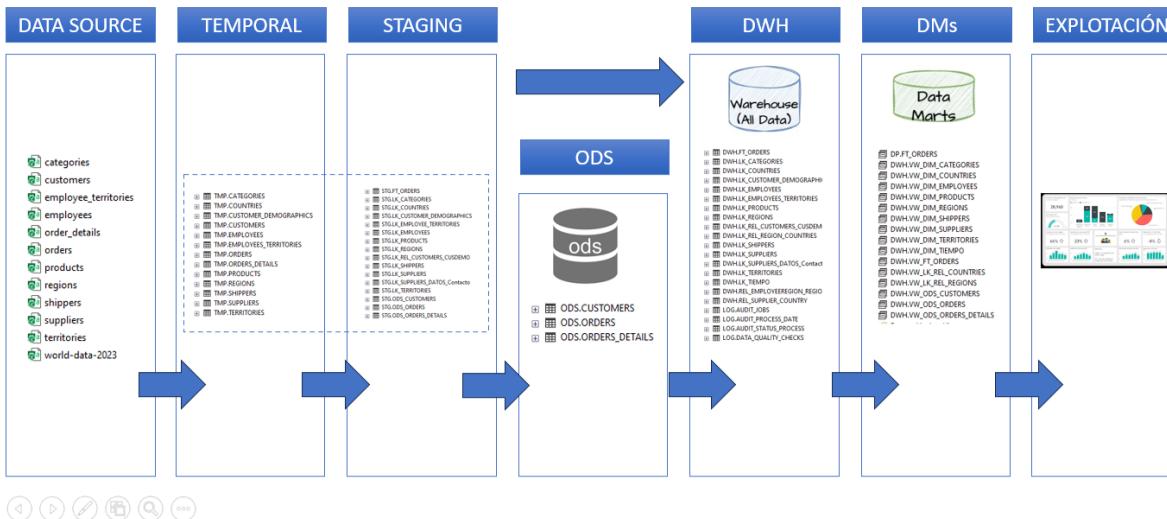
La arquitectura de la solución, será la siguiente. Los puntos importantes de la misma son:

- a- Esquema TEMPORAL: “TMP”; con el objeto de desconectar la fuente; Es una copia intacta del origen.
- b- Esquema STAGING; “STG” área donde se almacenan en forma temporal los datos, en la cual ,se aplican transformaciones de limpieza y join con otros objetos, con el objeto de agregar información.
- c- Esquema ODS;
- d- Esquema DWH; Donde se almacenan las dimensiones y fact tables.
- e- Esquema DP, para los Data Marts.

## ARQUITECTURA



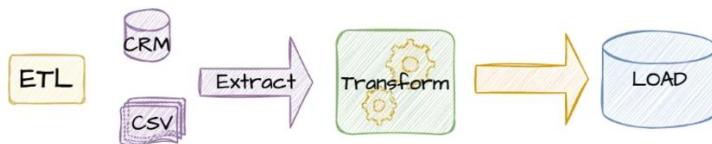
# IMPLEMENTACIÓN



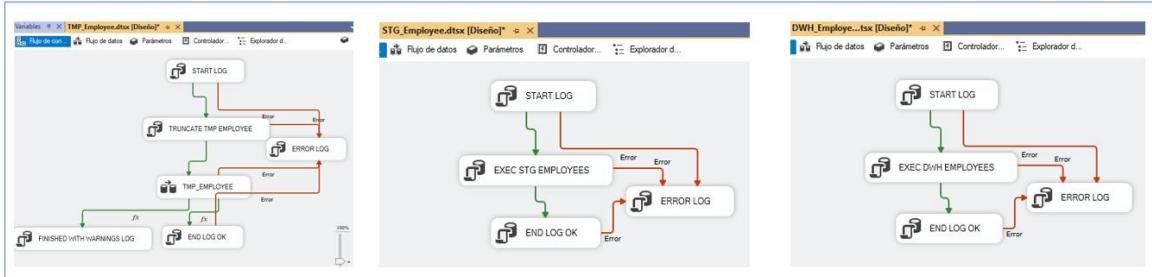
## 1.1 Estructura de Pipelines

Los ETLs se desarrollan con SSIS. La estructura es la siguiente.

ETL



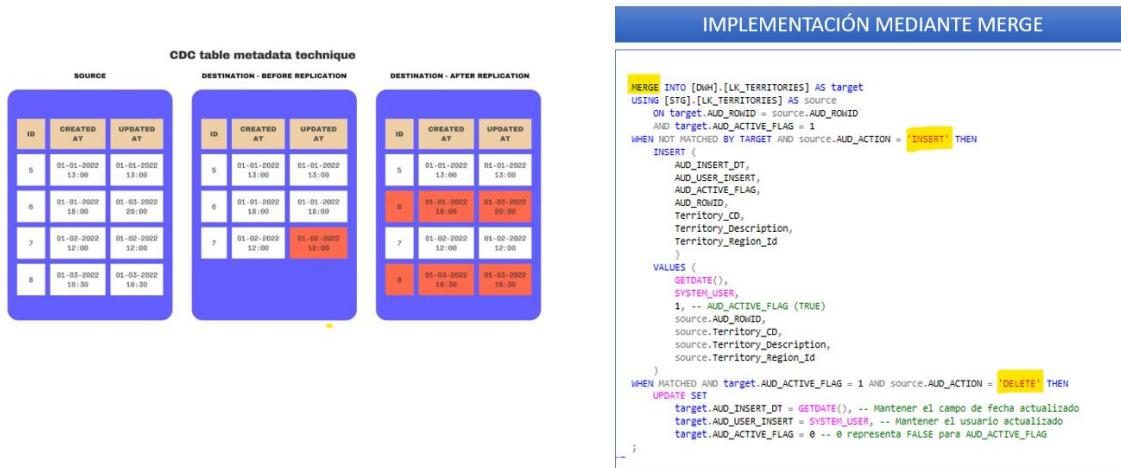
### Pipeline por entidad



## 1.2 Estrategia de Control de Cambios

Para asegurar la integridad y trazabilidad de los datos en mi Data Warehouse, implemento un robusto sistema de control de cambios. Utilizo la detección de novedades mediante la comparación del ROWID generado por el HASH de todos los campos relevantes. Este enfoque me permite identificar cambios de manera eficiente y precisa. Además, para mantener un histórico completo, utilizo un FLAG de ACTIVO que indica la versión actual de cada registro, mientras que las versiones anteriores se desactivan, asegurando que siempre disponga de la información más reciente y precisa para análisis y reporting.

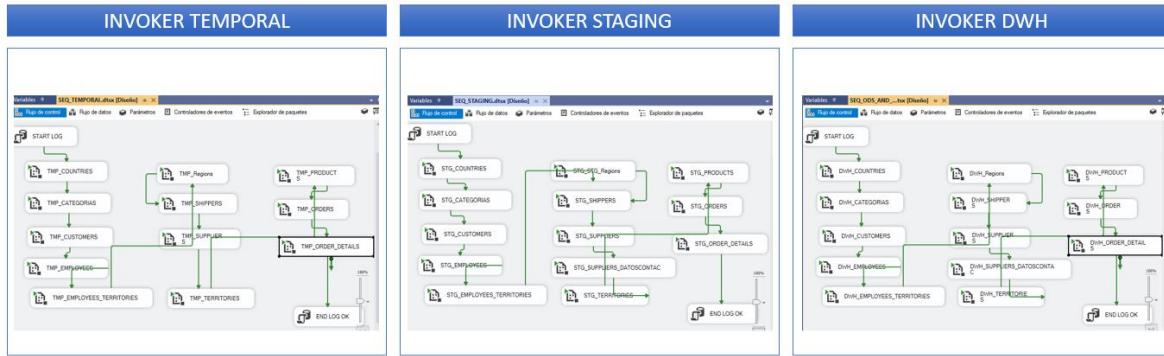
# ESTRATEGIA ACTUALIZACIÓN DE DATOS



## 1.3 Orquestación de procesos

Se han desarrollado 3 Orquestadores, encargados de la invocación de los procesos TEMPORAL, STAGING y DWH.

# ORQUESTACIÓN



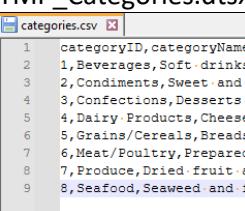
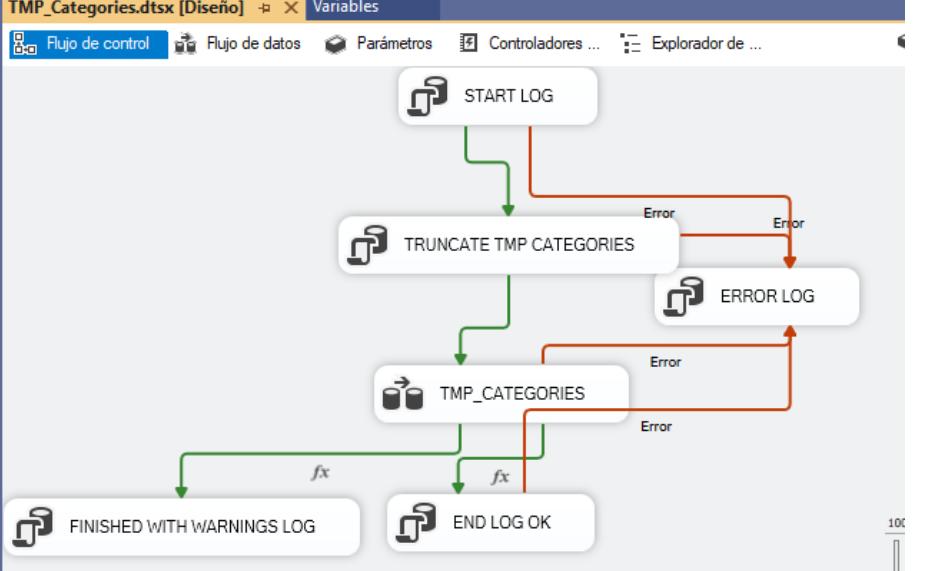
## 2. Procesos de ingesta de Schema TMP

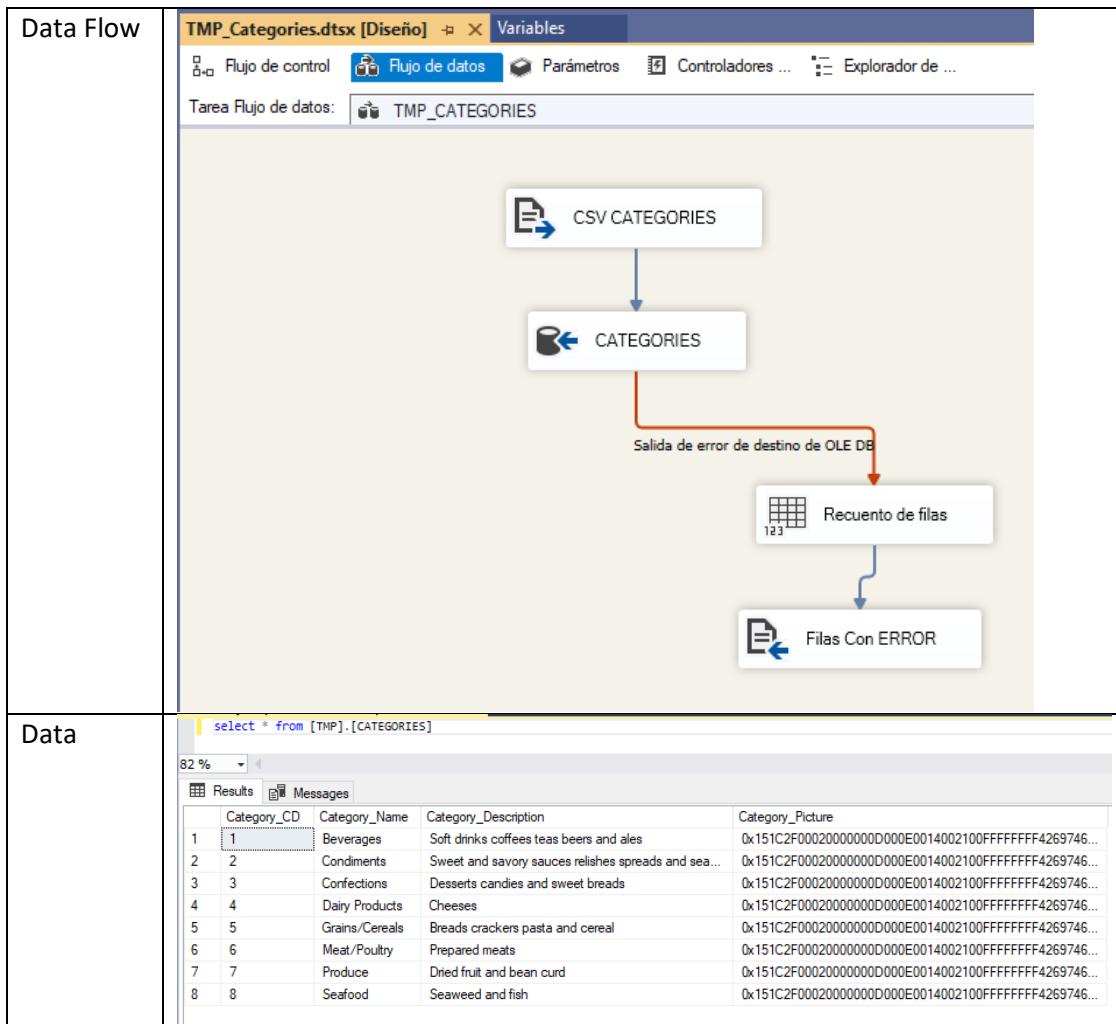
En ésta sección de trabajo, tenemos como objetivo alimentar todas las tablas del schema TEMPORAL a partir de los files de INGESTA. Tomamos como patrón de diseño lo siguiente:

- 1- El input serán los flat files del directorio de INGESTA
- 2- Se crea un registro de Log propio de la entidad a correr.
- 3- Las Tablas Temporales se truncan al momento inicial.
- 4- Se envían todos los registros del archivo de INPUT, hacia la tabla en el schema TMP.
  - a. Como premisa, todos los registros y sus respectivos campos, no reciben manipulación, para tener una copia exacta del transaccional; Motivo por el cual, todos los campos se almacenan como VARCHAR.
  - b. En el caso de ser rechazada alguna fila; se almacena en un registro de Auditoría.
- 5- Se registra nivel auditoría el status del proceso.

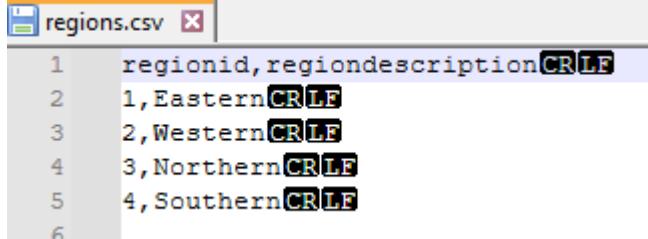
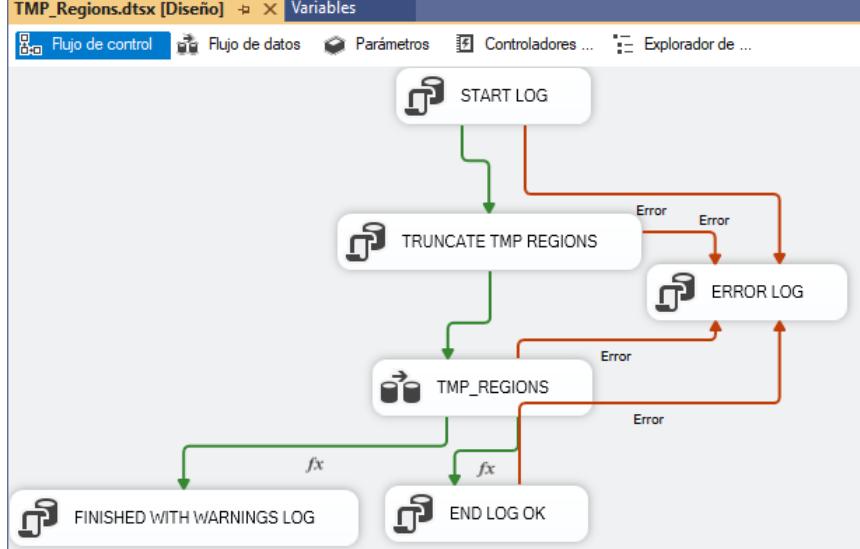
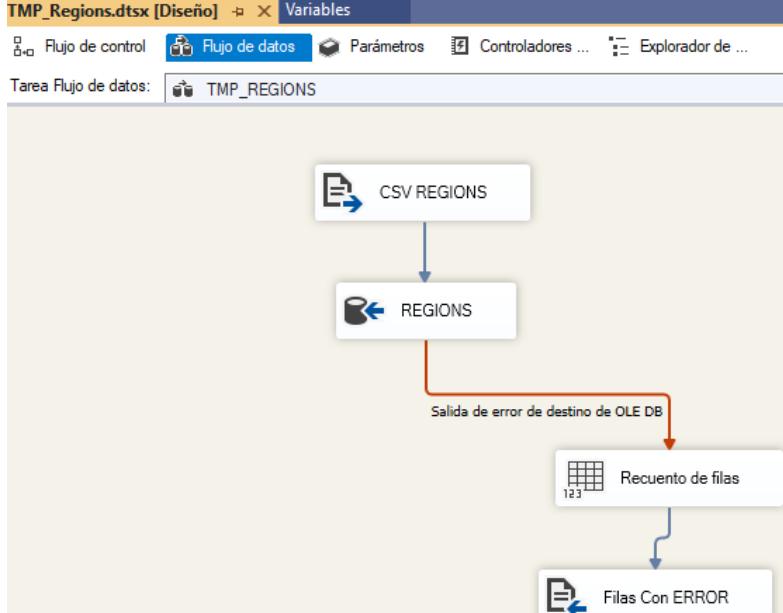
Correremos todos los procesos con los FILES DE INGESTA 1.

### 2.1 Proceso Schema TMP 1: CATEGORIES

JobName	TMP_Categories.dtsx
Input	 <pre> 1 CategoryID,categoryName,description,picture 2 1,Beverages,Soft drinks-coffees teas beers and ales,0x151C2F0002000000D000E0014002100FF4269746D61 3 2,Condiments,Sweet and savory sauces relishes spreads and seasonings,0x151C2F0002000000D000E0014002100F 4 3,Confections,Desserts candies and sweet breads,0x151C2F0002000000D000E0014002100FFF4269746D617020 5 4,Dairy Products,Cheeses,0x151C2F0002000000D000E0014002100FF4269746D617020496D616765005061696E742 6 5,Grains/Cereals,Breads crackers pasta and cereal,0x151C2F0002000000D000E0014002100FFF4269746D617020496D616765005061696E742 7 6,Meat/Poultry,Prepared meats,0x151C2F0002000000D000E0014002100FFF4269746D617020496D616765005061696E742 8 7,Produce,Dried fruit and bean curd,0x151C2F0002000000D000E0014002100FFF4269746D617020496D61676500 9 8,Seafood,Seaweed and fish,0x151C2F0002000000D000E0014002100FFF4269746D617020496D616765005061696E7 </pre>
Control Flow	 <pre> graph TD     StartLog([START LOG]) --&gt; Truncate[TRUNCATE TMP CATEGORIES]     Truncate -- Error --&gt; ErrorLog([ERROR LOG])     Truncate --&gt; TMPCategories[TMP_CATEGORIES]     TMPCategories -- Error --&gt; ErrorLog     TMPCategories -- fx --&gt; FinishedLog([FINISHED WITH WARNINGS LOG])     TMPCategories -- fx --&gt; EndLogOK([END LOG OK]) </pre>



## 2.2 Proceso Schema TMP 2: REGIONS

JobName	TMP_Regions.dtsx
Input	 <pre> 1 regionid,regiondescription 2 1,Eastern 3 2,Western 4 3,Northern 5 4,Southern 6 </pre>
Control Flow	 <pre> graph TD     START[START LOG] --&gt; TRUNCATE[TRUNCATE TMP REGIONS]     TRUNCATE --&gt; TMP[TMP_REGIONS]     TMP --&gt; END[END LOG OK]     TRUNCATE -- Error --&gt; ERROR[ERROR LOG]     TMP -- Error --&gt; ERROR </pre>
Data Flow	 <pre> graph TD     CSV[CSV REGIONS] --&gt; REGION[REGIONS]     REGION --&gt; COUNT[Recuento de filas]     COUNT --&gt; ERROR[Filas Con ERROR]     REGION -- "Salida de error de destino de OLE DB" --&gt; COUNT </pre>

Data

```
select * from [TMP].[REGIONS]
```

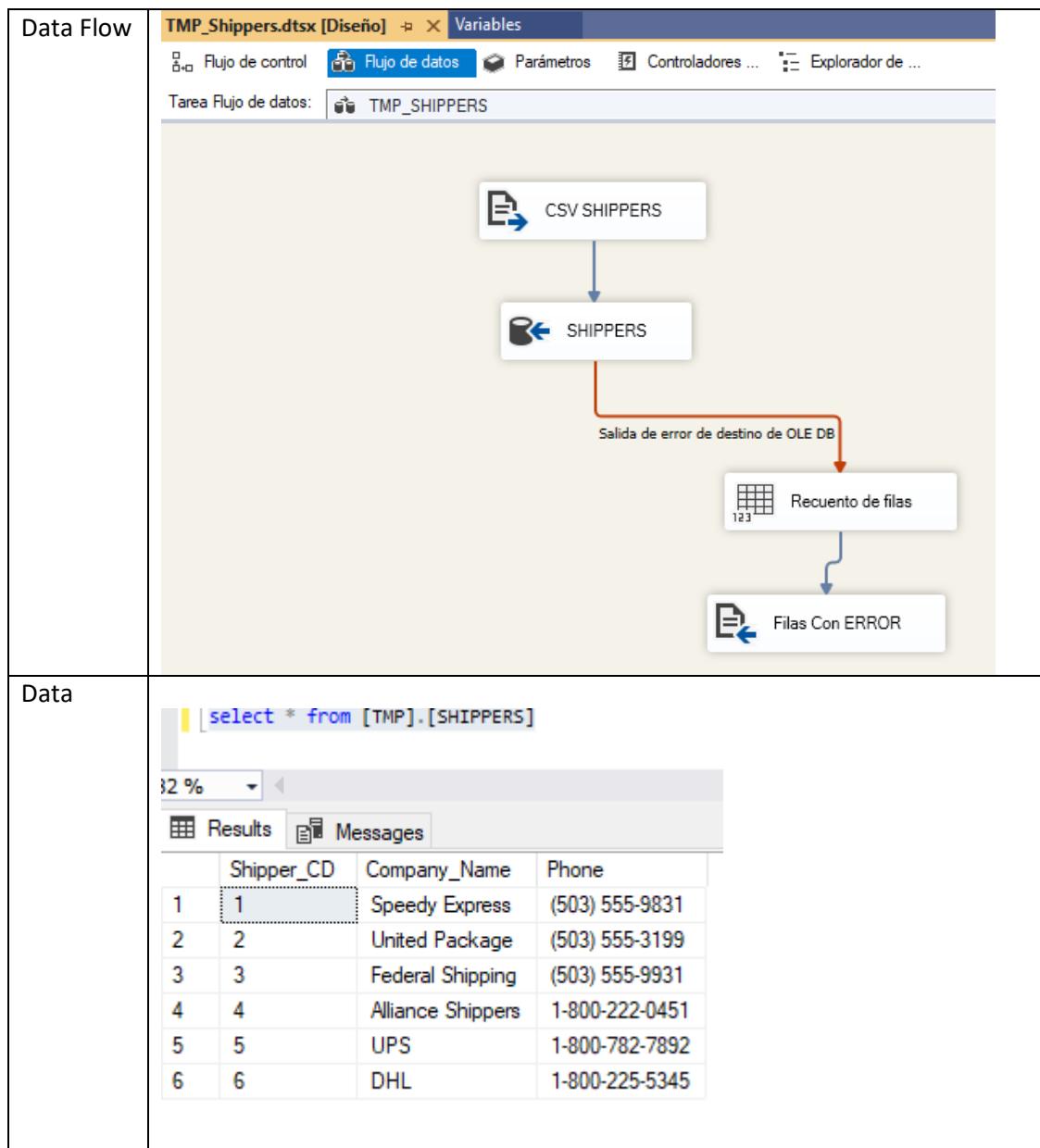
32 %

Results Messages

	Region_CD	Region_Description
1	1	Eastern
2	2	Western
3	3	Northern
4	4	Southern

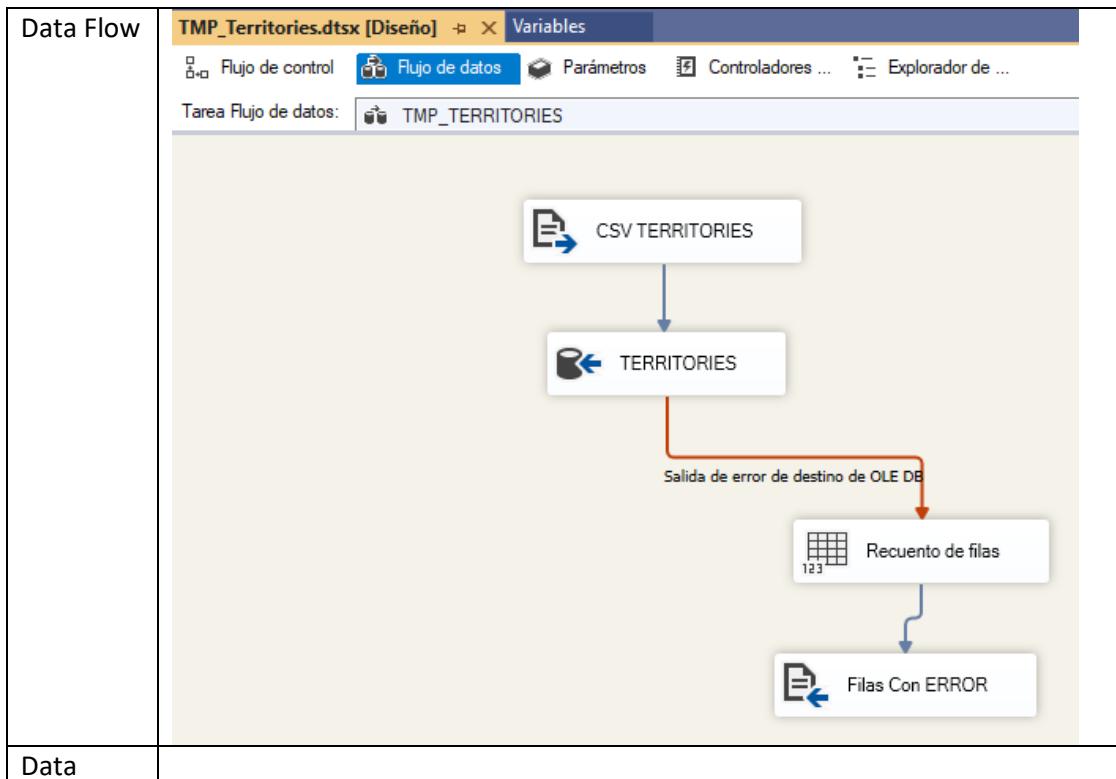
## 2.3 Proceso Schema TMP 3: SHIPPERS

JobName	TMP_Shippers.dtsx
Input	<p>shippers.csv</p> <pre> 1 shipperid,companyname,phone 2 1,Speedy Express, (503) 555-9831 3 2,United Package, (503) 555-3199 4 3,Federal Shipping, (503) 555-9931 5 4,Alliance Shippers,1-800-222-0451 6 5,UPS,1-800-782-7892 7 6,DHL,1-800-225-5345 8 </pre>
Control Flow	<p>TMP_Shippers.dtsx [Diseño] Variables</p> <p>Flujo de control Flujo de datos Parámetros Controladores ... Explorador de ...</p> <pre> graph TD     START_LOG([START LOG]) --&gt; TRUNCATE[TRUNCATE TMP SHIPPERS]     TRUNCATE --&gt; TMP_SHIPPERS[TMP_SHIPPERS]     TMP_SHIPPERS -- fx --&gt; FINISHED_WARNINGS[FINISHED WITH WARNINGS LOG]     TMP_SHIPPERS -- fx --&gt; END_LOG_OK([END LOG OK])     TRUNCATE -- Error --&gt; ERROR_LOG([ERROR LOG])     TMP_SHIPPERS -- Error --&gt; ERROR_LOG     END_LOG_OK -- Error --&gt; ERROR_LOG </pre>



## 2.4 Proceso Schema TMP 4: TERRITORIES

JobName	TMP_Territories.dtsx
Input	<p>territories.csv</p> <pre> 1 territoryid,territorydescription,regionid 2 01581,Westboro,1 3 01730,Bedford,1 4 01833,Georgetown,1 5 02116,Boston,1 6 02139,Cambridge,1 7 02184,Braintree,1 8 02903,Providence,1 9 03049,Hollis,3 10 03801,Portsmouth,3 11 06897,Wilton,1 12 07960,Morristown,1 13 08837,Edison,1 14 10019,New York,1 15 10038,New York,1 16 11747,Melville,1 17 14450,Fairport,1 18 19428,Philadelphia,3 19 19713,Newark,1 </pre>
Control Flow	<p>TMP_Territories.dtsx [Diseño] Variables</p> <pre> graph TD     START_LOG([START LOG]) --&gt; TRUNCATE[TRUNCATE TMP TERRITORIES]     TRUNCATE --&gt; TMP_TERRITORIES[TMP_TERRITORIES]     TMP_TERRITORIES -- fx --&gt; FINISHED_LOG[FINISHED WITH WARNINGS LOG]     TMP_TERRITORIES -- fx --&gt; END_LOG[END LOG OK]     TRUNCATE -- Error --&gt; ERROR_LOG([ERROR LOG])     END_LOG -- Error --&gt; ERROR_LOG     </pre>



select \* from [TMP].[TERRITORIES]

82 %

Results Messages

	Territory_CD	Territory_Description	Region_CD
1	01581	Westboro	1
2	01730	Bedford	1
3	01833	Georgetown	1
4	02116	Boston	1
5	02139	Cambridge	1
6	02184	Braintree	1
7	02903	Providence	1
8	03049	Hollis	3
9	03801	Portsmouth	3
10	06897	Wilton	1
11	07960	Morristown	1
12	08837	Edison	1
13	10019	New York	1
14	10038	New York	1
15	11747	Melville	1
16	14450	Fairport	1
17	19428	Philadelphia	3
18	19713	Newark	1
19	20852	Rockville	1
20	27403	Greensboro	1
21	27511	Cary	1
22	29202	Columbia	4

## 2.5 Proceso Schema TMP 5: CUSTOMERS

JobName	TMP_Customers.dtsx
Input	<p>customers.csv</p> <pre> 1 customerID, companyName, contactName, contactTitle, address, city, region, postalCode, country, phone, fax 2 ALFKI,Alfredo Fetterkiste,Maria Anders,Sales Representative,Obere Str. 57,Berlin,NULL,12209,Germany,030-0074321,030-0076545 3 ANATI,Ana Trujillo Emparedados y helados,Ana Trujillo,Owner,Avda. de la Constitución 2224,México D.F.,Mexico,01070001,Mexico,(5) 555-4729,(5) 555-3745 4 AROUT,Around the Horn,Thomas Harder,Sales Representative,80 Anselmo Dr.,Suite 101,Portland,OR,97201,USA,(503) 555-3555,(503) 555-4720,(503) 555-3555 5 AROUT,Around the Horn,Thomas Harder,Sales Representative,120 Hanover St.,London,NULL,W1 1DP,UK,(171) 555-7788,(171) 555-4750 6 BERGS,Berglunds snabbköp,Christina Berglund,Order Administrator,Berguvsvägen 8,Luleå,NULL,95-858 22,Sweden,0921-12 34 67 7 BLAUS,Blauer See Delikatessen,Hanna Moes,Sales Representative,Forsterstr. 57,Mannheim,NULL,68306,Germany,0621-08460,0621-08921 8 BLOND,Blondesdal père et fils,Frédérique Citeaux,Marketing Manager,24 place Kleber,Strasbourg,NULL,67000,France,98.60.15.31,98.60.15.32 9 BOLID,Bolido Comidas preparadas,Martin Sommer,Owner,67C Aragüil,Madrid,NULL,28023,Spain,(91) 555 22 82,(91) 555 91 99 10 BONAP,Bon app',Laurence Lebihan,Owner,12 rue des Bouchers,Marseille,NULL,13008,France,91.24.45.40,91.24.45.41 11 BOTIN,Bottom-Dollar Markets,Elizabeth Lincoln,Accounting Manager,23 Tsawassen Blvd.,Tsawassen,BC,T2J 8M,Canada,(604) 555-4729,(604) 555-3745 12 BONSAI,Bonsai Beamer,Andrea Beamer,Owner,1234 Main St.,Seattle,WA,98101,USA,(206) 555-4722,(171) 555-1212,NULL 13 CACTU,Cactus Comidas para llevar,Patricia Simpson,Sales Agent,Cerrito 333,Buenos Aires,NULL,1010,Argentina,(1) 135-5555,(1) 135-4892 14 CENTO,Centro comercial MonteZuma,Francisco Chang,Marketing Manager,Sierras de Granada 9993,Mexico D.F.,NULL,06222,Mexico,(5) 555-7298 15 CHOPS,Chop-suey Chinese,Yang Wang,Owner,Hauptstr. 29,Bern,NULL,3012,Switzerland,0452-076545,NULL 16 COMMI,Comércio Mineiro,Pedro Afonso,Sales Associate,23 Av. dos Lusíadas,Sao Paulo,SP,05432-043,Brazil,(11) 555-7647,NULL 17 CONSH,Consolidated Holdings,Elizabeth Brown,Sales Representative,Berkley Gardens 12 ,Brewery,London,NULL,W1L 6LT,UK,(171) 555-2282,(171) 555-9199 18 DRACD,Drachenblut Delikatessen,Sven Ottlieb,Order Administrator,Walserweg 21,Aschen,NULL,52066,Germany,0241-039123,0241-059420 19 DUNON,Le monde entier,Janine Labrune,Owner,67 rue des Cingquante Seigneurs,Nantes,NULL,44000,France,40.67.88.88,40.67.89.89 20 ERNSH,Ernest Handel,Roland Mendel,Sales Manager,Kirchgasse 6,Gras,NULL,8010,Austria,7673-3425,7673-3425 21 FAMIA,Famila Arreguialdo,Aria Crux,Marketing Assistant,Rua Orde 82,Sao Paulo,SP,05442-020,Brazil,(11) 555-9857,NULL 22 FISSA,FISSA Fabrica Inter,Salchichas S.A.,Diego Roel,Accounting Manager,C/Moralzarzal 86,Madrid,NULL,28034,Spain,(91) 555-94 44,(91) 555-55 93 23 FOLIO,Folies gourmandes,Martine Rancé,Assistant Sales Agent,104 chaussée de Tournai,Lille,NULL,59000,France,20.16.10.16,20.16.10.17 24 FOLKO,Folk och fä HB,Maria Larsson,Owner,Åkergratan 24,Bräcke,NULL,S-844 67,Sweden,0695-34 67 21,NULL </pre>
Control Flow	<p>TMP_Customers.dtsx [Diseño] ➔ Variables</p> <pre> graph TD     START_LOG([START LOG]) --&gt; TRUNCATE[TRUNCATE TMP CUSTOMERS]     TRUNCATE --&gt; TMP_CUSTOMERS[TMP_CUSTOMERS]     TMP_CUSTOMERS -- fx --&gt; FINISHED[FINISHED WITH WARNINGS LOG]     TMP_CUSTOMERS -- fx --&gt; END_LOG[END LOG OK]     TRUNCATE -- Error --&gt; ERROR_LOG([ERROR LOG])     TMP_CUSTOMERS -- Error --&gt; ERROR_LOG     END_LOG -- Error --&gt; ERROR_LOG </pre>

**Data Flow**

**TMP\_Customers.dtsx [Diseño] ▶ Variables**

Flujo de control □ Flujo de datos **Flujo de datos** Parámetros Controladores ... Explorador de ...

Tarea Flujo de datos: CSV CUSTOMERS

```

graph TD
    CSV[CSV CUSTOMERS] --> CUSTOMERS[CUSTOMERS]
    CUSTOMERS --> RC[Recuento de filas]
    CUSTOMERS -- "Salida de error de destino de OLE DB" --> FCE[Filas Con ERROR]
  
```

---

**Data**

Results

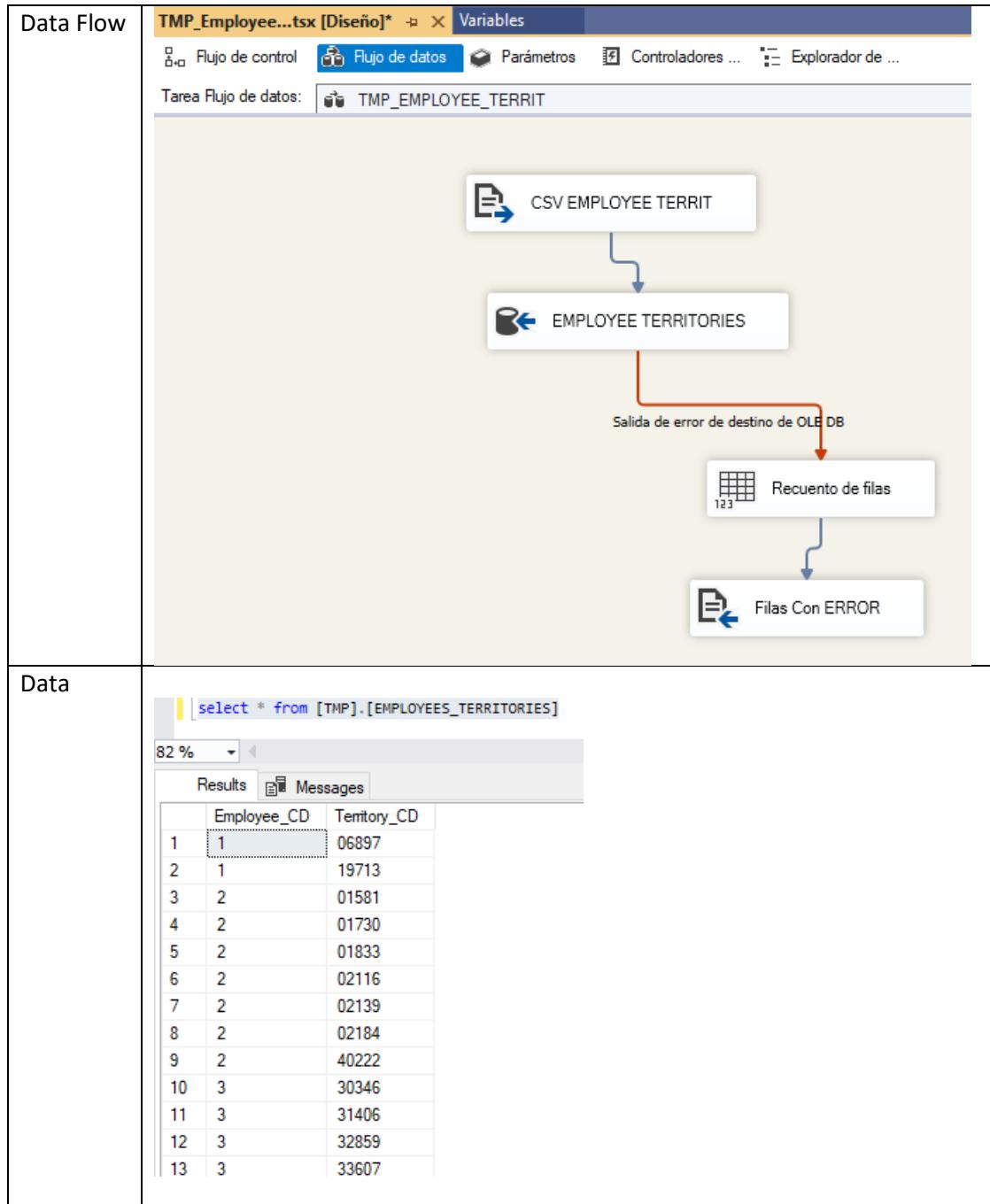
```
[select * from [TMP].[CUSTOMERS]
```

82 %

Customer_ID	Company_Name	Contact_Name	Contact_Title	Address	City	Region	Postal_Code	Country	Phone	Fax	
1	ALFKI	Aleida Futterkiste	Maria Anders	Sales Representative	Ober str. 57	Berlin	NULL	Germany	030-0074321	030-0076545	
2	ANATR	Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Avda. de ConstituciÃ³n 2222	MÃ©xico D.F.	05021	Mexico	(5) 555-4729	(5) 555-3745	
3	ANTON	Antonio Moreno TaquerÃ­a	Antonio Moreno	Owner	Mataderos 2312	MÃ©xico D.F.	05023	Mexico	(5) 555-3932	NULL	
4	AROUT	Around the Horn	Thomas Hardy	Sales Representative	120 Hanover Sq.	London	NULL	WA1 1DP	UK	(171) 555-7788	
5	BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	BerguvsvÄgen 8	Luleå	S-995 22	Sweden	0921-12 34 65	0921-12 34 67	
6	BLAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Forststr. 57	Manheim	NULL	68305	Germany	0621-08460	0621-08924
7	BLONP	Blondedel pÃ¢re et fils	FranÃ§ois Armand Cœtteau	Marketing Manager	24 place KÃ¶lber	Straubourg	67000	France	88 60 15 31	88 60 15 32	
8	BOUD	BÃ¶hlde Comidas preparadas	MarÃ¡n Sommer	Owner	67C Aroual	Madrid	NULL	28023	Spain	(91) 555 22 81	(91) 555 91 99
9	BONAP	Bon app'	Laurence Lebihan	Owner	12 rue des Bouchers	Marseille	NULL	13008	France	91 24 45 40	91 24 45 41
10	BOTTM	Bottom-Dollar Markets	Elizabeth Lincoln	Accounting Manager	23 Tavawsen Blvd.	Tsawassen	BC	T2F 8M4	Canada	(604) 555-4729	(604) 555-3745
11	BSBEV	B's Beverages	Victoria Ashworth	Sales Representative	Faunley Crous	London	NULL	E2 5NT	UK	(171) 555-1212	NULL
12	CACTU	Cactus Comidas para llevar	Patricia Simpson	Sales Agent	Cento 333	Buenos Aires	NULL	1010	Argentina	(1) 135-5555	(1) 135-4892
13	CENTC	Centro comercial Moctezuma	Francisco Chang	Marketing Manager	Sierras de Granada 9993	MÃ©xico D.F.	05022	Mexico	(5) 555-3932	(5) 555-7293	
14	CHOPS	Chop suey Chinese	Yang Wang	Owner	Hauptstr. 29	Bern	NULL	3012	Switzerland	0452-076545	NULL
15	COMMI	ComÃ©rcio Mineiro	Pedro Alonso	Sales Associate	23 Av. dos LusÃ¡dias	Sao Paulo	SP	05432/043	Brazil	(11) 555-7647	NULL
16	CONSH	Consolidated Holdings	Elizabeth Brown	Sales Representative	Beverley Gardens 12	Brewery	London	WX1 8LT	UK	(171) 555-2282	(171) 555-9199
17	DRACD	Drachenblut Delikatessen	Sven Ottieb	Order Administrator	Walsenweg 21	Aachen	NULL	52066	Germany	0241-039123	0241-059428
18	DUMON	Du monde entier	Jeanine Labrune	Owner	67 rue des Cinquante Otages	Nantes	NULL	44000	France	40 67 88.88	40 67 89.09

## 2.6 Proceso Schema TMP 6: EMPLOYEE TERRITORIES

JobName	TMP_Employee_Territories.dtsx
Input	<p>employee Territories.csv</p> <pre> 1 employeeid,territoryid 2 1,06897 3 1,19713 4 2,01581 5 2,01730 6 2,01833 7 2,02116 8 2,02139 9 2,02184 10 2,40222 11 3,30346 12 3,31406 13 3,32859 14 3,33607 15 4,20852 16 4,27403 17 4,27511 18 5,02903 19 5,07960 20 5,08837 21 5,10019 22 5,10038 23 5,11747 24 5,14450 </pre>
Control Flow	<p>TMP_Employee...tsx [Diseño]*</p> <pre> graph TD     StartLog([START LOG]) --&gt; Truncate[TRUNCATE TMP EMPLOYEE TERRIT]     Truncate -- Error --&gt; ErrorLog([ERROR LOG])     Truncate --&gt; TempTable[TMP_EMPLOYEE_TERRIT]     TempTable -- Error --&gt; ErrorLog     TempTable -- fx --&gt; FinishedLog([FINISHED WITH WARNINGS LOG])     TempTable -- fx --&gt; EndLogOK([END LOG OK]) </pre>



## 2.7 Proceso Schema TMP 7: EMPLOYEE

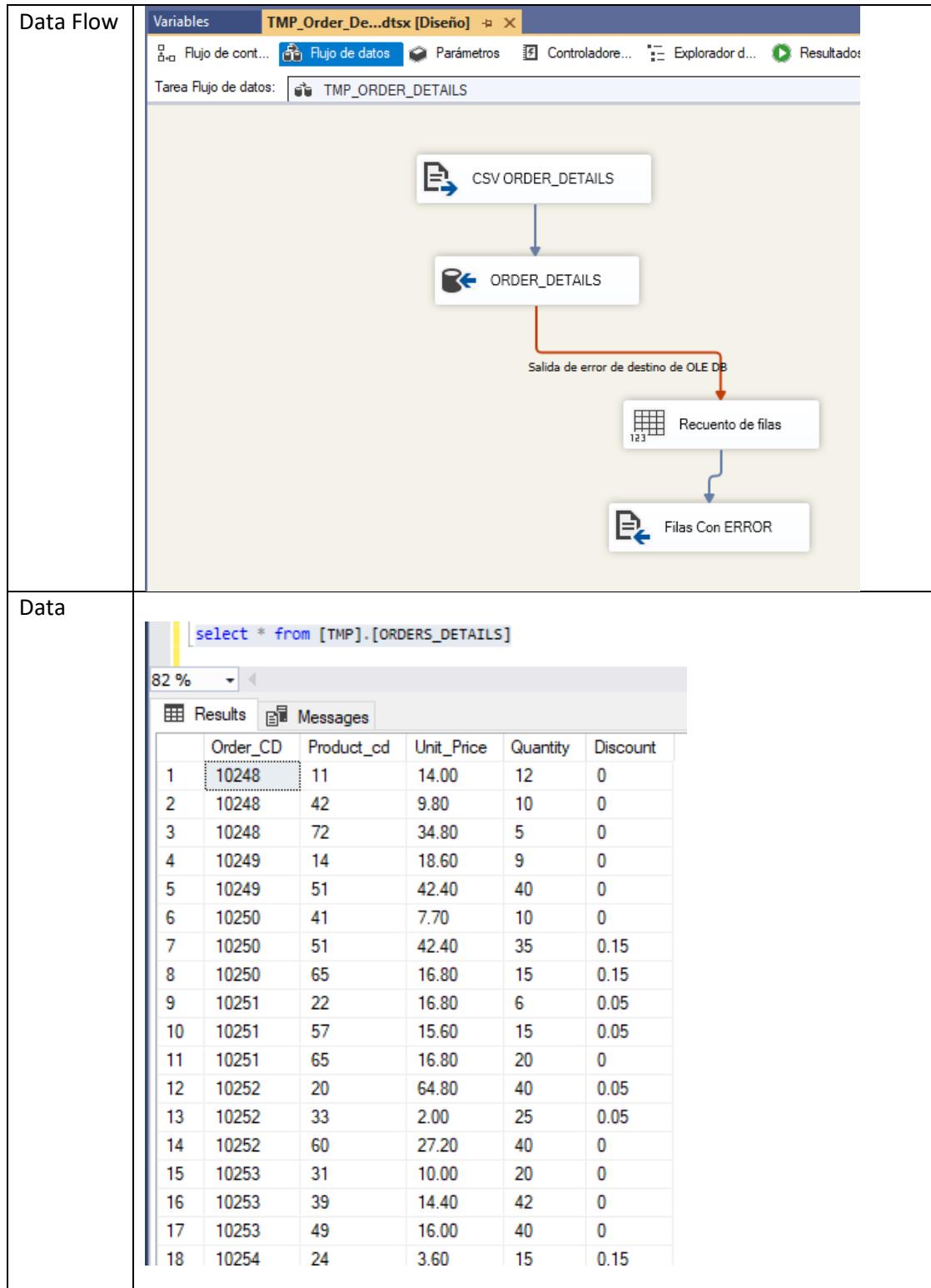
JobName	TMP_Employee.dtsx
Input	<pre> 1 employeeID,lastName,firstName,title,titleOfCourtesy,birthDate,hireDate,address,city,region,postalCode,country,homePhone,extenssion,photo,notes,reportsTo,photoPath 2,Fuller,Andrew,Vice President Sales,Dr.,1952-02-19 00:00:00.000,1992-05-14 00:00:00.000,808 W. Capital Way,Tacoma,WA,98401,USA,(206) 555-9452,4457,0x11C2F00002 3,Leverling,Janet,Sales Representative,Ms.,1963-08-30 00:00:00.000,1992-04-01 00:00:00.000,722 More Bay Blvd.,Kirkland,WA,98033,USA,(204) 555-3412,3355,0x151C2F0002 4,Peacock,Margaret,Sales Representative,Mrs.,1937-09-19 00:00:00.000,1993-05-03 00:00:00.000,4110 Old Redmond Rd.,Redmond,WA,98052,USA,(206) 555-8122,5176,0x151C2F0002 5,Buchanan,Steven,Sales Representative,Ms.,1958-01-01 00:00:00.000,1993-01-17 00:00:00.000,Cornerway House,High Holborn,London,HULL,SW1A 2B,UK,(71) 555-1234,3452,0x11C2F00002 6,King,Robert,Sales Representative,Mrs.,1960-05-28 00:00:00.000,1994-01-02 00:00:00.000,Edgeham Hollow,Wincanton Way,London,HULL,R01 9SB,UK,(71) 555-5598,445,0x151C2F0002 7,Callahan,Laura,Inside Sales Coordinator,Ms.,1958-01-09 00:00:00.000,1994-03-05 00:00:00.000,4726 11th Ave. N.E.,Seattle,WA,98105,USA,(206) 555-1189,2344,0x151C2F0002 8,Dodsworth,Anne,Sales Representative,Ms.,1966-01-27 00:00:00.000,1994-11-18 00:00:00.000,7 Houndsditch Rd.,London,HULL,M02 7LT,UK,(71) 555-4444,452,0x151C2F0002 9 10 </pre>
Control Flow	
Data Flow	
Data	

select \* from [TMP].[EMPLOYEES]

	Employee_CD	Last_name	First_name	title	title_of_courtesy	birth_date	hire_date	address	city
1	1	Davolio	Nancy	Sales Representative	Ms.	1948-12-08 00:00:00.000	1992-05-01 00:00:00.000	507 20th Ave. E. Apt. 2A	Seattle
2	2	Fuller	Andrew	Vice President Sales	Dr.	1952-02-19 00:00:00.000	1992-08-14 00:00:00.000	908 W. Capital Way	Tacoma
3	3	Leverling	Janet	Sales Representative	Ms.	1963-08-30 00:00:00.000	1992-04-01 00:00:00.000	722 Moss Bay Blvd.	Kirkland
4	4	Peacock	Margaret	Sales Representative	Mrs.	1937-09-19 00:00:00.000	1993-05-03 00:00:00.000	4110 Old Redmond Rd.	Redmond
5	5	Buchanan	Steven	Sales Manager	Mr.	1955-03-04 00:00:00.000	1993-10-17 00:00:00.000	14 Garrett Hill	London
6	6	Suyama	Michael	Sales Representative	Mr.	1963-07-02 00:00:00.000	1993-10-17 00:00:00.000	Coventry House Miner Rd.	London
7	7	King	Robert	Sales Representative	Mr.	1960-05-29 00:00:00.000	1994-01-02 00:00:00.000	Edgeham Hollow Winchester Way	London
8	8	Callahan	Laura	Inside Sales Coordinator	Ms.	1958-01-09 00:00:00.000	1994-03-05 00:00:00.000	4726 11th Ave. N.E.	Seattle
9	9	Dodsworth	Anne	Sales Representative	Ms.	1966-01-27 00:00:00.000	1994-11-15 00:00:00.000	7 Houndstooth Rd.	London

## 2.8 Proceso Schema TMP 8: EMPLOYEE TERRITORIES

JobName	TMP_Order_Details.dtsx
Input	<p>order_details.csv</p> <pre> 1  orderID,productID,unitPrice,quantity,discount 2  10248,11,14.00,12,0 3  10248,42,9.80,10,0 4  10248,72,34.80,5,0 5  10249,14,18.60,9,0 6  10249,51,42.40,40,0 7  10250,41,7.70,10,0 8  10250,51,42.40,35,0.15 9  10250,65,16.80,15,0.15 10 10251,22,16.80,6,0.05 11 10251,57,15.60,15,0.05 12 10251,65,16.80,20,0 13 10252,20,64.80,40,0.05 14 10252,33,2.00,25,0.05 15 10252,60,27.20,40,0 16 10253,31,10.00,20,0 17 10253,39,14.40,42,0 18 10253,49,16.00,40,0 19 10254,24,3.60,15,0.15 20 10254,55,19.20,21,0.15 21 10254,74,8.00,21,0 22 10255,2,15.20,20,0 </pre>
Control Flow	<p>Variables TMP_Order_De...dtsx [Diseño]</p> <pre> graph TD     START_LOG([START LOG]) --&gt; TRUNCATE[TRUNCATE TMP ORDER_DETAILS]     TRUNCATE --&gt; TMP_ORDER_DETAILS[TMP_ORDER_DETAILS]     TMP_ORDER_DETAILS -- fx --&gt; FINISHED_LOG[FINISHED WITH WARNINGS LOG]     TMP_ORDER_DETAILS -- fx --&gt; END_LOG[END LOG OK]     TRUNCATE -- Error --&gt; ERROR_LOG([ERROR LOG])     TMP_ORDER_DETAILS -- Error --&gt; ERROR_LOG     FINISHED_LOG -- Error --&gt; ERROR_LOG     END_LOG -- Error --&gt; ERROR_LOG </pre>



## 2.9 Proceso Schema TMP 9: ORDERS

JobName	TMP_Orders.dtsx
Input	<p>orders.csv</p> <pre> 1 orderID,customerID,employeeID,orderDate,requiredDate,shippedDate,shipVia,freight,shipName,shipAddress,shipCity,shipRegion,shipPostalCode,shipCountry 2 10245,THAI,1,1996-07-05 00:00:00.000,1996-07-10 00:00:00.000,1996-07-10 00:00:00.000,1,41,Comme et alcool,Chavelier,59 rue de l'Archeveche,Reims,51100,France 3 10246,YOUSSEF,1,1996-07-05 00:00:00.000,1996-07-10 00:00:00.000,1996-07-10 00:00:00.000,1,41,Comme et alcool,Chavelier,59 rue de l'Archeveche,Reims,51100,France 4 10250,HANAR,4,1996-07-08 00:00:00.000,1996-08-05 00:00:00:00.000,1996-07-12 00:00:00:00.000,1,41,34,Viauillales en stock,2 rue du Commerce,Lyon,NULL,69004,France 5 10251,VICTE,3,1996-07-08 00:00:00.000,1996-08-05 00:00:00:00.000,1996-07-15 00:00:00:00.000,1,41,34,Viauillales en stock,2 rue du Commerce,Lyon,NULL,69004,France 6 10252,SURD,4,1996-07-09 00:00:00.000,1996-08-06 00:00:00:00.000,1996-07-11 00:00:00:00.000,2,51,30,Suprême délices,Boulevard Tirou 255,Charleroi,NULL,B-6000,Belgium 7 10253,HANAR,3,1996-07-10 00:00:00.000,1996-07-24 00:00:00:00.000,1996-07-11 00:00:00:00.000,2,58,17,Hanari Carnes,Rua do Fago 47,Rio de Janeiro,RJ,05454-876,Brazil 8 10254,CHOPS,5,1996-07-11 00:00:00.000,1996-08-07 00:00:00:00.000,1996-07-21 00:00:00:00.000,2,22,98,Chop-suey Chinese,Hauptstr. 31,Bern,NULL,3012,Switzerland 9 10255,RICOH,9,1996-07-12 00:00:00.000,1996-08-08 00:00:00:00.000,1996-07-15 00:00:00:00.000,1,148,37,Printed Supermarkt,Steenweg 5,Genève,CH-1204,Switzerland 10 10256,LESLIE,3,1996-07-12 00:00:00.000,1996-08-09 00:00:00:00.000,1996-07-12 00:00:00:00.000,1,148,37,Printed Supermarkt,Steenweg 5,Genève,CH-1204,Switzerland 11 10257,MILAD,1,1996-07-14 00:00:00.000,1996-08-14 00:00:00:00.000,1996-07-22 00:00:00:00.000,3,81,91,WILATION-blouses,Carrera 22 Con Ave. Caribe,Soubrier,48-35,San Cristobal,DR 12 10258,ERNSH,1,1996-07-17 00:00:00.000,1996-08-14 00:00:00:00.000,1996-07-23 00:00:00:00.000,1,140,81,Ernst Handel,Kirchgasse 6,Graz,NULL,8010,Austria 13 10259,CENTC,4,1996-07-18 00:00:00.000,1996-08-15 00:00:00:00.000,1996-07-25 00:00:00:00.000,3,3,28,Centro comercial Nocturna,Sierra de Granada 9993,Mexico D.F.,NULL 14 10260,OTTIK,4,1996-07-19 00:00:00.000,1996-08-16 00:00:00:00.000,1996-07-29 00:00:00:00.000,1,55,09,Ottileen,Kaseladen,Mehrheimerstr. 369,Köln,NULL,50739,Germany 15 10261,QUEDE,4,1996-07-19 00:00:00.000,1996-08-16 00:00:00:00.000,1996-07-30 00:00:00:00.000,2,3,05,Que Delicia,Rua da Fazenda 12,Rio de Janeiro,RJ,02389-673,Brazil 16 10262,BATTC,8,1996-07-22 00:00:00.000,1996-08-19 00:00:00:00.000,1996-07-21 00:00:00:00.000,3,48,29,Rattlers,Canyon Grocery,2811 Alameda,Albuquerque,NM,87110,US 17 10263,GRU,9,1996-07-22 00:00:00.000,1996-08-19 00:00:00:00.000,1996-07-21 00:00:00:00.000,3,48,29,Rattlers,Canyon Grocery,2811 Alameda,Albuquerque,NM,87110,US 18 10264,FOLKO,6,1996-07-24 00:00:00.000,1996-08-21 00:00:00:00.000,1996-08-23 00:00:00:00.000,5,8,47,JK och ja HB,Älvängen 24,Bräcke,NULL,5-444 67,Sweden 19 10265,BLOUP,2,1996-07-25 00:00:00.000,1996-08-22 00:00:00:00.000,1996-08-12 00:00:00:00.000,1,55,28,Blondel père et fils,24 place Kléber,Strasbourg,NULL,67000,France </pre>
Control Flow	<p>Variables TMP_Orders.dtsx [Diseño]</p>
Data Flow	<p>Variables TMP_Orders.dtsx [Diseño]</p> <p>Tarea Flujo de datos: TMP_ORDERS</p>
Data	

select \* from [THP].[ORDERS]

	Order_Cd	Customer_cd	Employee_cd	Order_Date	Required_Date	Shipped_Date	Ship_Via	Freight	Ship_name	Ship_Address
1	10248	VINET	5	1996-07-04 00:00:00.000	1996-08-01 00:00:00.000	1996-07-16 00:00:00.000	3	32.38	Vins et alcools Chevalier	59 rue de l'Abbaye
2	10249	TOMSP	6	1996-07-05 00:00:00.000	1996-08-16 00:00:00.000	1996-07-10 00:00:00.000	1	11.61	Toms SpezialitÃ¤ten	Luisenstr. 48
3	10250	HANAR	4	1996-07-08 00:00:00.000	1996-08-05 00:00:00.000	1996-07-12 00:00:00.000	2	65.03	Hanari Cames	Rua do PaÃ§o 67
4	10251	VICTE	3	1996-07-08 00:00:00.000	1996-08-05 00:00:00.000	1996-07-15 00:00:00.000	1	41.34	Victuailles en stock	2 rue du Commerce
5	10252	SUPRD	4	1996-07-09 00:00:00.000	1996-08-06 00:00:00.000	1996-07-11 00:00:00.000	2	51.30	SupÃ©ries d'Ã©pices	Boulevard Tirou 255
6	10253	HANAR	3	1996-07-10 00:00:00.000	1996-07-24 00:00:00.000	1996-07-16 00:00:00.000	2	58.17	Hanari Cames	Rua do PaÃ§o 67
7	10254	CHOPS	5	1996-07-11 00:00:00.000	1996-08-08 00:00:00.000	1996-07-23 00:00:00.000	2	22.98	Chop-suey Chinese	Hauptstr. 31
8	10255	FIICSU	9	1996-07-12 00:00:00.000	1996-08-09 00:00:00.000	1996-07-15 00:00:00.000	3	148.33	Richter Supermarkt	Starenweg 5
9	10256	WELLU	3	1996-07-15 00:00:00.000	1996-08-12 00:00:00.000	1996-07-17 00:00:00.000	2	13.97	Wellington Importadora	Rua do Mercado 12
10	10257	HILAA	4	1996-07-16 00:00:00.000	1996-08-13 00:00:00.000	1996-07-22 00:00:00.000	3	81.91	HILARIOON-Abestos	Carrera 22 con Ave. Carlos Soublette #1
11	10258	ERNSH	1	1996-07-17 00:00:00.000	1996-08-14 00:00:00.000	1996-07-23 00:00:00.000	1	140.51	Emet Handel	Kirchgasse 6
12	10259	CENTC	4	1996-07-18 00:00:00.000	1996-08-15 00:00:00.000	1996-07-25 00:00:00.000	3	3.25	Centro comercial Moctezuma	Sierras de Granada 9993

## 2.10 Proceso Schema TMP 10: ORDERS

JobName	TMP_Orders.dtsx
Input	<p>orders.csv</p> <pre> 1 orderID,customerID,employeeID,orderDate,requiredDate,shippedDate,shipVia,freight,shipName,shipAddress,shipCity,shipRegion,shipPostalCode,shipCountry 2 10248,VINET,5,1996-07-04 00:00:00.000,1996-08-01 00:00:00.000,1996-07-16 00:00:00.000,3,32.8,Vins et alcools Chevalier,59 rue de l'Abbaye,Reims,NULL,S1100,France 3 10249,TOMSP,6,1996-07-05 00:00:00.000,1996-08-16 00:00:00.000,1996-07-10 00:00:00.000,1,11.61,Toms Spezialitäten,Luisenstr. 48,Münster,NULL,44087,Germany 4 10250,HANAR,4,1996-07-08 00:00:00.000,1996-08-05 00:00:00.000,1996-07-12 00:00:00.000,2,65.83,Hanari-Carneis,Rua do Paço 67,Rio de Janeiro,RJ,BR0454-076,Brazil 5 10251,VICTE,3,1996-07-08 00:00:00.000,1996-08-05 00:00:00.000,1996-07-15 00:00:00.000,1,41.34,Virtualiles en stock,2 rue du Commerce,Lyon,NULL,69004,France 6 10252,SHUMA,4,1996-07-10 00:00:00.000,1996-08-24 00:00:00.000,1996-07-16 00:00:00.000,2,17.51,Supervalu Fresh Foods,250 Charles St.,West Hartford,Conn,06107,USA 7 10253,HANDS,1,1996-07-10 00:00:00.000,1996-07-24 00:00:00.000,1996-07-16 00:00:00.000,1,17.51,Handar-Carnes,Rua do Paço 67,Rio de Janeiro,RJ,BR0454-076,Brazil 8 10254,CHROS,5,1996-07-11 00:00:00.000,1996-08-08 00:00:00.000,1996-07-23 00:00:00.000,2,22.98,Chop-suey Chinese,Hauptstr. 31,Bern,NULL,3012,Switzerland 9 10255,RICST,9,1996-07-12 00:00:00.000,1996-08-08 00:00:00.000,1996-07-15 00:00:00.000,3,148.33,Richter Supermarkt,Starneweg 5,Genève,NULL,1204,Switzerland 10 10256,WEILI,3,1996-07-15 00:00:00.000,1996-08-12 00:00:00.000,1996-07-17 00:00:00.000,2,13.97,Wellington Importadora,Rua do Mercado 12,Resende,SP,08737-363,Brazil 11 10257,HILAA,4,1996-07-16 00:00:00.000,1996-08-13 00:00:00.000,1996-07-22 00:00:00.000,3,81.91,HILARION-Abastos,Carrera 22 con Ave. Carlos Soublette #8-35,San Cristóbal,Barinas,6050,Venezuela 12 10258,ERNSH,1,1996-07-17 00:00:00.000,1996-08-14 00:00:00.000,1996-07-23 00:00:00.000,1,140.51,Ernst Handel,Kirchpasse 6,Graz,NULL,8010,Austria 13 10259,CENTC,4,1996-07-18 00:00:00.000,1996-08-15 00:00:00.000,1996-07-25 00:00:00.000,3,3.25,Centro comercial Motezuma,Sierra del Granizo,9933,México D.F.,NULL 14 10260,GRUNW,2,1996-07-19 00:00:00.000,1996-08-16 00:00:00.000,1996-07-27 00:00:00.000,2,49.09,Grundwag,Postfach 145,D-8500,Neu-Ulm,Germany 15 10261,QUEDD,4,1996-07-19 00:00:00.000,1996-08-16 00:00:00.000,1996-07-30 00:00:00.000,2,3.05,Que Delicia,Rua da Panificadora 12,Rio de Janeiro,RJ,BR02389-673,Brazil 16 10262,RAITZ,8,1996-07-22 00:00:00.000,1996-08-18 00:00:00.000,1996-07-25 00:00:00.000,48.28,Rattlemake,Canyon Grocery,2817 Milton Dr.,Albuquerque,NM,87110,USA 17 10263,ERNSH,9,1996-07-23 00:00:00.000,1996-08-19 00:00:00.000,1996-07-31 00:00:00.000,3,146.67,Ernst Handel,Kirchpasse 6,Graz,NULL,8010,Austria 18 10264,FOLKO,6,1996-07-24 00:00:00.000,1996-08-21 00:00:00.000,1996-08-23 00:00:00.000,3,3.67,Folk och fä HB,Åkergratan 24,Bräcke,NULL,S-844 67,Sweden 19 10265,BLONZ,2,1996-07-25 00:00:00.000,1996-08-22 00:00:00.000,1996-08-12 00:00:00.000,1,55.28,Blondel père et fils,24 place Kleber,Strasbourg,NULL,67000,France </pre>
Control Flow	<p>TMP_Products.dtsx [Diseño]</p>
Data Flow	<p>TMP_Products.dtsx [Diseño]*</p>
Data	

select \* from [TPP].[PRODUCTS]

82 %

Results Messages

product_CD	product_name	supplier_cd	category_cd	Quantity_per_unit	unit_price	units_in_stock	units_on_order	reorder_level	discontinued
1	Chai	1	1	10 boxes x 20 bags	18.00	39	0	10	0
2	Chang	1	1	24 - 12 oz bottles	19.00	17	40	25	0
3	Aniseed Syrup	1	2	12 - 550 ml bottles	10.00	13	70	25	0
4	Chef Anton's Cajun Seasoning	2	2	48 - 6 oz jars	22.00	53	0	0	0
5	Chef Anton's Gumbo Mix	2	2	36 boxes	21.35	0	0	0	1
6	Grandma's Boysenberry Spread	3	2	12 - 8 oz jars	25.00	120	0	25	0
7	Uncle Bob's Organic Dried Pears	3	7	12 - 1 lb pkgs.	30.00	15	0	10	0
8	Northwoods Cranberry Sauce	3	2	12 - 12 oz jars	40.00	6	0	0	0
9	Mishi Kobe Niku	4	6	18 - 500 g pkgs.	97.00	29	0	0	1
10	Ikura	4	8	12 - 200 ml jars	31.00	31	0	0	0
11	Queso Cabrales	5	4	1 kg pkg.	21.00	22	30	30	0
12	Queso Manchego La Pastora	5	4	10 - 500 g pkgs.	38.00	86	0	0	0
13	Konbu	6	8	2 kg box	6.00	24	0	5	0
14	Tofu	6	7	40 - 100 g pkgs.	23.25	35	0	0	0
15	Genen Shouyu	6	2	24 - 250 ml bottles	15.50	39	0	5	0
16	Pavlova	7	3	32 - 500 g boxes	17.45	29	0	10	0
17	Aloco Matzo	7	2	50 boxes	50.00	0	0	0	1

## 2.11 Proceso Schema TMP 11: SUPPLIERS

JobName	TMP_Suppliers.dtsx
Input	<p>supplier.csv</p> <pre> 1 supplierID, companyName, contactName, contactTitle, address, city, region, postalCode, country, phone, fax, homePage 2 1,New Orleans Cajun Delights,Shelley Burke,Order Administrator,P.O. Box 18934, New Orleans,LA,70117,USA,(504) 555-4822,NULL,*CAJUN.HTM 3 2,New Orleans Cajun Delights,Shelley Burke,Order Administrator,P.O. Box 18934, New Orleans,LA,70117,USA,(504) 555-4822,NULL,*CAJUN.HTM 4 3,Grandma Kelly's Homestead,Regina Murphy,Sales Representative,707 Oxford Rd.,Ann Arbor,MI,48104,USA,(313) 555-5349,NULL 5 4,Tokyo Traders,Yoshi Nagase,Marketing Manager,9-8 Sekimai Musashino-shi,Tokyo,NULL,100,Japan,(03) 3555-5011,NULL 6 5,Coooperativa de Queso 'Las Cabras',Antonio del Valle Saavedra,Export Administrator,Calle del Rosal 4,Oviedo,Asturias,33007,Spain,(98) 598-76-54,NULL 7 6,Mayumi's,Mayumi Ohno,Marketing Representative,92 Setsuko Chuo-ku,Osaka,NULL,546,Japan,(06) 432-8777,NULL,Mayumi's (on the World Wide Web)!http://www.microsoft.com/japan/mayumi.htm 8 7,Pavilions Icadian Delight,Marketing Manager,Mr. Franklynn McRae,100 Main St.,Montgomery,Montgomery,AL,36104,USA,(334) 444-5885,NULL 9 8,Pavilions Icadian Delight,Marketing Manager,Mr. Franklynn McRae,100 Main St.,Montgomery,Montgomery,AL,36104,USA,(334) 444-5885,NULL 10 9,FB Knackebrod AB,Lars Peterson,Sales Agent,Kalasgatan 13,Goteborg,Sweden,031-987 45 43,031-987 45 91,NULL 11 10,Refrescos Americanas LTDA,Carolin Diaz,Marketing Manager,Av. das Americanas 12,890,Sao Paulo,SP,5442,Brazil,(11) 555-4640,NULL 12 11,Nelli SUwaren GmbH &amp; Co. KG,Petra Winkler,Sales Manager,Tiergartenstrasse 8,Berlin,NULL,10785,Germany,(010) 9984510,NULL 13 12,Plutzer Lebensmittelgroßmärkte AG,Martin Bein,International Marketing Mgr.,Bogenallee 51,Frankfurt,NULL,60439,Germany,(069) 992755,NULL,Plutzer (on the World Wide Web)!http://www.plutzer.de 14 13,Nord-Ost-Fisch Handelsgesellschaft mbH,Sven Petersen,Coordinator,Foreign Markets,Frahmredder 112a,Cuxhaven,NULL,27478,Germany,(04721) 8713,(04721) 8714,NULL 15 14,Alfreds Flinger,Elisabeth Flinger,Sales Representative,Viala Danta 75,Ravenna,NULL,48100,Italy,(0549) 60603,010494614444,06063,IFORMAGSI.HTM 16 15,Norbert Weierster,Birte Vilzing,Marketing Manager,Hollevegen 8,Sandvika,NULL,1320,Norway,(01) 93110,NULL 17 16,Binfoot Breweries,Cheryl Saylor,Regional Account Rep.,3400 - 8th Avenue Suite 210,Send,OS,97101,USA,(503) 555-9931,NULL </pre>
Control Flow	<p>Variables TMP_Suppliers.dtsx [Diseño]</p> <pre> graph TD     START[START LOG] --&gt; TRUNCATE[TRUNCATE TMP SUPPLIERS]     TRUNCATE --&gt; TMP[TMP_SUPPLIERS]     TMP --&gt; END[END LOG OK]     TRUNCATE -- Error --&gt; ERROR[ERROR LOG]     TMP -- Error --&gt; ERROR     TMP -- Error --&gt; END     END -- Error --&gt; ERROR </pre>
Data Flow	<p>Variables TMP_Suppliers.dtsx [Diseño]</p> <p>Tarea Flujo de datos: TMP_SUPPLIERS</p> <pre> graph TD     CSV[CSV SUPPLIERS] --&gt; SUPPLIERS[SUPPLIERS]     SUPPLIERS --&gt; ROWS[Recuento de filas]     ROWS --&gt; ROWS_ERRORS[Filas Con ERROR] </pre>
Data	

select \* from [TPP].[SUPPLIERS]

	Supp_CD	Supp_companyName	Supp_contactName	Supp_contactTitle	Supp_address	Supp_City	Supp_Region	Supp_PostalCo
1	1	Exotic Liquids	Charlotte Cooper	Purchasing Manager	49 Gilbert St.	London	NULL	E1 4SD
2	2	New Orleans Cajun Delights	Shelley Burke	Order Administrator	P.O. Box 78934	New Orleans	LA	70117
3	3	Grandma Kelly's Homestead	Regina Murphy	Sales Representative	707 Oxford Rd.	Ann Arbor	MI	48104
4	4	Tokyo Traders	Yoshi Nagase	Marketing Manager	9-8 Sekimai Musashino-shi	Tokyo	NULL	100
5	5	Cooperative de Quesos 'Las Cabras'	Antonio del Valle Saavedra	Export Administrator	Calle del Rosal 4	Oviedo	Asturias	33007
6	6	Mayumi's	Mayumi Ohno	Marketing Representative	92 Setsuko Chuo-ku	Osaka	NULL	545
7	7	Pavlova Ltd.	Ian Devling	Marketing Manager	74 Rose St. Moonie Ponds	Melbourne	Victoria	3058
8	8	Specialty Biscuits Ltd	Peter Wilson	Sales Representative	29 King's Way	Manchester	NULL	M14 GSD
9	9	PB Knäckebrot AB	Lars Peterson	Sales Agent	Kalvadagatan 13	Göteborg	NULL	S-345 67
10	10	Refrescos Americanas LTDA	Carlos Diaz	Marketing Manager	Av. das Americanas 12.890	Sao Paulo	NULL	5442
11	11	Hel S.A. V.A.Waren GmbH & Co. KG	Petra Winkler	Sales Manager	Tiergartenstr. 47e	Berlin	NULL	10785
12	12	Platero y Jaraenthalen Å Mälsta A/C	Martin Rein	International Marketing Mgr	Rosenstraße 51	Frankfurt	NULL	60319



## **2.12 Proceso Schema TMP 12: COUNTRIES**

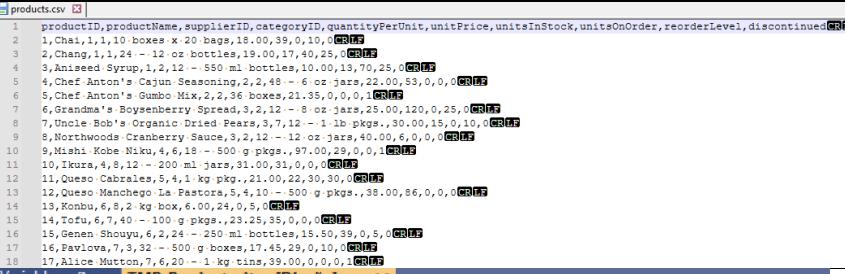
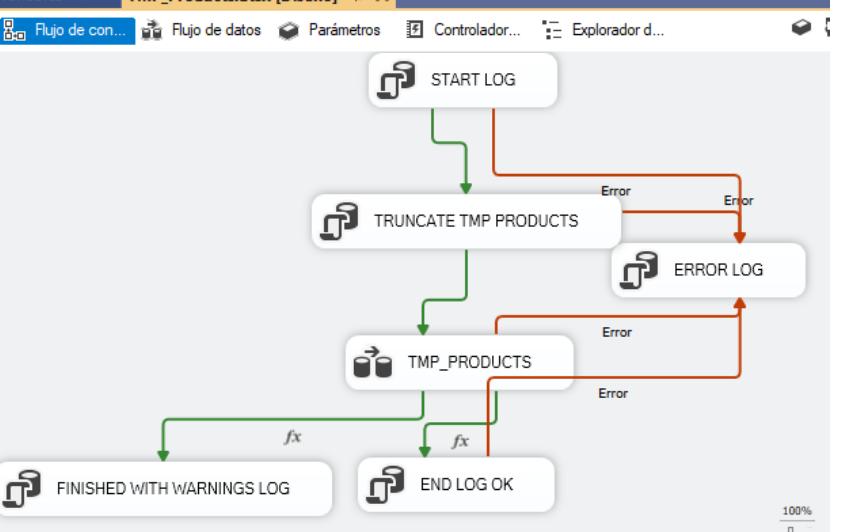
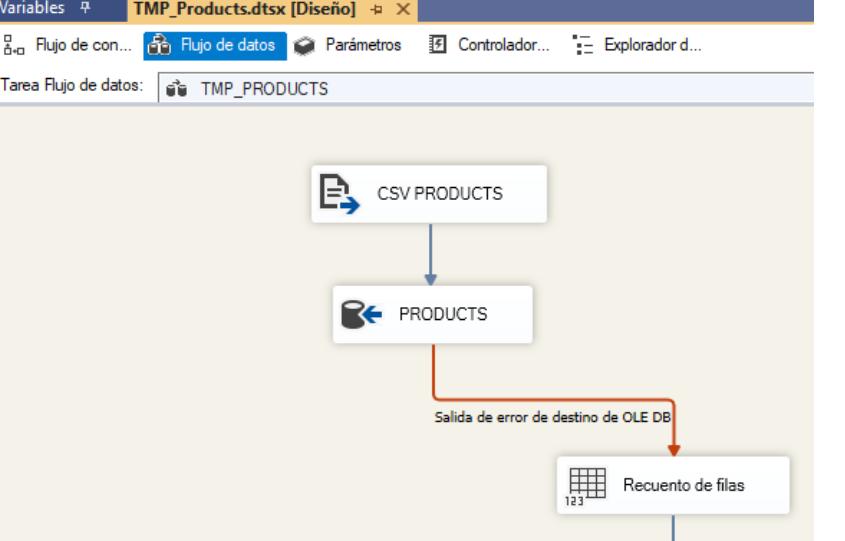
select \* from [TMP].[COUNTRIES]

32 %

Results Messages

	Country	Density	Abbreviation	Agricultural_Land	Land_Area	Armed_Force_Size	Capital	Currency_Code
1	Afghanistan	60	AF	58.10%	652,230	323,000	Kabul	AFN
2	Albania	105	AL	43.10%	28,748	9,000	Tirana	ALL
3	Algeria	18	DZ	17.40%	2,381,741	317,000	Algiers	DZD
4	Andorra	164	AD	40.00%	468		Andorra la Vella	EUR
5	Angola	26	AO	47.50%	1,246,700	117,000	Luanda	AOA
6	Antigua and Barbuda	223	AG	20.50%	443	0	St. John's, Saint John	XCD
7	Argentina	17	AR	54.30%	2,780,400	105,000	Buenos Aires	ARS
8	Armenia	104	AM	58.90%	29,743	49,000	Yerevan	AMD
9	Australia	3	AU	48.20%	7,741,220	58,000	Canberra	AUD
10	Austria	109	AT	32.40%	83,871	21,000	Vienna	EUR
11	Azerbaijan	123	AZ	57.70%	86,600	82,000	Baku	AZN
12	The Bahamas	39	BS	1.40%	13,880	1,000	Nassau, Bahamas	
13	Bahrain	2,239	BH	11.10%	765	19,000	Manama	BHD
14	Bangladesh	1,265	BD	70.60%	148,460	221,000	Dhaka	BDT
15	Barbados	668	BB	23.30%	430	1,000	Bridgetown	BBD
16	Belarus	47	BY	42.00%	207,600	155,000	Minsk	BYN
17	Belgium	383	BE	44.60%	30,528	32,000	City of Brussels	EUR
18	Belize	17	BZ	7.00%	22,966	2,000	Belmopan	BZD
19	Bolivia	100	BO	22.20%	112,622	12,000	La Paz	VNE

## 2.13 Proceso Schema TMP 13: PRODUCTS

JobName	TMP_Products.dtsx
Input	 <pre> 1 productID,productName,supplierID,categoryID,quantityPerUnit,unitPrice,unitsInStock,unitsOnOrder,reorderLevel,discontinued 2 ,Chai,,1,10 boxes x 20 bags,18.00,39.0,10,0,CRlf 3 ,Chang,,1,24 - 12 oz bottles,19.00,17,40,25,0,CRlf 4 ,Aniseed Syrup,,1,2,12 - 550 ml bottles,10.00,13,70,25,0,CRlf 5 ,Chef Anton's Cajun Seasoning,,2,2,48 - 6 oz jars,22.00,53,0,0,CRlf 6 ,Chef Anton's Gumbo Mix,,2,2,36 boxes,21.35,0,0,0,CRlf 7 ,Grandma's Boysenberry Spread,,3,2,12 - 8 oz jars,25.00,120,0,25,0,CRlf 8 ,Uncle Bob's Organic Dried Pears,,3,7,12 - 1 lb pkgs.,30.00,15,0,10,0,CRlf 9 ,Northwoods Cranberry Sauce,,3,2,12 - 12 oz jars,40.00,6,0,0,CRlf 10 ,Mishi Kobe Niku,,4,6,18 - 500 g pkgs.,97.00,29,0,0,1,CRlf 11 ,Ikura,,4,8,12 - 200 ml jars,31.00,31,0,0,CRlf 12 ,Queso Cabrales,,5,4,1 kg pkg.,21.00,22,30,30,0,CRlf 13 ,Queso Manchego La Pastor,5,4,10 - 500 g pkgs.,38.00,86,0,0,CRlf 14 ,Kombu,,6,8,2 kg box,6.00,24,0,5,0,CRlf 15 ,Tofu,,6,7,40 - 100 g pkgs.,23.25,35,0,0,CRlf 16 ,Genen Shouyu,,6,2,24 - 250 ml bottles,15.50,39,0,5,0,CRlf 17 ,Pavlova,,7,9,32 - 500 g boxes,17.45,29,0,10,0,CRlf 18 ,Alice Mutton,,7,6,20 - 1 kg tins,39.00,0,0,0,1,CRlf </pre>
Control Flow	 <pre> graph TD     StartLog([START LOG]) --&gt; Truncate[TRUNCATE TMP PRODUCTS]     Truncate --&gt; Products[TMP_PRODUCTS]     Products -- fx --&gt; EndLogOK([END LOG OK])     Products -- Error --&gt; ErrorLog([ERROR LOG])     EndLogOK -- fx --&gt; FinishedLog([FINISHED WITH WARNINGS LOG]) </pre>
Data Flow	 <pre> graph TD     CSVProducts[CSV PRODUCTS] --&gt; Products[PRODUCTS]     Products -- "Salida de error de destino de OLE DB" --&gt; RowCount[Recuento de filas]     RowCount --&gt; ErrorRows[Filas Con ERROR] </pre>

	product_CD	product_name	supplier_cd	category_cd	Quantity_per_unit	unit_price	units_in_stock	units_on_order
1	1	Chai	1	1	10 boxes x 20 bags	18.00	39	0
2	2	Chang	1	1	24 - 12 oz bottles	19.00	17	40
3	3	Aniseed Syrup	1	2	12 - 550 ml bottles	10.00	13	70
4	4	Chef Anton's Cajun Seasoning	2	2	48 - 6 oz jars	22.00	53	0
5	5	Chef Anton's Gumbo Mix	2	2	36 boxes	21.35	0	0
6	6	Grandma's Boysenberry Spread	3	2	12 - 8 oz jars	25.00	120	0
7	7	Uncle Bob's Organic Dried Pears	3	7	12 - 1 lb pkgs.	30.00	15	0
8	8	Northwoods Cranberry Sauce	3	2	12 - 12 oz jars	40.00	6	0
9	9	Mishi Kobe Niku	4	6	18 - 500 g pkgs.	97.00	29	0
10	10	Ikura	4	8	12 - 200 ml jars	31.00	31	0

### 3. Procesos de ingesta de Schema STG

En ésta sección de trabajo, tenemos como objetivo alimentar todas las tablas del schema STAGING a partir de las tablas TMP. Ya nos hemos desconectado del origen, y ahora podemos trabajar a partir de las tablas IMPORT.

Consideraciones en éste proceso:

- 1- Se utiliza CONTROL DE VERSIONES, por lo cual se tiene un campo CHECKSUM para determinar si es registro nuevo o existente.
- 2- En la tabla de Staging, tenemos el campo AUD\_ACTION para determinar si es un INSERT, o un DELETE (registro que existe en DWH, pero ya no viene desde la tabla TMP; Borrado Lógico).
- 3- Se Aplica limpieza de Datos.
- 4- Se identifican IDs de otras dimensiones.

#### 3.1 Proceso Schema STG 1: CATEGORIES

JobName	STG_Categories.dtsx																																													
Input	<pre>select * from [TMP].[CATEGORIES]</pre> <table border="1"> <thead> <tr> <th></th> <th>Category_CD</th> <th>Category_Name</th> <th>Category_Description</th> <th>Category_Picture</th> </tr> </thead> <tbody> <tr><td>1</td><td>1</td><td>Beverages</td><td>Soft drinks coffees teas beers and ales</td><td>0x151C2F00020000000D000E0014002100FFFFFF4269746...</td></tr> <tr><td>2</td><td>2</td><td>Condiments</td><td>Sweet and savory sauces relishes spreads and sea...</td><td>0x151C2F00020000000D000E0014002100FFFFFF4269746...</td></tr> <tr><td>3</td><td>3</td><td>Confections</td><td>Desserts candies and sweet breads</td><td>0x151C2F00020000000D000E0014002100FFFFFF4269746...</td></tr> <tr><td>4</td><td>4</td><td>Dairy Products</td><td>Cheeses</td><td>0x151C2F00020000000D000E0014002100FFFFFF4269746...</td></tr> <tr><td>5</td><td>5</td><td>Grains/Cereals</td><td>Breads crackers pasta and cereal</td><td>0x151C2F00020000000D000E0014002100FFFFFF4269746...</td></tr> <tr><td>6</td><td>6</td><td>Meat/Poultry</td><td>Prepared meats</td><td>0x151C2F00020000000D000E0014002100FFFFFF4269746...</td></tr> <tr><td>7</td><td>7</td><td>Produce</td><td>Dried fruit and bean curd</td><td>0x151C2F00020000000D000E0014002100FFFFFF4269746...</td></tr> <tr><td>8</td><td>8</td><td>Seafood</td><td>Seaweed and fish</td><td>0x151C2F00020000000D000E0014002100FFFFFF4269746...</td></tr> </tbody> </table>		Category_CD	Category_Name	Category_Description	Category_Picture	1	1	Beverages	Soft drinks coffees teas beers and ales	0x151C2F00020000000D000E0014002100FFFFFF4269746...	2	2	Condiments	Sweet and savory sauces relishes spreads and sea...	0x151C2F00020000000D000E0014002100FFFFFF4269746...	3	3	Confections	Desserts candies and sweet breads	0x151C2F00020000000D000E0014002100FFFFFF4269746...	4	4	Dairy Products	Cheeses	0x151C2F00020000000D000E0014002100FFFFFF4269746...	5	5	Grains/Cereals	Breads crackers pasta and cereal	0x151C2F00020000000D000E0014002100FFFFFF4269746...	6	6	Meat/Poultry	Prepared meats	0x151C2F00020000000D000E0014002100FFFFFF4269746...	7	7	Produce	Dried fruit and bean curd	0x151C2F00020000000D000E0014002100FFFFFF4269746...	8	8	Seafood	Seaweed and fish	0x151C2F00020000000D000E0014002100FFFFFF4269746...
	Category_CD	Category_Name	Category_Description	Category_Picture																																										
1	1	Beverages	Soft drinks coffees teas beers and ales	0x151C2F00020000000D000E0014002100FFFFFF4269746...																																										
2	2	Condiments	Sweet and savory sauces relishes spreads and sea...	0x151C2F00020000000D000E0014002100FFFFFF4269746...																																										
3	3	Confections	Desserts candies and sweet breads	0x151C2F00020000000D000E0014002100FFFFFF4269746...																																										
4	4	Dairy Products	Cheeses	0x151C2F00020000000D000E0014002100FFFFFF4269746...																																										
5	5	Grains/Cereals	Breads crackers pasta and cereal	0x151C2F00020000000D000E0014002100FFFFFF4269746...																																										
6	6	Meat/Poultry	Prepared meats	0x151C2F00020000000D000E0014002100FFFFFF4269746...																																										
7	7	Produce	Dried fruit and bean curd	0x151C2F00020000000D000E0014002100FFFFFF4269746...																																										
8	8	Seafood	Seaweed and fish	0x151C2F00020000000D000E0014002100FFFFFF4269746...																																										
Control Flow	<pre> graph TD     START[START LOG] --&gt; EXEC[EXEC STG CATEGORIES]     EXEC --&gt; END[END LOG OK]     EXEC -- Error --&gt; ERROR[ERROR LOG]   </pre>																																													
Proceso	<pre> USE [TP_DWH_MCD_2025] GO SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_STG_Categories] AS BEGIN   </pre>																																													

```

SET NOCOUNT ON;

-- Truncar la tabla STG
TRUNCATE TABLE [STG].[LK_CATEGORIES];

-- Insertar los datos desde TMP con AUD_ROW_ID y acción INSERT
WITH STG_CATEGORIES AS (
    SELECT
        LTRIM(RTRIM(Category_CD)) AS Category_CD,
        LTRIM(RTRIM(Category_Name)) AS Category_Name,
        LTRIM(RTRIM(Category_Description)) AS Category_Description,
        LTRIM(RTRIM(Category_Picture)) AS Category_Picture
    FROM [TMP].[CATEGORIES]
    WHERE ISNULL(LTRIM(RTRIM(Category_CD)), '') <> ''
)
-- Mecanismo de Control de Versiones
INSERT INTO [STG].[LK_CATEGORIES] (
    Category_CD,
    Category_Name,
    Category_Description,
    Category_Picture, -- Mantener el nombre correcto "Category_Picture"
    AUD_INSERT_DT,
    AUD_USER_INSERT,
    AUD_ACTION,
    AUD_ROWID
)
SELECT
    bt.Category_CD,
    bt.Category_Name,
    bt.Category_Description,
    bt.Category_Picture, -- Mantener el nombre correcto "Category_Picture"
    GETDATE() AS AUD_INSERT_DT,
    SYSTEM_USER AS AUD_USER_INSERT,
    'INSERT' AS AUD_ACTION,
    -- Uso de CHECKSUM sobre la concatenación de cadenas
    CHECKSUM(
        ISNULL(bt.Category_CD, ''),
        ISNULL(bt.Category_Name, ''),
        ISNULL(bt.Category_Description, ''),
        ISNULL(bt.Category_Picture, '')
    ) AS AUD_ROW_ID
FROM STG_CATEGORIES bt;

-- Inserto los BORRADOS LÓGICOS
INSERT INTO [STG].[LK_CATEGORIES] (
    Category_CD,
    Category_Name,
    Category_Description,
    Category_Picture,
    AUD_INSERT_DT,
    AUD_USER_INSERT,
    AUD_ACTION,
    AUD_ROWID
)
SELECT
    dwh.Category_CD,
    dwh.Category_Name,
    dwh.Category_Description,
    dwh.Category_Picture, -- Mantener el nombre correcto "Category_Picture"
    GETDATE() AS AUD_INSERT_DT,
    SYSTEM_USER AS AUD_USER_INSERT,
    'DELETE' AS AUD_ACTION,
    -- Uso de CHECKSUM sobre la concatenación de cadenas
    dwh.AUD_ROWID
FROM [DWH].[LK_CATEGORIES] dwh
LEFT JOIN [STG].[LK_CATEGORIES] s

```

	<pre> ON dwh.AUD_ROWID = s.AUD_ROWID WHERE 1 = 1     AND dwh.AUD_ACTIVE_FLAG = 1 AND s.Category_CD IS NULL;  END; </pre>																																																																								
OUTPUT	<pre>select * from [STG].[LK_CATEGORIES]</pre> <table border="1"> <thead> <tr> <th>Category_CD</th> <th>Category_Name</th> <th>Category_Description</th> <th>Category_Picture</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> <th>AUD_ACTION</th> <th>AUD_ROWID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Beverages</td> <td>Soft drinks coffees teas beers and ales</td> <td>0x151C2F0002000000D000E0014002</td> <td>2025-05-06 00:35:35.673</td> <td>DESKTOP-IAI1KNV\Exequiel</td> <td>INSERT</td> <td>0xC3800616</td> </tr> <tr> <td>2</td> <td>Condiments</td> <td>Sweet and savory sauces relishes spreads a...</td> <td>0x151C2F0002000000D000E0014002</td> <td>2025-05-06 00:35:35.673</td> <td>DESKTOP-IAI1KNV\Exequiel</td> <td>INSERT</td> <td>0x3253F682</td> </tr> <tr> <td>3</td> <td>Confections</td> <td>Desserts candies and sweet breads</td> <td>0x151C2F0002000000D000E0014002</td> <td>2025-05-06 00:35:35.673</td> <td>DESKTOP-IAI1KNV\Exequiel</td> <td>INSERT</td> <td>0xEC380CD1</td> </tr> <tr> <td>4</td> <td>Dairy Products</td> <td>Cheeses</td> <td>0x151C2F0002000000D000E0014002</td> <td>2025-05-06 00:35:35.673</td> <td>DESKTOP-IAI1KNV\Exequiel</td> <td>INSERT</td> <td>0xCAE7582C</td> </tr> <tr> <td>5</td> <td>Grains/Cereals</td> <td>Breads crackers pasta and cereal</td> <td>0x151C2F0002000000D000E0014002</td> <td>2025-05-06 00:35:35.673</td> <td>DESKTOP-IAI1KNV\Exequiel</td> <td>INSERT</td> <td>0x810A582</td> </tr> <tr> <td>6</td> <td>Meat/Poultry</td> <td>Prepared meats</td> <td>0x151C2F0002000000D000E0014002</td> <td>2025-05-06 00:35:35.673</td> <td>DESKTOP-IAI1KNV\Exequiel</td> <td>INSERT</td> <td>0x24602387</td> </tr> <tr> <td>7</td> <td>Produce</td> <td>Dried fruit and bean curd</td> <td>0x151C2F0002000000D000E0014002</td> <td>2025-05-06 00:35:35.673</td> <td>DESKTOP-IAI1KNV\Exequiel</td> <td>INSERT</td> <td>0x1750B053</td> </tr> <tr> <td>8</td> <td>Seafood</td> <td>Seaweed and fish</td> <td>0x151C2F0002000000D000E0014002</td> <td>2025-05-06 00:35:35.673</td> <td>DESKTOP-IAI1KNV\Exequiel</td> <td>INSERT</td> <td>0x75E90312</td> </tr> </tbody> </table>	Category_CD	Category_Name	Category_Description	Category_Picture	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID	1	Beverages	Soft drinks coffees teas beers and ales	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0xC3800616	2	Condiments	Sweet and savory sauces relishes spreads a...	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0x3253F682	3	Confections	Desserts candies and sweet breads	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0xEC380CD1	4	Dairy Products	Cheeses	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0xCAE7582C	5	Grains/Cereals	Breads crackers pasta and cereal	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0x810A582	6	Meat/Poultry	Prepared meats	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0x24602387	7	Produce	Dried fruit and bean curd	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0x1750B053	8	Seafood	Seaweed and fish	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0x75E90312
Category_CD	Category_Name	Category_Description	Category_Picture	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID																																																																		
1	Beverages	Soft drinks coffees teas beers and ales	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0xC3800616																																																																		
2	Condiments	Sweet and savory sauces relishes spreads a...	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0x3253F682																																																																		
3	Confections	Desserts candies and sweet breads	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0xEC380CD1																																																																		
4	Dairy Products	Cheeses	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0xCAE7582C																																																																		
5	Grains/Cereals	Breads crackers pasta and cereal	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0x810A582																																																																		
6	Meat/Poultry	Prepared meats	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0x24602387																																																																		
7	Produce	Dried fruit and bean curd	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0x1750B053																																																																		
8	Seafood	Seaweed and fish	0x151C2F0002000000D000E0014002	2025-05-06 00:35:35.673	DESKTOP-IAI1KNV\Exequiel	INSERT	0x75E90312																																																																		

### 3.2 Proceso Schema STG 2: REGIONS

JobName	STG_Regions.dtsx															
Input	<pre>select * from [TMP].[REGIONS]</pre> <table border="1"> <thead> <tr> <th></th> <th>Region_CD</th> <th>Region_Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1</td> <td>Eastern</td> </tr> <tr> <td>2</td> <td>2</td> <td>Westem</td> </tr> <tr> <td>3</td> <td>3</td> <td>Northern</td> </tr> <tr> <td>4</td> <td>4</td> <td>Southern</td> </tr> </tbody> </table>		Region_CD	Region_Description	1	1	Eastern	2	2	Westem	3	3	Northern	4	4	Southern
	Region_CD	Region_Description														
1	1	Eastern														
2	2	Westem														
3	3	Northern														
4	4	Southern														
Control Flow	<pre> graph TD     StartLog([START LOG]) --&gt; ExecRegions([EXEC STG REGIONS])     ExecRegions --&gt; EndLogOK([END LOG OK])     ExecRegions -- Error --&gt; ErrorLog([ERROR LOG])     </pre>															
Proceso	<pre> CREATE PROCEDURE [dbo].[SP_STG_Regions] AS BEGIN     SET NOCOUNT ON;      -- Truncar la tabla STG     TRUNCATE TABLE [STG].[LK_REGIONS];      -- Insertar los datos desde TMP con AUD_ROW_ID y acción INSERT     WITH STG_REGIONS AS (         SELECT             LTRIM(RTRIM(Region_CD)) AS Region_CD,             LTRIM(RTRIM(Region_Description)) Region_Description         FROM [TMP].[REGIONS]         WHERE ISNULL(LTRIM(RTRIM(Region_CD)), '') &lt;&gt; ''     )     -- Mecanismo de Control de Versiones     INSERT INTO [STG].[LK_REGIONS] (         Region_CD,         Region_Description,         AUD_INSERT_DT,         AUD_USER_INSERT,         AUD_ACTION,         AUD_ROWID     )     SELECT         bt.Region_CD,         bt.Region_Description,         GETDATE() AS AUD_INSERT_DT,         SYSTEM_USER AS AUD_USER_INSERT,         'INSERT' AS AUD_ACTION,         -- Uso de CHECKSUM sobre la concatenación de cadenas         CHECKSUM(             ISNULL(bt.Region_CD, ''),             ISNULL(bt.Region_Description, '')         )     </pre>															

	<pre> ) AS AUD_ROW_ID FROM STG_REGIONS bt;  -- Inserto los BORRADOS LÓGICOS INSERT INTO [STG].[LK_REGIONS] (     Region_CD,     Region_Description,     AUD_INSERT_DT,     AUD_USER_INSERT,     AUD_ACTION,     AUD_ROWID ) SELECT     dwh.Region_CD,     dwh.Region_Description,     GETDATE() AS AUD_INSERT_DT,     SYSTEM_USER AS AUD_USER_INSERT,     'DELETE' AS AUD_ACTION,     dwh.AUD_ROWID FROM [DWI].[LK_REGIONS] dwh LEFT JOIN [STG].[LK_REGIONS] s ON dwh.AUD_ROWID = s.AUD_ROWID WHERE 1 = 1     AND dwh.AUD_ACTIVE_FLAG = 1 AND s.Region_CD IS NULL;  END; </pre>																																			
OUTPUT	<pre>select * from [STG].[LK_REGIONS]</pre> <table border="1"> <thead> <tr> <th></th> <th>Region_CD</th> <th>Region_Description</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> <th>AUD_ACTION</th> <th>AUD_ROWID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1</td> <td>Eastern</td> <td>2025-05-06 22:18:32.280</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x7CBABA0</td> </tr> <tr> <td>2</td> <td>2</td> <td>Western</td> <td>2025-05-06 22:18:32.280</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x74EAB90</td> </tr> <tr> <td>3</td> <td>3</td> <td>Northern</td> <td>2025-05-06 22:18:32.280</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x273D7741</td> </tr> <tr> <td>4</td> <td>4</td> <td>Southern</td> <td>2025-05-06 22:18:32.280</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x26FA36A1</td> </tr> </tbody> </table>		Region_CD	Region_Description	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID	1	1	Eastern	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x7CBABA0	2	2	Western	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x74EAB90	3	3	Northern	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x273D7741	4	4	Southern	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x26FA36A1
	Region_CD	Region_Description	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID																														
1	1	Eastern	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x7CBABA0																														
2	2	Western	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x74EAB90																														
3	3	Northern	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x273D7741																														
4	4	Southern	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x26FA36A1																														

### 3.3 Proceso Schema STG 3: SHIPPERS

JobName	STG_Shippers.dtsx																												
Input	<pre>select * from [TMP].[SHIPPIERS]</pre> <table border="1"> <thead> <tr> <th></th> <th>Shipper_CD</th> <th>Company_Name</th> <th>Phone</th> </tr> </thead> <tbody> <tr><td>1</td><td>1</td><td>Speedy Express</td><td>(503) 555-9831</td></tr> <tr><td>2</td><td>2</td><td>United Package</td><td>(503) 555-3199</td></tr> <tr><td>3</td><td>3</td><td>Federal Shipping</td><td>(503) 555-9931</td></tr> <tr><td>4</td><td>4</td><td>Alliance Shippers</td><td>1-800-222-0451</td></tr> <tr><td>5</td><td>5</td><td>UPS</td><td>1-800-782-7892</td></tr> <tr><td>6</td><td>6</td><td>DHL</td><td>1-800-225-5345</td></tr> </tbody> </table>		Shipper_CD	Company_Name	Phone	1	1	Speedy Express	(503) 555-9831	2	2	United Package	(503) 555-3199	3	3	Federal Shipping	(503) 555-9931	4	4	Alliance Shippers	1-800-222-0451	5	5	UPS	1-800-782-7892	6	6	DHL	1-800-225-5345
	Shipper_CD	Company_Name	Phone																										
1	1	Speedy Express	(503) 555-9831																										
2	2	United Package	(503) 555-3199																										
3	3	Federal Shipping	(503) 555-9931																										
4	4	Alliance Shippers	1-800-222-0451																										
5	5	UPS	1-800-782-7892																										
6	6	DHL	1-800-225-5345																										
Control Flow	<pre> graph TD     START_LOG([START LOG]) --&gt; EXEC[EXEC STG SHIPPERS]     EXEC -- Error --&gt; ERROR_LOG([ERROR LOG])     EXEC --&gt; END_LOG_OK([END LOG OK])   </pre>																												
Proceso	<pre> CREATE PROCEDURE [dbo].[SP_STG_Shippers] AS BEGIN     SET NOCOUNT ON;      -- Truncar la tabla STG     TRUNCATE TABLE [STG].[LK_SHIPPERS];      -- Insertar los datos desde TMP con AUD_ROW_ID y acción INSERT     WITH STG_SHIPPERS AS (         SELECT             LTRIM(RTRIM(Shipper_CD)) AS Shipper_CD,             LTRIM(RTRIM(Company_Name)) Company_Name,             LTRIM(RTRIM(Phone)) Phone         FROM [TMP].[SHIPPIERS]         WHERE ISNULL(LTRIM(RTRIM(Shipper_CD)), '') &lt;&gt; ''     )     -- Mecanismo de Control de Versiones     INSERT INTO [STG].[LK_SHIPPERS] (         Ship_Shipper_CD,         Ship_Company_Name,         Ship_Phone,         AUD_INSERT_DT,         AUD_USER_INSERT,         AUD_ACTION,         AUD_ROWID     )     SELECT         bt.Shipper_CD,         bt.Company_Name,         bt.Phone,         GETDATE(),         SUSER_NAME(),         'I',         ROWID     FROM [TMP].[SHIPPIERS] bt;   </pre>																												

	<pre>         bt.Phone,         GETDATE() AS AUD_INSERT_DT,         SYSTEM_USER AS AUD_USER_INSERT,         'INSERT' AS AUD_ACTION,         -- Uso de CHECKSUM sobre la concatenación de cadenas         CHECKSUM(             ISNULL(bt.Shipper_CD, ''),             ISNULL(bt.Company_Name, ''),             ISNULL(bt.Phone, '')         ) AS AUD_ROW_ID         FROM STG_SHIPPERS bt;          -- Inserto los BORRADOS LÓGICOS         INSERT INTO [STG].[LK_SHIPPERS] (             Ship_Shipper_CD,             Ship_Company_Name,             Ship_Phone,             AUD_INSERT_DT,             AUD_USER_INSERT,             AUD_ACTION,             AUD_ROWID         )         SELECT             dwh.Ship_Shipper_CD,             dwh.Ship_Company_Name,             dwh.Ship_Phone,             GETDATE() AS AUD_INSERT_DT,             SYSTEM_USER AS AUD_USER_INSERT,             'DELETE' AS AUD_ACTION,             dwh.AUD_ROWID         FROM [DWH].[LK_SHIPPERS] dwh         LEFT JOIN [STG].[LK_SHIPPERS] s         ON dwh.AUD_ROWID = s.AUD_ROWID         WHERE 1 = 1             AND dwh.AUD_ACTIVE_FLAG = 1         AND s.Ship_Shipper_CD IS NULL;          END;     </pre>																																																								
OUTPUT	<pre>select * from [STG].[LK_SHIPPERS]</pre> <table border="1"> <thead> <tr> <th></th> <th>Ship_Shipper_CD</th> <th>Ship_Company_Name</th> <th>Ship_Phone</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> <th>AUD_ACTION</th> <th>AUD_ROWID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1</td> <td>Speedy Express</td> <td>(503) 555-9831</td> <td>2025-05-06 22:47:15.103</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x181723D4</td> </tr> <tr> <td>2</td> <td>2</td> <td>United Package</td> <td>(503) 555-3199</td> <td>2025-05-06 22:47:15.103</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x39F447B0</td> </tr> <tr> <td>3</td> <td>3</td> <td>Federal Shipping</td> <td>(503) 555-9931</td> <td>2025-05-06 22:47:15.103</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0xE03941E</td> </tr> <tr> <td>4</td> <td>4</td> <td>Alliance Shippers</td> <td>1-800-222-0451</td> <td>2025-05-06 22:47:15.103</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x4ECC925D</td> </tr> <tr> <td>5</td> <td>5</td> <td>UPS</td> <td>1-800-782-7892</td> <td>2025-05-06 22:47:15.103</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x6D86E420</td> </tr> <tr> <td>6</td> <td>6</td> <td>DHL</td> <td>1-800-225-5345</td> <td>2025-05-06 22:47:15.103</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x6529F77E</td> </tr> </tbody> </table>		Ship_Shipper_CD	Ship_Company_Name	Ship_Phone	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID	1	1	Speedy Express	(503) 555-9831	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x181723D4	2	2	United Package	(503) 555-3199	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x39F447B0	3	3	Federal Shipping	(503) 555-9931	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xE03941E	4	4	Alliance Shippers	1-800-222-0451	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x4ECC925D	5	5	UPS	1-800-782-7892	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x6D86E420	6	6	DHL	1-800-225-5345	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x6529F77E
	Ship_Shipper_CD	Ship_Company_Name	Ship_Phone	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID																																																		
1	1	Speedy Express	(503) 555-9831	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x181723D4																																																		
2	2	United Package	(503) 555-3199	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x39F447B0																																																		
3	3	Federal Shipping	(503) 555-9931	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xE03941E																																																		
4	4	Alliance Shippers	1-800-222-0451	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x4ECC925D																																																		
5	5	UPS	1-800-782-7892	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x6D86E420																																																		
6	6	DHL	1-800-225-5345	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x6529F77E																																																		



### 3.4 Proceso Schema STG 4: TERRITORIES

JobName	STG_Territories.dtsx																																												
Input	<pre>select * from [TMP].[TERRITORIES]</pre> <table border="1"> <thead> <tr> <th></th> <th>Territory_CD</th> <th>Territory_Description</th> <th>Region_CD</th> </tr> </thead> <tbody> <tr><td>1</td><td>01581</td><td>Westboro</td><td>1</td></tr> <tr><td>2</td><td>01730</td><td>Bedford</td><td>1</td></tr> <tr><td>3</td><td>01833</td><td>Georgetown</td><td>1</td></tr> <tr><td>4</td><td>02116</td><td>Boston</td><td>1</td></tr> <tr><td>5</td><td>02139</td><td>Cambridge</td><td>1</td></tr> <tr><td>6</td><td>02184</td><td>Braintree</td><td>1</td></tr> <tr><td>7</td><td>02903</td><td>Providence</td><td>1</td></tr> <tr><td>8</td><td>03049</td><td>Hollis</td><td>3</td></tr> <tr><td>9</td><td>03801</td><td>Portsmouth</td><td>3</td></tr> <tr><td>--</td><td>-----</td><td>....</td><td>.</td></tr> </tbody> </table>		Territory_CD	Territory_Description	Region_CD	1	01581	Westboro	1	2	01730	Bedford	1	3	01833	Georgetown	1	4	02116	Boston	1	5	02139	Cambridge	1	6	02184	Braintree	1	7	02903	Providence	1	8	03049	Hollis	3	9	03801	Portsmouth	3	--	-----	....	.
	Territory_CD	Territory_Description	Region_CD																																										
1	01581	Westboro	1																																										
2	01730	Bedford	1																																										
3	01833	Georgetown	1																																										
4	02116	Boston	1																																										
5	02139	Cambridge	1																																										
6	02184	Braintree	1																																										
7	02903	Providence	1																																										
8	03049	Hollis	3																																										
9	03801	Portsmouth	3																																										
--	-----	....	.																																										
Control Flow	<pre> graph TD     StartLog([START LOG]) --&gt; ExecStgTerritories[EXEC STG TERRITORIES]     ExecStgTerritories -- Error --&gt; ErrorLog([ERROR LOG])     ErrorLog -- Error --&gt; EndLogOk([END LOG OK])     </pre>																																												
Proceso	<pre> CREATE PROCEDURE [dbo].[SP_STG_Territories] AS BEGIN     SET NOCOUNT ON;      -- Truncar la tabla STG     TRUNCATE TABLE [STG].[LK_TERRITORIES];      -- Insertar los datos desde TMP con AUD_ROW_ID y acción INSERT     WITH STG_TERRITORIES AS (         SELECT             LTRIM(RTRIM(Territory_CD)) AS Territory_CD,             LTRIM(RTRIM(Territory_Description)) Territory_Description,             COALESCE(d.Region_Id,-1) Region_Id         FROM [TMP].[TERRITORIES] s         LEFT JOIN [DWH].[LK_REGIONS] d         ON LTRIM(RTRIM(s.Region_CD))= d.Region_CD         WHERE ISNULL(LTRIM(RTRIM(Territory_CD)), "") &lt;&gt;             AND d.AUD_ACTIVE_FLAG = 1     )     -- Mecanismo de Control de Versiones     INSERT INTO [STG].[LK_TERRITORIES] (         Territory_CD,         Territory_Description,         Territory_Region_Id,         AUD_INSERT_DT,         AUD_UPDATE_DT     )     SELECT         Territory_CD,         Territory_Description,         Territory_Region_Id,         GETDATE(),         NULL     FROM STG_TERRITORIES     </pre>																																												

	<pre>         AUD_USER_INSERT,         AUD_ACTION,         AUD_ROWID     ) SELECT     bt.Territory_CD,     bt.Territory_Description,     bt.Region_Id,     GETDATE() AS AUD_INSERT_DT,     SYSTEM_USER AS AUD_USER_INSERT,     'INSERT' AS AUD_ACTION,     -- Uso de CHECKSUM sobre la concatenación de cadenas     CHECKSUM(         ISNULL(bt.Territory_CD, ''),         ISNULL(bt.Territory_Description, ''),         ISNULL(bt.Region_Id, '')     ) AS AUD_ROW_ID FROM STG_TERRITORIES bt;  -- Inserto los BORRADOS LÓGICOS INSERT INTO [STG].[LK_TERRITORIES] (     Territory_CD,     Territory_Description,     Territory_Region_Id,     AUD_INSERT_DT,     AUD_USER_INSERT,     AUD_ACTION,     AUD_ROWID ) SELECT     dwh.Territory_CD,     dwh.Territory_Description,     dwh.Territory_Region_Id,     GETDATE() AS AUD_INSERT_DT,     SYSTEM_USER AS AUD_USER_INSERT,     'DELETE' AS AUD_ACTION,     dwh.AUD_ROWID FROM [DWH].[LK_TERRITORIES] dwh LEFT JOIN [STG].[LK_TERRITORIES] s ON dwh.AUD_ROWID = s.AUD_ROWID WHERE 1 = 1     AND dwh.AUD_ACTIVE_FLAG = 1 AND s.Territory_CD IS NULL;  END; </pre>																																																																																																
OUTPUT	<pre>select * from [STG].[LK_TERRITORIES]</pre> <table border="1"> <thead> <tr> <th></th> <th>Territory_CD</th> <th>Territory_Description</th> <th>Territory_Region_Id</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> <th>AUD_ACTION</th> <th>AUD_ROWID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>01581</td> <td>Westboro</td> <td>1</td> <td>2025-05-06 23:29:50.730</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x35B2F206</td> </tr> <tr> <td>2</td> <td>01730</td> <td>Bedford</td> <td>1</td> <td>2025-05-06 23:29:50.730</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0xD144E97D</td> </tr> <tr> <td>3</td> <td>01833</td> <td>Georgetown</td> <td>1</td> <td>2025-05-06 23:29:50.730</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x84210774</td> </tr> <tr> <td>4</td> <td>02116</td> <td>Boston</td> <td>1</td> <td>2025-05-06 23:29:50.730</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x81D00D01</td> </tr> <tr> <td>5</td> <td>02139</td> <td>Cambridge</td> <td>1</td> <td>2025-05-06 23:29:50.730</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0xE60C4121</td> </tr> <tr> <td>6</td> <td>02184</td> <td>Braintree</td> <td>1</td> <td>2025-05-06 23:29:50.730</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0xB008FA51</td> </tr> <tr> <td>7</td> <td>02903</td> <td>Providence</td> <td>1</td> <td>2025-05-06 23:29:50.730</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x85AC0127</td> </tr> <tr> <td>8</td> <td>03049</td> <td>Hollis</td> <td>3</td> <td>2025-05-06 23:29:50.730</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x29AC5025</td> </tr> <tr> <td>9</td> <td>03801</td> <td>Portsmouth</td> <td>3</td> <td>2025-05-06 23:29:50.730</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0xFC47CC1E</td> </tr> <tr> <td>10</td> <td>06897</td> <td>Wilton</td> <td>1</td> <td>2025-05-06 23:29:50.730</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x93C8D879</td> </tr> <tr> <td>11</td> <td>07960</td> <td>Morristown</td> <td>1</td> <td>2025-05-06 23:29:50.730</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x943B0C88</td> </tr> </tbody> </table>		Territory_CD	Territory_Description	Territory_Region_Id	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID	1	01581	Westboro	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x35B2F206	2	01730	Bedford	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xD144E97D	3	01833	Georgetown	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x84210774	4	02116	Boston	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x81D00D01	5	02139	Cambridge	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xE60C4121	6	02184	Braintree	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xB008FA51	7	02903	Providence	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x85AC0127	8	03049	Hollis	3	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x29AC5025	9	03801	Portsmouth	3	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xFC47CC1E	10	06897	Wilton	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x93C8D879	11	07960	Morristown	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x943B0C88
	Territory_CD	Territory_Description	Territory_Region_Id	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID																																																																																										
1	01581	Westboro	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x35B2F206																																																																																										
2	01730	Bedford	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xD144E97D																																																																																										
3	01833	Georgetown	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x84210774																																																																																										
4	02116	Boston	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x81D00D01																																																																																										
5	02139	Cambridge	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xE60C4121																																																																																										
6	02184	Braintree	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xB008FA51																																																																																										
7	02903	Providence	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x85AC0127																																																																																										
8	03049	Hollis	3	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x29AC5025																																																																																										
9	03801	Portsmouth	3	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xFC47CC1E																																																																																										
10	06897	Wilton	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x93C8D879																																																																																										
11	07960	Morristown	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x943B0C88																																																																																										

### 3.5 Proceso Schema STG 5: COUNTRIES

JobName	STG_Countries.dtsx																																																																																																			
Input	<p>select * from [TMP].[TERRITORIES]</p> <table border="1"> <thead> <tr> <th></th> <th>Country</th> <th>Density</th> <th>Abbreviation</th> <th>Agricultural_Land</th> <th>Land_Area</th> <th>Armed_Force_Size</th> <th>Capital</th> <th>Currency_Code</th> </tr> </thead> <tbody> <tr><td>1</td><td>Afghanistan</td><td>60</td><td>AF</td><td>58.10%</td><td>652,230</td><td>323,000</td><td>Kabul</td><td>AFN</td></tr> <tr><td>2</td><td>Albania</td><td>105</td><td>AL</td><td>43.10%</td><td>28,748</td><td>9,000</td><td>Tirana</td><td>ALL</td></tr> <tr><td>3</td><td>Algeria</td><td>18</td><td>DZ</td><td>17.40%</td><td>2,381,741</td><td>317,000</td><td>Algiers</td><td>DZD</td></tr> <tr><td>4</td><td>Andorra</td><td>164</td><td>AD</td><td>40.00%</td><td>468</td><td></td><td>Andorra la Vella</td><td>EUR</td></tr> <tr><td>5</td><td>Angola</td><td>26</td><td>AO</td><td>47.50%</td><td>1,246,700</td><td>117,000</td><td>Luanda</td><td>AOA</td></tr> <tr><td>6</td><td>Antigua and Barbuda</td><td>223</td><td>AG</td><td>20.50%</td><td>443</td><td>0</td><td>St. John's, Saint John</td><td>XCD</td></tr> <tr><td>7</td><td>Argentina</td><td>17</td><td>AR</td><td>54.30%</td><td>2,780,400</td><td>105,000</td><td>Buenos Aires</td><td>ARS</td></tr> <tr><td>8</td><td>Amenia</td><td>104</td><td>AM</td><td>58.90%</td><td>29,743</td><td>49,000</td><td>Yerevan</td><td>AMD</td></tr> <tr><td>9</td><td>Australia</td><td>3</td><td>AU</td><td>48.20%</td><td>7,741,220</td><td>58,000</td><td>Canberra</td><td>AUD</td></tr> <tr><td>10</td><td>Austria</td><td>109</td><td>AT</td><td>32.40%</td><td>83,871</td><td>21,000</td><td>Vienna</td><td>FIR</td></tr> </tbody> </table>		Country	Density	Abbreviation	Agricultural_Land	Land_Area	Armed_Force_Size	Capital	Currency_Code	1	Afghanistan	60	AF	58.10%	652,230	323,000	Kabul	AFN	2	Albania	105	AL	43.10%	28,748	9,000	Tirana	ALL	3	Algeria	18	DZ	17.40%	2,381,741	317,000	Algiers	DZD	4	Andorra	164	AD	40.00%	468		Andorra la Vella	EUR	5	Angola	26	AO	47.50%	1,246,700	117,000	Luanda	AOA	6	Antigua and Barbuda	223	AG	20.50%	443	0	St. John's, Saint John	XCD	7	Argentina	17	AR	54.30%	2,780,400	105,000	Buenos Aires	ARS	8	Amenia	104	AM	58.90%	29,743	49,000	Yerevan	AMD	9	Australia	3	AU	48.20%	7,741,220	58,000	Canberra	AUD	10	Austria	109	AT	32.40%	83,871	21,000	Vienna	FIR
	Country	Density	Abbreviation	Agricultural_Land	Land_Area	Armed_Force_Size	Capital	Currency_Code																																																																																												
1	Afghanistan	60	AF	58.10%	652,230	323,000	Kabul	AFN																																																																																												
2	Albania	105	AL	43.10%	28,748	9,000	Tirana	ALL																																																																																												
3	Algeria	18	DZ	17.40%	2,381,741	317,000	Algiers	DZD																																																																																												
4	Andorra	164	AD	40.00%	468		Andorra la Vella	EUR																																																																																												
5	Angola	26	AO	47.50%	1,246,700	117,000	Luanda	AOA																																																																																												
6	Antigua and Barbuda	223	AG	20.50%	443	0	St. John's, Saint John	XCD																																																																																												
7	Argentina	17	AR	54.30%	2,780,400	105,000	Buenos Aires	ARS																																																																																												
8	Amenia	104	AM	58.90%	29,743	49,000	Yerevan	AMD																																																																																												
9	Australia	3	AU	48.20%	7,741,220	58,000	Canberra	AUD																																																																																												
10	Austria	109	AT	32.40%	83,871	21,000	Vienna	FIR																																																																																												
Control Flow	<pre> graph TD     StartLog([START LOG]) --&gt; ExecStg[EXEC STG COUNTRIES]     ExecStg --&gt; EndLogOk([END LOG OK])     ExecStg -- Error --&gt; ErrorLog([ERROR LOG])     ErrorLog -- Error --&gt; ExecStg   </pre>																																																																																																			
Proceso	<pre> CREATE PROCEDURE [dbo].[SP_STG_Countries] AS BEGIN     SET NOCOUNT ON;      -- Truncar la tabla STG     TRUNCATE TABLE [STG].[LK_COUNTRIES];      -- Insertar los datos desde TMP con AUD_ROW_ID y acción INSERT     WITH STG_COUNTRIES AS (         SELECT             LTRIM(RTRIM(Abbreviation)) AS Country_CD,             LTRIM(RTRIM(Country)) Country_Name         FROM [TMP].[COUNTRIES]         WHERE ISNULL(LTRIM(RTRIM(Abbreviation)), '') &lt;&gt; ''     )     -- Mecanismo de Control de Versiones     INSERT INTO [STG].[LK_COUNTRIES] (         Country_CD,         Country_Name,         AUD_INSERT_DT,         AUD_USER_INSERT,         AUD_ACTION,         AUD_ROWID     )     SELECT         bt.Country_CD,         bt.Country_Name,         GETDATE() AS AUD_INSERT_DT,         SYSTEM_USER AS AUD_USER_INSERT,         ...     ) </pre>																																																																																																			

	<pre>'INSERT' AS AUD_ACTION, -- Uso de CHECKSUM sobre la concatenación de cadenas CHECKSUM(     ISNULL(bt.Country_CD, ''),     ISNULL(bt.Country_Name, '') ) AS AUD_ROW_ID FROM STG_COUNTRIES bt;  -- Inserto los BORRADOS LÓGICOS INSERT INTO [STG].[LK_COUNTRIES] (     Country_CD,     Country_Name,     AUD_INSERT_DT,     AUD_USER_INSERT,     AUD_ACTION,     AUD_ROWID ) SELECT     dwh.Country_CD,     dwh.Ctry_Name,     GETDATE() AS AUD_INSERT_DT,     SYSTEM_USER AS AUD_USER_INSERT,     'DELETE' AS AUD_ACTION,     dwh.AUD_ROWID FROM [DWH].[LK_COUNTRIES] dwh LEFT JOIN [STG].[LK_COUNTRIES] s ON dwh.AUD_ROWID = s.AUD_ROWID WHERE 1 = 1     AND dwh.AUD_ACTIVE_FLAG = 1     AND s.Country_CD IS NULL;  END;</pre>																																																																																																									
OUTPUT	<pre>select * from [STG].[LK_COUNTRIES]</pre> <table border="1"> <thead> <tr> <th></th> <th>Country_CD</th> <th>Country_Name</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> <th>AUD_ACTION</th> <th>AUD_ROWID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>AF</td> <td>Afghanistan</td> <td>2025-05-07 23:14:20.963</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x55BD037F</td> </tr> <tr> <td>2</td> <td>AL</td> <td>Albania</td> <td>2025-05-07 23:14:20.963</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0xFF4EDB9E</td> </tr> <tr> <td>3</td> <td>DZ</td> <td>Algeria</td> <td>2025-05-07 23:14:20.963</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0xEF29DBD6</td> </tr> <tr> <td>4</td> <td>AD</td> <td>Andorra</td> <td>2025-05-07 23:14:20.963</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0xDF5658C9</td> </tr> <tr> <td>5</td> <td>AO</td> <td>Angola</td> <td>2025-05-07 23:14:20.963</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x211FC306</td> </tr> <tr> <td>6</td> <td>AG</td> <td>Antigua and Barbuda</td> <td>2025-05-07 23:14:20.963</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x09316491</td> </tr> <tr> <td>7</td> <td>AR</td> <td>Argentina</td> <td>2025-05-07 23:14:20.963</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x5CDB1923</td> </tr> <tr> <td>8</td> <td>AM</td> <td>Armenia</td> <td>2025-05-07 23:14:20.963</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x6FFED7F9</td> </tr> <tr> <td>9</td> <td>AU</td> <td>Australia</td> <td>2025-05-07 23:14:20.963</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x86719904</td> </tr> <tr> <td>10</td> <td>AT</td> <td>Austria</td> <td>2025-05-07 23:14:20.963</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0xEE4057D5</td> </tr> <tr> <td>11</td> <td>AZ</td> <td>Azerbaijan</td> <td>2025-05-07 23:14:20.963</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x377F0691</td> </tr> <tr> <td>12</td> <td>BS</td> <td>The Bahamas</td> <td>2025-05-07 23:14:20.963</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x9B039E95</td> </tr> <tr> <td>13</td> <td>BH</td> <td>Bahrain</td> <td>2025-05-07 23:14:20.963</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0xBFA8EE5A</td> </tr> <tr> <td>14</td> <td>BD</td> <td>Bangladesh</td> <td>2025-05-07 23:14:20.963</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0xFB7C2E74</td> </tr> </tbody> </table>		Country_CD	Country_Name	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID	1	AF	Afghanistan	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x55BD037F	2	AL	Albania	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xFF4EDB9E	3	DZ	Algeria	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xEF29DBD6	4	AD	Andorra	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xDF5658C9	5	AO	Angola	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x211FC306	6	AG	Antigua and Barbuda	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x09316491	7	AR	Argentina	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x5CDB1923	8	AM	Armenia	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x6FFED7F9	9	AU	Australia	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x86719904	10	AT	Austria	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xEE4057D5	11	AZ	Azerbaijan	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x377F0691	12	BS	The Bahamas	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x9B039E95	13	BH	Bahrain	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xBFA8EE5A	14	BD	Bangladesh	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xFB7C2E74
	Country_CD	Country_Name	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID																																																																																																				
1	AF	Afghanistan	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x55BD037F																																																																																																				
2	AL	Albania	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xFF4EDB9E																																																																																																				
3	DZ	Algeria	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xEF29DBD6																																																																																																				
4	AD	Andorra	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xDF5658C9																																																																																																				
5	AO	Angola	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x211FC306																																																																																																				
6	AG	Antigua and Barbuda	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x09316491																																																																																																				
7	AR	Argentina	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x5CDB1923																																																																																																				
8	AM	Armenia	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x6FFED7F9																																																																																																				
9	AU	Australia	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x86719904																																																																																																				
10	AT	Austria	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xEE4057D5																																																																																																				
11	AZ	Azerbaijan	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x377F0691																																																																																																				
12	BS	The Bahamas	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x9B039E95																																																																																																				
13	BH	Bahrain	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xBFA8EE5A																																																																																																				
14	BD	Bangladesh	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xFB7C2E74																																																																																																				

### 3.6 Proceso Schema STG 6: EMPLOYEES

JobName	STG_Employees.dtsx
Input	<p>select * from [TMP].[EMPLOYEES]</p>
Control Flow	
Proceso	<pre> USE [TP_DWH_MCD_2025] GO ***** Object: StoredProcedure [dbo].[SP_STG_Employees]  Script Date: 17/5/2025 14:33:36 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_STG_Employees] AS BEGIN     SET NOCOUNT ON;      -- Truncar la tabla STG     TRUNCATE TABLE [STG].[LK_EMPLOYEES];      -- Insertar los datos desde TMP con AUD_ROW_ID y acción INSERT     WITH EMPLOYEES_REPORT AS     (         SELECT *         FROM [DWH].[LK_EMPLOYEES]         WHERE AUD_ACTIVE_FLAG = 1     ),     REGIONS AS     (         SELECT *         FROM [DWH].VW_LK_REL_REGIONS     ),     STG_EMPLOYEES AS (         SELECT             LTRIM(RTRIM(Employee_CD)) AS Emp_Employee_CD,             LTRIM(RTRIM&gt;Last_name)) Emp_Last_name,             LTRIM(RTRIM(First_name)) Emp_First_name,             LTRIM(RTRIM(title)) Emp_title,             LTRIM(RTRIM(title_of_courtesy)) Emp_title_of_courtesy,             CONVERT(DATE,LTRIM(RTRIM(birth_date))) Emp_birth_date, </pre>

```

CONVERT(DATE, LTRIM(RTRIM(hire_date))) Emp_hire_date,
LTRIM(RTRIM(address)) Emp_address,
LTRIM(RTRIM(city)) Emp_city,
COALESCE(r.Region_id, -1) Emp_Region_id,
LTRIM(RTRIM(postal_Code)) Emp_postal_Code,
LTRIM(RTRIM(home_phone)) Emp_home_phone,
LTRIM(RTRIM(extension)) Emp_extension,
LTRIM(RTRIM(photo)) Emp_photo,
LTRIM(RTRIM(notes)) Emp_notes,
COALESCE(er.Emp_Employee_id, -1) Emp_report_to_id,
LTRIM(RTRIM(photo_path)) Emp_photo_path,
CONVERT(int, CASE WHEN [report_to] = 'NULL' THEN -1 else [report_to] END)

Emp_report_to_cd
FROM [TMP].[EMPLOYEES] s
    LEFT JOIN EMPLOYEES_REPORT d
    ON LTRIM(RTRIM(s.Employee_CD))= d.Emp_Employee_CD
    LEFT JOIN REGIONS r
    ON LTRIM(RTRIM(s.region_cd))= r.Region_CD
    LEFT JOIN EMPLOYEES_REPORT er
    ON LTRIM(RTRIM(s.report_to))= er.Emp_Employee_CD
    WHERE ISNULL(LTRIM(RTRIM(Employee_CD)), "") <> "
)
-- Mecanismo de Control de Versiones
INSERT INTO [STG].[LK_EMPLOYEES] (
    Emp_Employee_CD,
    Emp_Last_name,
    Emp_First_name,
    Emp_title,
    Emp_title_of_courtesy,
    Emp_birth_date,
    Emp_hire_date,
    Emp_address,
    Emp_city,
    Emp_Region_id,
    Emp_postal_Code,
    Emp_home_phone,
    Emp_extension,
    Emp_photo,
    Emp_notes,
    Emp_report_to_id,
    Emp_photo_path,
    Emp_report_to_cd,
    AUD_INSERT_DT,
    AUD_USER_INSERT,
    AUD_ACTION,
    AUD_ROWID
)
SELECT
    bt.Emp_Employee_CD,
    bt.Emp_Last_name,
    bt.Emp_First_name,
    bt.Emp_title,
    bt.Emp_title_of_courtesy,
    bt.Emp_birth_date,
    bt.Emp_hire_date,
    bt.Emp_address,
    bt.Emp_city,
    bt.Emp_Region_id,
    bt.Emp_postal_Code,
    bt.Emp_home_phone,
    bt.Emp_extension,
    bt.Emp_photo,
    bt.Emp_notes,
    bt.Emp_report_to_id,
    bt.Emp_photo_path,
    bt.Emp_report_to_cd,

```

```

    GETDATE() AS AUD_INSERT_DT,
    SYSTEM_USER AS AUD_USER_INSERT,
    'INSERT' AS AUD_ACTION,
    -- Uso de CHECKSUM sobre la concatenación de cadenas
    CHECKSUM(
        ISNULL(bt.Emp_Employee_CD,"),
        ISNULL(bt.Emp_Employee_CD,"),
        ISNULL(bt.Emp_Last_name,"),
        ISNULL(bt.Emp_First_name,"),
        ISNULL(bt.Emp_title,"),
        ISNULL(bt.Emp_title_of_courtesy,"),
        ISNULL(bt.Emp_birth_date,"),
        ISNULL(bt.Emp_hire_date,"),
        ISNULL(bt.Emp_address,"),
        ISNULL(bt.Emp_city,"),
        ISNULL(bt.Emp_Region_id,"),
        ISNULL(bt.Emp_postal_Code,"),
        ISNULL(bt.Emp_home_phone,"),
        ISNULL(bt.Emp_extension,"),
        ISNULL(bt.Emp_photo,"),
        ISNULL(bt.Emp_notes,"),
        ISNULL(bt.Emp_report_to_id,"),
        ISNULL(bt.Emp_photo_path,")
    ) AS AUD_ROW_ID
FROM STG_EMPLOYEES bt;

-- Inserto los BORRADOS LÓGICOS
INSERT INTO [STG].[LK_EMPLOYEES] (
    Emp_Employee_CD,
    Emp_Last_name,
    Emp_First_name,
    Emp_title,
    Emp_title_of_courtesy,
    Emp_birth_date,
    Emp_hire_date,
    Emp_address,
    Emp_city,
    Emp_Region_id,
    Emp_postal_Code,
    Emp_home_phone,
    Emp_extension,
    Emp_photo,
    Emp_notes,
    Emp_report_to_id,
    Emp_photo_path,
    AUD_INSERT_DT,
    AUD_USER_INSERT,
    AUD_ACTION,
    AUD_ROWID
)
SELECT
    dwh.Emp_Employee_CD,
    dwh.Emp_Last_name,
    dwh.Emp_First_name,
    dwh.Emp_title,
    dwh.Emp_title_of_courtesy,
    dwh.Emp_birth_date,
    dwh.Emp_hire_date,
    dwh.Emp_address,
    dwh.Emp_city,
    dwh.Emp_Region_id,
    dwh.Emp_postal_Code,
    dwh.Emp_home_phone,
    dwh.Emp_extension,
    dwh.Emp_photo,
    dwh.Emp_notes,

```

	<pre> dwh.Emp_report_to_id, dwh.Emp_photo_path, GETDATE() AS AUD_INSERT_DT, SYSTEM_USER AS AUD_USER_INSERT, 'DELETE' AS AUD_ACTION, dwh.AUD_ROWID FROM [DWH].[LK_EMPLOYEES] dwh LEFT JOIN [STG].[LK_EMPLOYEES] s ON dwh.AUD_ROWID = s.AUD_ROWID WHERE 1 = 1     AND dwh.AUD_ACTIVE_FLAG = 1 AND s.Emp_Employee_CD IS NULL     AND dwh.Emp_Employee_id&lt;&gt;-1;  END; </pre>																																																																																										
OUTPUT	<pre>select * from [STG].[LK_EMPLOYEES]</pre> <table border="1"> <thead> <tr> <th></th> <th>Emp_Employee_CD</th> <th>Emp_Last_name</th> <th>Emp_First_name</th> <th>Emp_title</th> <th>Emp_title_of_courtesy</th> <th>Emp_birth_date</th> <th>Emp_hire_date</th> <th>Emp_address</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1</td> <td>Davolio</td> <td>Nancy</td> <td>Sales Representative</td> <td>Ms.</td> <td>1948-12-08</td> <td>1992-05-01</td> <td>507 20th Ave. E. Apt. 2A</td> </tr> <tr> <td>2</td> <td>2</td> <td>Fuller</td> <td>Andrew</td> <td>Vice President Sales</td> <td>Dr.</td> <td>1952-02-19</td> <td>1992-08-14</td> <td>908 W. Capital Way</td> </tr> <tr> <td>3</td> <td>3</td> <td>Leverling</td> <td>Janet</td> <td>Sales Representative</td> <td>Ms.</td> <td>1963-08-30</td> <td>1992-04-01</td> <td>722 Moss Bay Blvd.</td> </tr> <tr> <td>4</td> <td>4</td> <td>Peacock</td> <td>Margaret</td> <td>Sales Representative</td> <td>Mrs.</td> <td>1937-09-19</td> <td>1993-05-03</td> <td>4110 Old Redmond Rd.</td> </tr> <tr> <td>5</td> <td>5</td> <td>Buchanan</td> <td>Steven</td> <td>Sales Manager</td> <td>Mr.</td> <td>1955-03-04</td> <td>1993-10-17</td> <td>14 Garrett Hill</td> </tr> <tr> <td>6</td> <td>6</td> <td>Suyama</td> <td>Michael</td> <td>Sales Representative</td> <td>Mr.</td> <td>1963-07-02</td> <td>1993-10-17</td> <td>Coventry House Miner Rd.</td> </tr> <tr> <td>7</td> <td>7</td> <td>King</td> <td>Robert</td> <td>Sales Representative</td> <td>Mr.</td> <td>1960-05-29</td> <td>1994-01-02</td> <td>Edgeham Hollow Winchester Way</td> </tr> <tr> <td>8</td> <td>8</td> <td>Callahan</td> <td>Laura</td> <td>Inside Sales Coordinator</td> <td>Ms.</td> <td>1950-01-09</td> <td>1994-03-05</td> <td>4726 11th Ave. N.E.</td> </tr> <tr> <td>9</td> <td>9</td> <td>Dodsworth</td> <td>Anne</td> <td>Sales Representative</td> <td>Ms.</td> <td>1966-01-27</td> <td>1994-11-15</td> <td>7 Houndstooth Rd.</td> </tr> </tbody> </table>		Emp_Employee_CD	Emp_Last_name	Emp_First_name	Emp_title	Emp_title_of_courtesy	Emp_birth_date	Emp_hire_date	Emp_address	1	1	Davolio	Nancy	Sales Representative	Ms.	1948-12-08	1992-05-01	507 20th Ave. E. Apt. 2A	2	2	Fuller	Andrew	Vice President Sales	Dr.	1952-02-19	1992-08-14	908 W. Capital Way	3	3	Leverling	Janet	Sales Representative	Ms.	1963-08-30	1992-04-01	722 Moss Bay Blvd.	4	4	Peacock	Margaret	Sales Representative	Mrs.	1937-09-19	1993-05-03	4110 Old Redmond Rd.	5	5	Buchanan	Steven	Sales Manager	Mr.	1955-03-04	1993-10-17	14 Garrett Hill	6	6	Suyama	Michael	Sales Representative	Mr.	1963-07-02	1993-10-17	Coventry House Miner Rd.	7	7	King	Robert	Sales Representative	Mr.	1960-05-29	1994-01-02	Edgeham Hollow Winchester Way	8	8	Callahan	Laura	Inside Sales Coordinator	Ms.	1950-01-09	1994-03-05	4726 11th Ave. N.E.	9	9	Dodsworth	Anne	Sales Representative	Ms.	1966-01-27	1994-11-15	7 Houndstooth Rd.
	Emp_Employee_CD	Emp_Last_name	Emp_First_name	Emp_title	Emp_title_of_courtesy	Emp_birth_date	Emp_hire_date	Emp_address																																																																																			
1	1	Davolio	Nancy	Sales Representative	Ms.	1948-12-08	1992-05-01	507 20th Ave. E. Apt. 2A																																																																																			
2	2	Fuller	Andrew	Vice President Sales	Dr.	1952-02-19	1992-08-14	908 W. Capital Way																																																																																			
3	3	Leverling	Janet	Sales Representative	Ms.	1963-08-30	1992-04-01	722 Moss Bay Blvd.																																																																																			
4	4	Peacock	Margaret	Sales Representative	Mrs.	1937-09-19	1993-05-03	4110 Old Redmond Rd.																																																																																			
5	5	Buchanan	Steven	Sales Manager	Mr.	1955-03-04	1993-10-17	14 Garrett Hill																																																																																			
6	6	Suyama	Michael	Sales Representative	Mr.	1963-07-02	1993-10-17	Coventry House Miner Rd.																																																																																			
7	7	King	Robert	Sales Representative	Mr.	1960-05-29	1994-01-02	Edgeham Hollow Winchester Way																																																																																			
8	8	Callahan	Laura	Inside Sales Coordinator	Ms.	1950-01-09	1994-03-05	4726 11th Ave. N.E.																																																																																			
9	9	Dodsworth	Anne	Sales Representative	Ms.	1966-01-27	1994-11-15	7 Houndstooth Rd.																																																																																			

### 3.7 Proceso Schema STG 7: SUPPLIERS

JobName	STG_Suppliers.dtsx
Input	<pre>select * from [TMP].[SUPPLIERS]</pre>
Control Flow	
Proceso	<pre> USE [TP_DWH_MCD_2025] GO /******** Object: StoredProcedure [dbo].[SP_STG_Suppliers]  Script Date: 17/5/2025 14:15:15 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_STG_Suppliers] AS BEGIN     SET NOCOUNT ON;      -- Truncar la tabla STG     TRUNCATE TABLE [STG].[LK_SUPPLIERS];      -- Insertar los datos desde TMP con AUD_ROW_ID y acción INSERT     WITH REGIONS AS         (SELECT * from [DWH].[LK_REGIONS]         WHERE AUD_ACTIVE_FLAG = 1),     COUNTRIES AS         (SELECT * from DWH.VW_LK_REL_COUNTRIES         ),     STG_SUPPLIERS AS (     SELECT         LTRIM(RTRIM(Supp_CD)) AS Supp_CD,         LTRIM(RTRIM(Supp_companyName)) Supp_companyName,         LTRIM(RTRIM(Supp_contactName)) Supp_contactName,</pre>

```

        LTRIM(RTRIM(Supp_contactTitle)) Supp_contactTitle,
        LTRIM(RTRIM(Supp_address)) Supp_address,
        LTRIM(RTRIM(Supp_City)) Supp_City,
        COALESCE(d.Region_Id,-1) Supp_Id_Region,
        LTRIM(RTRIM(Supp_PostalCode))Supp_PostalCode,
        COALESCE(c.Ctry_Country_Id,-1)Supp_Id_Country,
        CONVERT(integer, '-1') Supp_ID_DatoContacto
    FROM [TMP].[SUPPLIERS] s
    LEFT JOIN REGIONS d
    ON LTRIM(RTRIM(s.Supp_Region))= d.Region_CD
    LEFT JOIN COUNTRIES c
    ON LTRIM(RTRIM(s.Supp_Country))= c.Country_CD
    WHERE ISNULL(LTRIM(RTRIM(Supp_CD)), '') <> ''
)
-- Mecanismo de Control de Versiones
INSERT INTO [STG].[LK_SUPPLIERS] (
    Supp_CD,
    Supp_companyName,
    Supp_contactName,
    Supp_contactTitle,
    Supp_address,
    Supp_City,
    Supp_Id_Region,
    Supp_PostalCode,
    Supp_Id_Country,
    Supp_ID_DatoContacto,
    AUD_INSERT_DT,
    AUD_USER_INSERT,
    AUD_ACTION,
    AUD_ROWID
)
SELECT
    bt.Supp_CD,
    bt.Supp_companyName,
    bt.Supp_contactName,
    bt.Supp_contactTitle,
    bt.Supp_address,
    bt.Supp_City,
    Supp_Id_Region,
    Supp_PostalCode,
    Supp_Id_Country,
    Supp_ID_DatoContacto,
    GETDATE() AS AUD_INSERT_DT,
    SYSTEM_USER AS AUD_USER_INSERT,
    'INSERT' AS AUD_ACTION,
    -- Uso de CHECKSUM sobre la concatenación de cadenas
    CHECKSUM(
        ISNULL(bt.Supp_CD, ''),
        ISNULL(bt.Supp_companyName, ''),
        ISNULL(bt.Supp_contactName, ''),
        ISNULL(bt.Supp_contactTitle, ''),
        ISNULL(bt.Supp_address, ''),
        ISNULL(bt.Supp_City, ''),
        ISNULL(bt.Supp_Id_Region, ''),
        ISNULL(bt.Supp_PostalCode, ''),
        ISNULL(bt.Supp_Id_Country, ''),
        ISNULL(bt.Supp_ID_DatoContacto, '')
    ) AS AUD_ROW_ID
FROM STG_SUPPLIERS bt;

-- Inserto los BORRADOS LÓGICOS
INSERT INTO [STG].[LK_SUPPLIERS] (
    Supp_CD,
    Supp_companyName,
    Supp_contactName,
    Supp_contactTitle,

```

	<pre> Supp_address, Supp_City, Supp_Id_Region, Supp_PostalCode, Supp_Id_Country, Supp_ID_DatoContacto, AUD_INSERT_DT, AUD_USER_INSERT, AUD_ACTION, AUD_ROWID ) SELECT dwh.Supp_CD, dwh.Supp_companyName, dwh.Supp_contactName, dwh.Supp_contactTitle, dwh.Supp_address, dwh.Supp_City, dwh.Supp_Id_Region, dwh.Supp_PostalCode, dwh.Supp_Id_Country, dwh.Supp_ID_DatoContacto, GETDATE() AS AUD_INSERT_DT, SYSTEM_USER AS AUD_USER_INSERT, 'DELETE' AS AUD_ACTION, dwh.AUD_ROWID FROM [DWH].[LK_SUPPLIERS] dwh LEFT JOIN [STG].[LK_SUPPLIERS] s ON dwh.AUD_ROWID = s.AUD_ROWID WHERE 1 = 1 AND dwh.AUD_ACTIVE_FLAG = 1 AND s.Supp_CD IS NULL AND dwh.Supp_Supplier_Id &lt;&gt; -1;  END; </pre>																																																																																										
OUTPUT	<pre>select * from [STG].[LK_EMPLOYEES]</pre> <table border="1"> <thead> <tr> <th></th><th>Emp_Employee_CD</th><th>Emp_Last_name</th><th>Emp_First_name</th><th>Emp_title</th><th>Emp_title_of_courtesy</th><th>Emp_birth_date</th><th>Emp_hire_date</th><th>Emp_address</th></tr> </thead> <tbody> <tr> <td>1</td><td>1</td><td>Davolio</td><td>Nancy</td><td>Sales Representative</td><td>Ms.</td><td>1948-12-08</td><td>1992-05-01</td><td>507 20th Ave. E. Apt. 2A</td></tr> <tr> <td>2</td><td>2</td><td>Fuller</td><td>Andrew</td><td>Vice President Sales</td><td>Dr.</td><td>1952-02-19</td><td>1992-08-14</td><td>908 W. Capital Way</td></tr> <tr> <td>3</td><td>3</td><td>Leverling</td><td>Janet</td><td>Sales Representative</td><td>Ms.</td><td>1963-08-30</td><td>1992-04-01</td><td>722 Moss Bay Blvd.</td></tr> <tr> <td>4</td><td>4</td><td>Peacock</td><td>Margaret</td><td>Sales Representative</td><td>Mrs.</td><td>1937-09-19</td><td>1993-05-03</td><td>4110 Old Redmond Rd.</td></tr> <tr> <td>5</td><td>5</td><td>Buchanan</td><td>Steven</td><td>Sales Manager</td><td>Mr.</td><td>1955-03-04</td><td>1993-10-17</td><td>14 Garrett Hill</td></tr> <tr> <td>6</td><td>6</td><td>Suyama</td><td>Michael</td><td>Sales Representative</td><td>Mr.</td><td>1963-07-02</td><td>1993-10-17</td><td>Coventry House Miner Rd.</td></tr> <tr> <td>7</td><td>7</td><td>King</td><td>Robert</td><td>Sales Representative</td><td>Mr.</td><td>1960-05-29</td><td>1994-01-02</td><td>Edgeham Hollow Winchester Way</td></tr> <tr> <td>8</td><td>8</td><td>Callahan</td><td>Laura</td><td>Inside Sales Coordinator</td><td>Ms.</td><td>1958-01-09</td><td>1994-03-05</td><td>4726 11th Ave. N.E.</td></tr> <tr> <td>9</td><td>9</td><td>Dodsworth</td><td>Anne</td><td>Sales Representative</td><td>Ms.</td><td>1966-01-27</td><td>1994-11-15</td><td>7 Houndstooth Rd.</td></tr> </tbody> </table>		Emp_Employee_CD	Emp_Last_name	Emp_First_name	Emp_title	Emp_title_of_courtesy	Emp_birth_date	Emp_hire_date	Emp_address	1	1	Davolio	Nancy	Sales Representative	Ms.	1948-12-08	1992-05-01	507 20th Ave. E. Apt. 2A	2	2	Fuller	Andrew	Vice President Sales	Dr.	1952-02-19	1992-08-14	908 W. Capital Way	3	3	Leverling	Janet	Sales Representative	Ms.	1963-08-30	1992-04-01	722 Moss Bay Blvd.	4	4	Peacock	Margaret	Sales Representative	Mrs.	1937-09-19	1993-05-03	4110 Old Redmond Rd.	5	5	Buchanan	Steven	Sales Manager	Mr.	1955-03-04	1993-10-17	14 Garrett Hill	6	6	Suyama	Michael	Sales Representative	Mr.	1963-07-02	1993-10-17	Coventry House Miner Rd.	7	7	King	Robert	Sales Representative	Mr.	1960-05-29	1994-01-02	Edgeham Hollow Winchester Way	8	8	Callahan	Laura	Inside Sales Coordinator	Ms.	1958-01-09	1994-03-05	4726 11th Ave. N.E.	9	9	Dodsworth	Anne	Sales Representative	Ms.	1966-01-27	1994-11-15	7 Houndstooth Rd.
	Emp_Employee_CD	Emp_Last_name	Emp_First_name	Emp_title	Emp_title_of_courtesy	Emp_birth_date	Emp_hire_date	Emp_address																																																																																			
1	1	Davolio	Nancy	Sales Representative	Ms.	1948-12-08	1992-05-01	507 20th Ave. E. Apt. 2A																																																																																			
2	2	Fuller	Andrew	Vice President Sales	Dr.	1952-02-19	1992-08-14	908 W. Capital Way																																																																																			
3	3	Leverling	Janet	Sales Representative	Ms.	1963-08-30	1992-04-01	722 Moss Bay Blvd.																																																																																			
4	4	Peacock	Margaret	Sales Representative	Mrs.	1937-09-19	1993-05-03	4110 Old Redmond Rd.																																																																																			
5	5	Buchanan	Steven	Sales Manager	Mr.	1955-03-04	1993-10-17	14 Garrett Hill																																																																																			
6	6	Suyama	Michael	Sales Representative	Mr.	1963-07-02	1993-10-17	Coventry House Miner Rd.																																																																																			
7	7	King	Robert	Sales Representative	Mr.	1960-05-29	1994-01-02	Edgeham Hollow Winchester Way																																																																																			
8	8	Callahan	Laura	Inside Sales Coordinator	Ms.	1958-01-09	1994-03-05	4726 11th Ave. N.E.																																																																																			
9	9	Dodsworth	Anne	Sales Representative	Ms.	1966-01-27	1994-11-15	7 Houndstooth Rd.																																																																																			

### 3.8 Proceso Schema STG 8: SUPPLIERS DATOS CONTACTO

JobName	STG_Suppliers.dtsx																																																																																																																																																
Input	<pre>select * from [TMP].[SUPPLIERS]</pre> <table border="1"> <thead> <tr> <th>Supp_CD</th> <th>Supp_companyName</th> <th>Supp_contactName</th> <th>Supp_contactTitle</th> <th>Supp_address</th> <th>Supp_City</th> <th>Supp_Region</th> <th>Supp_PostalCode</th> </tr> </thead> <tbody> <tr><td>1</td><td>Exotic Liquids</td><td>Charlotte Cooper</td><td>Purchasing Manager</td><td>49 Gilbert St.</td><td>London</td><td>NULL</td><td>EC1 4SD</td></tr> <tr><td>2</td><td>New Orleans Cajun Delights</td><td>Shelley Burke</td><td>Order Administrator</td><td>P.O. Box 78534</td><td>New Orleans</td><td>LA</td><td>70117</td></tr> <tr><td>3</td><td>Grandma Kelly's Homestead</td><td>Regina Murphy</td><td>Sales Representative</td><td>707 Oxford Rd.</td><td>Ann Arbor</td><td>MI</td><td>48104</td></tr> <tr><td>4</td><td>Tokyo Traders</td><td>Yoshi Nagase</td><td>Marketing Manager</td><td>9-9 Sekimai Musashino-shi</td><td>Tokyo</td><td>NULL</td><td>100</td></tr> <tr><td>5</td><td>Cooperativa de Quesos 'La Cabras'</td><td>Antonio del Valle Saavedra</td><td>Export Administrator</td><td>Calle del Rosal 4</td><td>Oviedo</td><td>Asturias</td><td>33007</td></tr> <tr><td>6</td><td>Mayumi's</td><td>Miyumi Ohno</td><td>Marketing Representative</td><td>92 Setuko Chuo-ku</td><td>Osaka</td><td>NULL</td><td>545</td></tr> <tr><td>7</td><td>Pavlova Ltd.</td><td>Ian Devling</td><td>Marketing Manager</td><td>74 Rose St. Moonie Ponds</td><td>Melbourne</td><td>Victoria</td><td>3058</td></tr> <tr><td>8</td><td>Specialty Biscuits Ltd.</td><td>Peter Wilson</td><td>Sales Representative</td><td>29 King's Way</td><td>Manchester</td><td>NULL</td><td>M14 GSD</td></tr> <tr><td>9</td><td>PB Knäckebrot AB</td><td>Lars Peterson</td><td>Sales Agent</td><td>Kalosdagatan 13</td><td>Gäteborg</td><td>NULL</td><td>5-345 67</td></tr> <tr><td>10</td><td>Refrescos Americanas LTDA</td><td>Carlos Diaz</td><td>Marketing Manager</td><td>Av. das Americanas 12890</td><td>Sao Paulo</td><td>NULL</td><td>5442</td></tr> <tr><td>11</td><td>Hell S&amp;V Waren GmbH &amp; Co. KG</td><td>Petra Winkler</td><td>Sales Manager</td><td>Tiergartenstrasse 5</td><td>Berlin</td><td>NULL</td><td>10785</td></tr> <tr><td>12</td><td>Plutzer Lebensmittelgroßmärkte...</td><td>Martin Bein</td><td>International Marketing ...</td><td>Bogenallee 51</td><td>Frankfurt</td><td>NULL</td><td>60439</td></tr> <tr><td>13</td><td>Nord-Ost-Fisch Handelsgesellscha...</td><td>Sven Petersen</td><td>Coordinator Foreign Mar...</td><td>Frahmredder 112a</td><td>Cuxhaven</td><td>NULL</td><td>27478</td></tr> <tr><td>14</td><td>Fornaggi Fortini s.r.l.</td><td>Elio Rossi</td><td>Sales Representative</td><td>Viale Dante 75</td><td>Ravenna</td><td>NULL</td><td>48100</td></tr> <tr><td>15</td><td>Norske Meierier</td><td>Beate Vleid</td><td>Marketing Manager</td><td>Høstvegen 5</td><td>Sandvika</td><td>NULL</td><td>1320</td></tr> <tr><td>16</td><td>Bigfoot Breweries</td><td>Cheryl Saylor</td><td>Regional Account Rep.</td><td>3400 - 8th Avenue Suite ...</td><td>Bend</td><td>OR</td><td>97101</td></tr> <tr><td>17</td><td>Svensk Skärmförläggare AB</td><td>Michael Rådin</td><td>Sales Representative</td><td>Brunnsvallvägen 231</td><td>Stockholm</td><td>NULL</td><td>5-123 45</td></tr> </tbody> </table>	Supp_CD	Supp_companyName	Supp_contactName	Supp_contactTitle	Supp_address	Supp_City	Supp_Region	Supp_PostalCode	1	Exotic Liquids	Charlotte Cooper	Purchasing Manager	49 Gilbert St.	London	NULL	EC1 4SD	2	New Orleans Cajun Delights	Shelley Burke	Order Administrator	P.O. Box 78534	New Orleans	LA	70117	3	Grandma Kelly's Homestead	Regina Murphy	Sales Representative	707 Oxford Rd.	Ann Arbor	MI	48104	4	Tokyo Traders	Yoshi Nagase	Marketing Manager	9-9 Sekimai Musashino-shi	Tokyo	NULL	100	5	Cooperativa de Quesos 'La Cabras'	Antonio del Valle Saavedra	Export Administrator	Calle del Rosal 4	Oviedo	Asturias	33007	6	Mayumi's	Miyumi Ohno	Marketing Representative	92 Setuko Chuo-ku	Osaka	NULL	545	7	Pavlova Ltd.	Ian Devling	Marketing Manager	74 Rose St. Moonie Ponds	Melbourne	Victoria	3058	8	Specialty Biscuits Ltd.	Peter Wilson	Sales Representative	29 King's Way	Manchester	NULL	M14 GSD	9	PB Knäckebrot AB	Lars Peterson	Sales Agent	Kalosdagatan 13	Gäteborg	NULL	5-345 67	10	Refrescos Americanas LTDA	Carlos Diaz	Marketing Manager	Av. das Americanas 12890	Sao Paulo	NULL	5442	11	Hell S&V Waren GmbH & Co. KG	Petra Winkler	Sales Manager	Tiergartenstrasse 5	Berlin	NULL	10785	12	Plutzer Lebensmittelgroßmärkte...	Martin Bein	International Marketing ...	Bogenallee 51	Frankfurt	NULL	60439	13	Nord-Ost-Fisch Handelsgesellscha...	Sven Petersen	Coordinator Foreign Mar...	Frahmredder 112a	Cuxhaven	NULL	27478	14	Fornaggi Fortini s.r.l.	Elio Rossi	Sales Representative	Viale Dante 75	Ravenna	NULL	48100	15	Norske Meierier	Beate Vleid	Marketing Manager	Høstvegen 5	Sandvika	NULL	1320	16	Bigfoot Breweries	Cheryl Saylor	Regional Account Rep.	3400 - 8th Avenue Suite ...	Bend	OR	97101	17	Svensk Skärmförläggare AB	Michael Rådin	Sales Representative	Brunnsvallvägen 231	Stockholm	NULL	5-123 45
Supp_CD	Supp_companyName	Supp_contactName	Supp_contactTitle	Supp_address	Supp_City	Supp_Region	Supp_PostalCode																																																																																																																																										
1	Exotic Liquids	Charlotte Cooper	Purchasing Manager	49 Gilbert St.	London	NULL	EC1 4SD																																																																																																																																										
2	New Orleans Cajun Delights	Shelley Burke	Order Administrator	P.O. Box 78534	New Orleans	LA	70117																																																																																																																																										
3	Grandma Kelly's Homestead	Regina Murphy	Sales Representative	707 Oxford Rd.	Ann Arbor	MI	48104																																																																																																																																										
4	Tokyo Traders	Yoshi Nagase	Marketing Manager	9-9 Sekimai Musashino-shi	Tokyo	NULL	100																																																																																																																																										
5	Cooperativa de Quesos 'La Cabras'	Antonio del Valle Saavedra	Export Administrator	Calle del Rosal 4	Oviedo	Asturias	33007																																																																																																																																										
6	Mayumi's	Miyumi Ohno	Marketing Representative	92 Setuko Chuo-ku	Osaka	NULL	545																																																																																																																																										
7	Pavlova Ltd.	Ian Devling	Marketing Manager	74 Rose St. Moonie Ponds	Melbourne	Victoria	3058																																																																																																																																										
8	Specialty Biscuits Ltd.	Peter Wilson	Sales Representative	29 King's Way	Manchester	NULL	M14 GSD																																																																																																																																										
9	PB Knäckebrot AB	Lars Peterson	Sales Agent	Kalosdagatan 13	Gäteborg	NULL	5-345 67																																																																																																																																										
10	Refrescos Americanas LTDA	Carlos Diaz	Marketing Manager	Av. das Americanas 12890	Sao Paulo	NULL	5442																																																																																																																																										
11	Hell S&V Waren GmbH & Co. KG	Petra Winkler	Sales Manager	Tiergartenstrasse 5	Berlin	NULL	10785																																																																																																																																										
12	Plutzer Lebensmittelgroßmärkte...	Martin Bein	International Marketing ...	Bogenallee 51	Frankfurt	NULL	60439																																																																																																																																										
13	Nord-Ost-Fisch Handelsgesellscha...	Sven Petersen	Coordinator Foreign Mar...	Frahmredder 112a	Cuxhaven	NULL	27478																																																																																																																																										
14	Fornaggi Fortini s.r.l.	Elio Rossi	Sales Representative	Viale Dante 75	Ravenna	NULL	48100																																																																																																																																										
15	Norske Meierier	Beate Vleid	Marketing Manager	Høstvegen 5	Sandvika	NULL	1320																																																																																																																																										
16	Bigfoot Breweries	Cheryl Saylor	Regional Account Rep.	3400 - 8th Avenue Suite ...	Bend	OR	97101																																																																																																																																										
17	Svensk Skärmförläggare AB	Michael Rådin	Sales Representative	Brunnsvallvägen 231	Stockholm	NULL	5-123 45																																																																																																																																										
Control Flow	<pre> graph TD     START_LOG([START LOG]) --&gt; EXEC[EXEC STG SUPPLIERS DATOS]     EXEC -- Error --&gt; ERROR_LOG([ERROR LOG])     ERROR_LOG --&gt; END_LOG_OK([END LOG OK])     </pre>																																																																																																																																																
Process	<pre> USE [TP_DWH_MCD_2025] GO ***** Object: StoredProcedure [dbo].[SP_STG_Suppliers_Datos_Contacto] Script Date: 16/5/2025 19:04:54 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_STG_Suppliers_Datos_Contacto] AS BEGIN     SET NOCOUNT ON;      -- Truncar la tabla STG     TRUNCATE TABLE [STG].LK_SUPPLIERS_DATOS_Contacto;      -- Insertar los datos desde TMP con AUD_ROW_ID y acción INSERT     WITH SUPPLIERS AS         (SELECT * from [DWH].[LK_SUPPLIERS]         WHERE AUD_ACTIVE_FLAG = 1),         STG_SUPPLIERS AS (             SELECT                 d.Supp_Supplier_Id AS Dat_SupplierId,                 LTRIM(RTRIM(Supp_Phone)) Dat_Phone,                 LTRIM(RTRIM(Supp_Fax)) Dat_Fax,                 LTRIM(RTRIM(Supp_HomePage)) Dat_HomePage             FROM [TMP].[SUPPLIERS] s             INNER JOIN SUPPLIERS d             ON LTRIM(RTRIM(s.Supp_CD))= d.Supp_CD         )     INSERT INTO [STG].LK_SUPPLIERS_DATOS_Contacto     SELECT         Dat_SupplierId,         Dat_Phone,         Dat_Fax,         Dat_HomePage     FROM STG_SUPPLIERS; END     </pre>																																																																																																																																																

	<pre>         WHERE ISNULL(LTRIM(RTRIM(s.Supp_CD)), "") &lt;&gt; "     ) -- Mecanismo de Control de Versiones INSERT INTO [STG].LK_SUPPLIERS_DATOS_Contacto (     Dat_SupplierId,     Dat_Phone,     Dat_Fax,     Dat_HomePage,     AUD_INSERT_DT,     AUD_USER_INSERT,     AUD_ACTION,     AUD_ROWID ) SELECT     bt.Dat_SupplierId,     bt.Dat_Phone,     bt.Dat_Fax,     bt.Dat_HomePage,     GETDATE() AS AUD_INSERT_DT,     SYSTEM_USER AS AUD_USER_INSERT,     'INSERT' AS AUD_ACTION,     -- Uso de CHECKSUM sobre la concatenación de cadenas     CHECKSUM(         ISNULL(bt.Dat_SupplierId, ''),         ISNULL(bt.Dat_Phone, ''),         ISNULL(bt.Dat_Fax, ''),         ISNULL(bt.Dat_HomePage, '')     ) AS AUD_ROW_ID FROM STG_SUPPLIERS bt;  -- Inserto los BORRADOS LÓGICOS INSERT INTO [STG].[LK_SUPPLIERS_DATOS_Contacto] (     Dat_SupplierId,     Dat_Phone,     Dat_Fax,     Dat_HomePage,     AUD_INSERT_DT,     AUD_USER_INSERT,     AUD_ACTION,     AUD_ROWID ) SELECT     dwh.Dat_SupplierId,     dwh.Dat_Phone,     dwh.Dat_Fax,     dwh.Dat_HomePage,     GETDATE() AS AUD_INSERT_DT,     SYSTEM_USER AS AUD_USER_INSERT,     'DELETE' AS AUD_ACTION,     dwh.AUD_ROWID FROM [DWH].[LK_SUPPLIERS_DATOS_Contacto] dwh LEFT JOIN [STG].[LK_SUPPLIERS_DATOS_Contacto] s ON dwh.AUD_ROWID = s.AUD_ROWID WHERE 1 = 1     AND dwh.AUD_ACTIVE_FLAG = 1     AND s.Dat_SupplierId IS NULL     AND dwh.DatC_Contacto_Id &lt;&gt; -1; END; </pre>
OUTPUT	select * from [STG].[LK_SUPPLIERS_DATOS_Contacto]

	Dat_SupplierId	Dat_Phone	Dat_Fax	Dat_HomePage	AUD_INSERT_DT	AUD_USER_INSERT
1	30	(171) 555-2222	NULL	NULL	2025-05-16 01:25:31.243	DESKTOP-IAI1KNV\EE
2	31	(100) 555-4822	NULL	#CAJUN.HTM#	2025-05-16 01:25:31.243	DESKTOP-IAI1KNV\EE
3	32	(313) 555-5735	(313) 555-3349	NULL	2025-05-16 01:25:31.243	DESKTOP-IAI1KNV\EE
4	33	(03) 3555-5011	NULL	NULL	2025-05-16 01:25:31.243	DESKTOP-IAI1KNV\EE
5	34	(98) 598 76 54	NULL	NULL	2025-05-16 01:25:31.243	DESKTOP-IAI1KNV\EE
6	35	(06) 431-7877	NULL	Mayumi's (on the World Wide Web) #http://www.micr...	2025-05-16 01:25:31.243	DESKTOP-IAI1KNV\EE
7	36	(03) 444-2343	(03) 444-6588	NULL	2025-05-16 01:25:31.243	DESKTOP-IAI1KNV\EE
8	37	(161) 555-4448	NULL	NULL	2025-05-16 01:25:31.243	DESKTOP-IAI1KNV\EE
9	38	031-987 65 43	031-987 65 91	NULL	2025-05-16 01:25:31.243	DESKTOP-IAI1KNV\EE
10	39	(11) 555 4640	NULL	NULL	2025-05-16 01:25:31.243	DESKTOP-IAI1KNV\EE
11	40	(010) 9984510	NULL	NULL	2025-05-16 01:25:31.243	DESKTOP-IAI1KNV\EE
12	41	(069) 992755	NULL	Plutzer (on the World Wide Web) #http://www.micro...	2025-05-16 01:25:31.243	DESKTOP-IAI1KNV\EE
...	...	...	...	...	...	...

### 3.9 Proceso Schema STG 9: PRODUCTS

JobName	STG_Products.dtsx
Input	<pre>select * from [TMP].[PRODUCTS]</pre> <p></p>
Control Flow	<pre> graph TD     StartLog([START LOG]) --&gt; ExecProducts([EXEC STG PRODUCTS])     ExecProducts -- Error --&gt; ErrorLog([ERROR LOG])     ExecProducts --&gt; EndLogOK([END LOG OK])     EndLogOK -- Error --&gt; ErrorLog   </pre>
Proceso	<pre> USE [TP_DWH_MCD_2025] GO /***** Object: StoredProcedure [dbo].[SP_STG_Products]  Script Date: 17/5/2025 11:57:16 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_STG_Products] AS BEGIN     SET NOCOUNT ON;      -- Truncar la tabla STG     TRUNCATE TABLE [STG].[LK_PRODUCTS];      -- Insertar los datos desde TMP con AUD_ROW_ID y acción INSERT     WITH SUPPLIERS AS         (SELECT * from [DWH].[LK_SUPPLIERS]          WHERE AUD_ACTIVE_FLAG = 1),     CATEGORIES AS         (SELECT * from [DWH].[LK_CATEGORIES]          WHERE AUD_ACTIVE_FLAG = 1),     STG_PRODUCTS AS (         SELECT             LTRIM(RTRIM(product_CD)) AS prod_product_CD,             LTRIM(RTRIM(product_name)) AS prod_product_name,             COALESCE(d.Supp_Supplier_Id,-1) AS prod_supplier_id,             COALESCE(c.Category_Id,-1) AS prod_category_id,             LTRIM(RTRIM(Quantity_per_unit)) AS prod_Quantity_per_unit,             CAST(LTRIM(RTRIM(unit_price)) AS DECIMAL(10,2)) AS prod_unit_price,             CAST(LTRIM(RTRIM(units_in_stock)) AS DECIMAL(10,2)) AS prod_units_in_stock,             ...         )     INSERT INTO [STG].[LK_PRODUCTS]     SELECT * FROM STG_PRODUCTS; END   </pre>

```

    CAST(LTRIM(RTRIM(units_on_order)) AS DECIMAL(10,2))
prod_units_on_order,
    CAST(LTRIM(RTRIM(reorder_level)) AS INT) prod_reorder_level,
    CAST(LTRIM(RTRIM(discontinued)) AS INT) prod_discontinued
FROM [TMP].[PRODUCTS] s
    LEFT JOIN SUPPLIERS d
        ON LTRIM(RTRIM(s.supplier_cd))= d.Supp_CD
    LEFT JOIN CATEGORIES c
        ON LTRIM(RTRIM(s.category_cd))= c.Category_CD
    WHERE ISNULL(LTRIM(RTRIM(product_CD)), "") <> ""
)
-- Mecanismo de Control de Versiones
INSERT INTO [STG].[LK_PRODUCTS] (
    prod_product_CD,
    prod_product_name,
    prod_supplier_id,
    prod_category_id,
    prod_Quantity_per_unit,
    prod_unit_price,
    prod_units_in_stock,
    prod_units_on_order,
    prod_reorder_level,
    prod_discontinued,
    AUD_INSERT_DT,
    AUD_USER_INSERT,
    AUD_ACTION,
    AUD_ROWID
)
SELECT
    bt.prod_product_CD,
    bt.prod_product_name,
    bt.prod_supplier_id,
    bt.prod_category_id,
    bt.prod_Quantity_per_unit,
    bt.prod_unit_price,
    bt.prod_units_in_stock,
    bt.prod_units_on_order,
    bt.prod_reorder_level,
    bt.prod_discontinued,
    GETDATE() AS AUD_INSERT_DT,
    SYSTEM_USER AS AUD_USER_INSERT,
    'INSERT' AS AUD_ACTION,
    -- Uso de CHECKSUM sobre la concatenación de cadenas
    CHECKSUM(
        ISNULL(bt.prod_product_CD, ""),
        ISNULL(bt.prod_product_name, ""),
        ISNULL(bt.prod_supplier_id, ""),
        ISNULL(bt.prod_category_id, ""),
        ISNULL(bt.prod_Quantity_per_unit, ""),
        ISNULL(bt.prod_unit_price, 0),
        ISNULL(bt.prod_units_in_stock, 0),
        ISNULL(bt.prod_units_on_order, 0),
        ISNULL(bt.prod_reorder_level, 0),
        ISNULL(bt.prod_discontinued, 0)
    ) AS AUD_ROW_ID
FROM STG_PRODUCTS bt;

-- Inserto los BORRADOS LÓGICOS
INSERT INTO [STG].[LK_PRODUCTS] (
    prod_product_CD,
    prod_product_name,
    prod_supplier_id,
    prod_category_id,
    prod_Quantity_per_unit,
    prod_unit_price,
    prod_units_in_stock,

```

	<pre> prod_units_on_order, prod_reorder_level, prod_discontinued, AUD_INSERT_DT, AUD_USER_INSERT, AUD_ACTION, AUD_ROWID ) SELECT dwh.prod_product_CD, dwh.prod_product_name, dwh.prod_supplier_id, dwh.prod_category_id, dwh.prod_Quantity_per_unit, dwh.prod_unit_price, dwh.prod_units_in_stock, dwh.prod_units_on_order, dwh.prod_reorder_level, dwh.prod_discontinued, GETDATE() AS AUD_INSERT_DT, SYSTEM_USER AS AUD_USER_INSERT, 'DELETE' AS AUD_ACTION, dwh.AUD_ROWID FROM [DWH].[LK_PRODUCTS] dwh LEFT JOIN [STG].[LK_PRODUCTS] s ON dwh.AUD_ROWID = s.AUD_ROWID WHERE 1 = 1 AND dwh.AUD_ACTIVE_FLAG = 1 AND s.prod_product_CD IS NULL AND dwh.prod_product_id &lt;&gt; -1;  END; </pre>																																																																																																																									
OUTPUT	<pre>select * from [STG].[LK_PRODUCTS]</pre> <table border="1"> <thead> <tr> <th></th><th>prod_product_CD</th><th>prod_product_name</th><th>prod_supplier_id</th><th>prod_category_id</th><th>prod_Quantity_per_unit</th><th>prod_unit_price</th><th>prod_units_in_stock</th><th>prod_units_on_order</th><th>prod_reorder_level</th><th>prod_discontinued</th></tr> </thead> <tbody> <tr><td>1</td><td>1</td><td>Chai</td><td>2002</td><td>1</td><td>10 boxes x 20 bags</td><td>18.00</td><td>39.00</td><td>0.00</td><td>10</td><td>0</td></tr> <tr><td>2</td><td>2</td><td>Chang</td><td>2002</td><td>1</td><td>24 - 12 oz bottles</td><td>19.00</td><td>17.00</td><td>40.00</td><td>25</td><td>0</td></tr> <tr><td>3</td><td>3</td><td>Aniseed Syrup</td><td>2002</td><td>2</td><td>12 - 550 ml bottles</td><td>10.00</td><td>13.00</td><td>70.00</td><td>25</td><td>0</td></tr> <tr><td>4</td><td>4</td><td>Chef Anton's Cajun Seasoning</td><td>2003</td><td>2</td><td>48 - 6 oz jars</td><td>22.00</td><td>53.00</td><td>0.00</td><td>0</td><td>0</td></tr> <tr><td>5</td><td>5</td><td>Chef Anton's Gumbo Mix</td><td>2003</td><td>2</td><td>36 boxes</td><td>21.35</td><td>0.00</td><td>0.00</td><td>0</td><td>1</td></tr> <tr><td>6</td><td>6</td><td>Grandma's Boysenberry Spread</td><td>2004</td><td>2</td><td>12 - 8 oz jars</td><td>25.00</td><td>120.00</td><td>0.00</td><td>25</td><td>0</td></tr> <tr><td>7</td><td>7</td><td>Uncle Bob's Organic Dried Pears</td><td>2004</td><td>7</td><td>12 - 1 lb pkgs.</td><td>30.00</td><td>15.00</td><td>0.00</td><td>10</td><td>0</td></tr> <tr><td>8</td><td>8</td><td>Nothwoods Cranberry Sauce</td><td>2004</td><td>2</td><td>12 - 12 oz jars</td><td>40.00</td><td>6.00</td><td>0.00</td><td>0</td><td>0</td></tr> <tr><td>9</td><td>9</td><td>Mishi Kobe Niku</td><td>2005</td><td>6</td><td>18 - 500 g pkgs.</td><td>97.00</td><td>29.00</td><td>0.00</td><td>0</td><td>1</td></tr> <tr><td>10</td><td>10</td><td>Ikura</td><td>2005</td><td>8</td><td>12 - 200 ml jars</td><td>31.00</td><td>31.00</td><td>0.00</td><td>0</td><td>0</td></tr> </tbody> </table>		prod_product_CD	prod_product_name	prod_supplier_id	prod_category_id	prod_Quantity_per_unit	prod_unit_price	prod_units_in_stock	prod_units_on_order	prod_reorder_level	prod_discontinued	1	1	Chai	2002	1	10 boxes x 20 bags	18.00	39.00	0.00	10	0	2	2	Chang	2002	1	24 - 12 oz bottles	19.00	17.00	40.00	25	0	3	3	Aniseed Syrup	2002	2	12 - 550 ml bottles	10.00	13.00	70.00	25	0	4	4	Chef Anton's Cajun Seasoning	2003	2	48 - 6 oz jars	22.00	53.00	0.00	0	0	5	5	Chef Anton's Gumbo Mix	2003	2	36 boxes	21.35	0.00	0.00	0	1	6	6	Grandma's Boysenberry Spread	2004	2	12 - 8 oz jars	25.00	120.00	0.00	25	0	7	7	Uncle Bob's Organic Dried Pears	2004	7	12 - 1 lb pkgs.	30.00	15.00	0.00	10	0	8	8	Nothwoods Cranberry Sauce	2004	2	12 - 12 oz jars	40.00	6.00	0.00	0	0	9	9	Mishi Kobe Niku	2005	6	18 - 500 g pkgs.	97.00	29.00	0.00	0	1	10	10	Ikura	2005	8	12 - 200 ml jars	31.00	31.00	0.00	0	0
	prod_product_CD	prod_product_name	prod_supplier_id	prod_category_id	prod_Quantity_per_unit	prod_unit_price	prod_units_in_stock	prod_units_on_order	prod_reorder_level	prod_discontinued																																																																																																																
1	1	Chai	2002	1	10 boxes x 20 bags	18.00	39.00	0.00	10	0																																																																																																																
2	2	Chang	2002	1	24 - 12 oz bottles	19.00	17.00	40.00	25	0																																																																																																																
3	3	Aniseed Syrup	2002	2	12 - 550 ml bottles	10.00	13.00	70.00	25	0																																																																																																																
4	4	Chef Anton's Cajun Seasoning	2003	2	48 - 6 oz jars	22.00	53.00	0.00	0	0																																																																																																																
5	5	Chef Anton's Gumbo Mix	2003	2	36 boxes	21.35	0.00	0.00	0	1																																																																																																																
6	6	Grandma's Boysenberry Spread	2004	2	12 - 8 oz jars	25.00	120.00	0.00	25	0																																																																																																																
7	7	Uncle Bob's Organic Dried Pears	2004	7	12 - 1 lb pkgs.	30.00	15.00	0.00	10	0																																																																																																																
8	8	Nothwoods Cranberry Sauce	2004	2	12 - 12 oz jars	40.00	6.00	0.00	0	0																																																																																																																
9	9	Mishi Kobe Niku	2005	6	18 - 500 g pkgs.	97.00	29.00	0.00	0	1																																																																																																																
10	10	Ikura	2005	8	12 - 200 ml jars	31.00	31.00	0.00	0	0																																																																																																																

### 3.10 Proceso Schema STG 10: EMPLOYEE\_TERRITORIES

JobName	STG_Employees_Territories.dtsx																																	
Input	<pre>select * from [TMP].[EMPLOYEES_TERRITORIES]</pre> <table border="1"> <thead> <tr> <th></th> <th>Employee_CD</th> <th>Territory_CD</th> </tr> </thead> <tbody> <tr><td>1</td><td>1</td><td>06897</td></tr> <tr><td>2</td><td>1</td><td>19713</td></tr> <tr><td>3</td><td>2</td><td>01581</td></tr> <tr><td>4</td><td>2</td><td>01730</td></tr> <tr><td>5</td><td>2</td><td>01833</td></tr> <tr><td>6</td><td>2</td><td>02116</td></tr> <tr><td>7</td><td>2</td><td>02139</td></tr> <tr><td>8</td><td>2</td><td>02184</td></tr> <tr><td>9</td><td>2</td><td>40222</td></tr> <tr><td>10</td><td>2</td><td>30216</td></tr> </tbody> </table>		Employee_CD	Territory_CD	1	1	06897	2	1	19713	3	2	01581	4	2	01730	5	2	01833	6	2	02116	7	2	02139	8	2	02184	9	2	40222	10	2	30216
	Employee_CD	Territory_CD																																
1	1	06897																																
2	1	19713																																
3	2	01581																																
4	2	01730																																
5	2	01833																																
6	2	02116																																
7	2	02139																																
8	2	02184																																
9	2	40222																																
10	2	30216																																
Control Flow																																		
Proceso	<pre> USE [TP_DWH_MCD_2025] GO /***** Object: StoredProcedure [dbo].[SP_STG_Employee_Territories] Script Date: 17/5/2025 17:37:37 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_STG_Employee_Territories] AS BEGIN     SET NOCOUNT ON;      -- Truncar la tabla STG     TRUNCATE TABLE [STG].[LK_EMPLOYEE_TERRITORIES];      -- Insertar los datos desde TMP con AUD_ROW_ID y acción INSERT     WITH         TERRITORIES AS (             Select * from [DWH].[LK_TERRITORIES]             WHERE AUD_ACTIVE_FLAG = 1         ),         EMPLOYEES AS         (             SELECT * from [DWH].[LK_EMPLOYEES]             WHERE AUD_ACTIVE_FLAG = 1         )     INSERT INTO [STG].[LK_EMPLOYEE_TERRITORIES]     (AUD_ROW_ID, TERRITORY_CD, EMPLOYEE_CD)     SELECT E.AUD_ROW_ID, T.TERRITORY_CD, E.EMPLOYEE_CD     FROM EMPLOYEES E     JOIN TERRITORIES T ON E.TERRITORY_CD = T.TERRITORY_CD     WHERE E.AUD_ACTIVE_FLAG = 1 END </pre>																																	

	<pre> ), STG_EMPLOYEE_TERRITORIES AS ( SELECT     COALESCE(e.Emp_Employee_id,-1)AS EmpTer_Employee_id,     COALESCE(t.Territory_Id,-1) [EmpTer_Territory_id] FROM [TMP].[EMPLOYEES_TERRITORIES] s LEFT JOIN EMPLOYEES e ON LTRIM(RTRIM(s.Employee_CD))= e.Emp_Employee_CD LEFT JOIN TERRITORIES t ON LTRIM(RTRIM(s.Territory_CD))= t.Territory_CD WHERE ISNULL(LTRIM(RTRIM(Employee_CD)),") &lt;&gt; " ) -- Mecanismo de Control de Versiones INSERT INTO [STG].[LK_EMPLOYEE_TERRITORIES] (     EmpTer_Employee_id,     EmpTer_Territory_id,     AUD_INSERT_DT,     AUD_USER_INSERT,     AUD_ACTION,     AUD_ROWID ) SELECT     bt.EmpTer_Employee_id,     bt.EmpTer_Territory_id,     GETDATE() AS AUD_INSERT_DT,     SYSTEM_USER AS AUD_USER_INSERT,     'INSERT' AS AUD_ACTION,     -- Uso de CHECKSUM sobre la concatenación de cadenas     CHECKSUM(         ISNULL(bt.EmpTer_Employee_id, ""),         ISNULL(bt.EmpTer_Territory_id, "")     ) AS AUD_ROW_ID FROM STG_EMPLOYEE_TERRITORIES bt;  -- Inserto los BORRADOS LÓGICOS INSERT INTO [STG].[LK_EMPLOYEE_TERRITORIES] (     EmpTer_Employee_id,     EmpTer_Territory_id,     AUD_INSERT_DT,     AUD_USER_INSERT,     AUD_ACTION,     AUD_ROWID ) SELECT     dwh.EmpTer_Employee_id,     dwh.EmpTer_Territory_id,     GETDATE() AS AUD_INSERT_DT,     SYSTEM_USER AS AUD_USER_INSERT,     'DELETE' AS AUD_ACTION,     dwh.AUD_ROWID FROM [DWH].[LK_EMPLOYEES_TERRITORIES] dwh LEFT JOIN [STG].[LK_EMPLOYEE_TERRITORIES] s ON dwh.AUD_ROWID = s.AUD_ROWID WHERE 1 = 1     AND dwh.AUD_ACTIVE_FLAG = 1     AND s.EmpTer_Employee_id IS NULL         AND dwh.EmpTer_Employee_id &lt;&gt; -1;  END; </pre>
OUTPUT	select * from [STG].[LK_EMPLOYEE_TERRITORIES]

### 3.11 Proceso Schema STG 11: CUSTOMERS

JobName	STG_Customers.dtsx
Input	<pre>select * from [TMP].[CUSTOMERS]</pre>
Control Flow	
Proceso	<pre> USE [TP_DWH_MCD_2025] GO /******** Object: StoredProcedure [dbo].[SP_STG_Customers] Script Date: 18/5/2025 21:31:36 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_STG_Customers] AS BEGIN     SET NOCOUNT ON;      -- Truncar la tabla STG     TRUNCATE TABLE [STG].[ODS_CUSTOMERS];      -- Insertar los datos desde TMP con AUD_ROW_ID y acción INSERT     WITH REGIONS AS         (SELECT * from [DWH].[VW_LK_REL_REGIONS]),     COUNTRIES AS         (SELECT * from DWH.VW_LK_REL_COUNTRIES         ),     STG_CUSTOMERS AS (     SELECT         LTRIM(RTRIM(Customer_CD)) Cus_Customer_CD,         LTRIM(RTRIM(Company_Name)) Cus_Company_Name,         LTRIM(RTRIM(Contact_Name)) Cus_Contact_Name,         LTRIM(RTRIM(Contact_Title)) Cus_Contact_Title,         LTRIM(RTRIM(address)) Cus_address,         LTRIM(RTRIM(City)) Cus_City,         LTRIM(RTRIM(Region)) Cus_Region_cd,         COALESCE(r.Region_Id,-1) as Cus_Region_id,</pre>

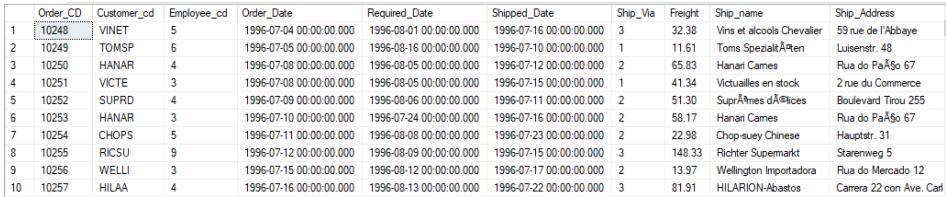
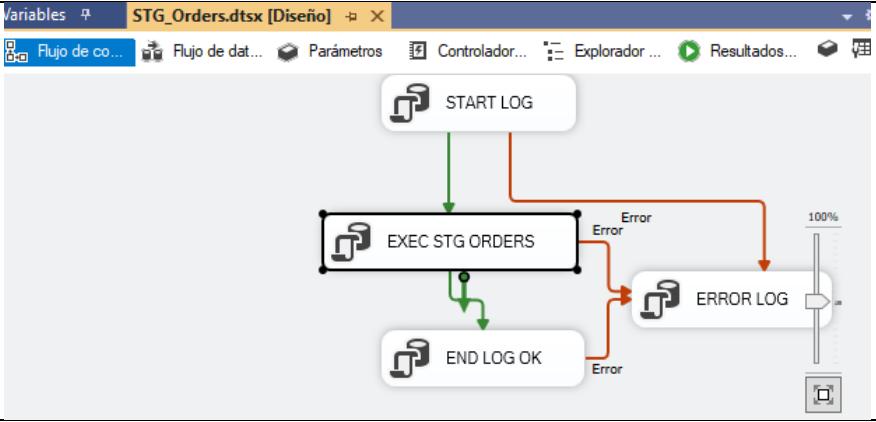
```

    LTRIM(RTRIM(Postal_Code)) Cus_Postal_Code,
    LTRIM(RTRIM(Country)) Cus_Country_cd,
    COALESCE(co.Ctry_Country_Id,-1) as Cus_Country_id,
    LTRIM(RTRIM(Phone)) Cus_Phone,
    LTRIM(RTRIM(fax))Cus_fax
FROM [TMP].[CUSTOMERS] c
    LEFT JOIN REGIONS r
        ON LTRIM(RTRIM(c.Region)) = r.Region_CD
    LEFT JOIN COUNTRIES co
        ON LTRIM(RTRIM(c.Country)) = co.Country_CD
    WHERE ISNULL(LTRIM(RTRIM(Customer_CD)), "") <> ""
)
-- Mecanismo de Control de Versiones
INSERT INTO [STG].[ODS_CUSTOMERS] (
    [Cus_Customer_CD],
    [Cus_Company_Name],
    [Cus_Contact_Name],
    [Cus_Contact_Title],
    [Cus_address],
    [Cus_City],
    [Cus_Region_cd],
    [Cus_Region_id],
    [Cus_Postal_Code],
    [Cus_Country_cd],
    [Cus_Country_id],
    [Cus_Phone],
    [Cus_fax],
    AUD_INSERT_DT,
    AUD_USER_INSERT,
    AUD_ACTION,
    AUD_ROWID
)
SELECT
    Cus_Customer_CD,
    Cus_Company_Name,
    Cus_Contact_Name,
    Cus_Contact_Title,
    Cus_address,
    Cus_City,
    Cus_Region_cd,
    Cus_Region_id,
    Cus_Postal_Code,
    Cus_Country_cd,
    Cus_Country_id,
    Cus_Phone,
    Cus_fax,
    GETDATE() AS AUD_INSERT_DT,
    SYSTEM_USER AS AUD_USER_INSERT,
    'INSERT' AS AUD_ACTION,
    -- Uso de CHECKSUM sobre la concatenación de cadenas
    CHECKSUM(
        ISNULL(bt.Cus_Customer_CD, ""),
        ISNULL(bt.Cus_Company_Name, ""),
            ISNULL(bt.Cus_Contact_Name, ""),
            ISNULL(bt.Cus_Contact_Title, ""),
            ISNULL(bt.Cus_address, ""),
            ISNULL(bt.Cus_City, ""),
            ISNULL(bt.Cus_Region_cd, ""),
            ISNULL(bt.Cus_Region_id, ""),
            ISNULL(bt.Cus_Postal_Code, ""),
            ISNULL(bt.Cus_Country_cd, ""),
            ISNULL(bt.Cus_Country_id, ""),
            ISNULL(bt.Cus_Phone, ""),
            ISNULL(bt.Cus_fax, "")
    ) AS AUD_ROW_ID
FROM STG_CUSTOMERS bt;

```

	<pre>-- Inserto los BORRADOS LÓGICOS INSERT INTO [STG].[ODS_Customers] (     Cus_Customer_CD,         Cus_Company_Name,         Cus_Contact_Name,         Cus_Contact_Title,         Cus_address,         Cus_City,         Cus_Region_cd,         Cus_Region_id,         Cus_Postal_Code,         Cus_Country_cd,         Cus_Country_id,         Cus_Phone,         Cus_fax,         AUD_INSERT_DT,         AUD_USER_INSERT,         AUD_ACTION,         AUD_ROWID ) SELECT     dwh.Cus_Customer_CD,         dwh.Cus_Company_Name,         dwh.Cus_Contact_Name,         dwh.Cus_Contact_Title,         dwh.Cus_address,         dwh.Cus_City,         dwh.Cus_Region_cd,         dwh.Cus_Region_id,         dwh.Cus_Postal_Code,         dwh.Cus_Country_cd,         dwh.Cus_Country_id,         dwh.Cus_Phone,         dwh.Cus_fax,         GETDATE() AS AUD_INSERT_DT,         SYSTEM_USER AS AUD_USER_INSERT,         'DELETE' AS AUD_ACTION,         dwh.AUD_ROWID FROM [ODS].[CUSTOMERS] dwh LEFT JOIN [STG].[ODS_CUSTOMERS] s ON dwh.AUD_ROWID = s.AUD_ROWID WHERE 1 = 1     AND dwh.AUD_ACTIVE_FLAG = 1 AND s.Cus_Customer_CD IS NULL     AND dwh.Cus_Customer_id&lt;&gt;-1;  END;</pre>																																																																																																																																							
OUTPUT	<pre>select * from [STG].[ ODS_CUSTOMERS]</pre> <table border="1"> <thead> <tr> <th>Cus_Customer_CD</th><th>Cus_Company_Name</th><th>Cus_Contact_Name</th><th>Cus_Contact_Title</th><th>Cus_address</th><th>Cus_City</th><th>Cus_Region_cd</th><th>Cus_Region_id</th><th>Cus_J_A</th></tr> </thead> <tbody> <tr> <td>1 ALFKI</td><td>Alfreds Futterkiste</td><td>Maria Anders</td><td>Sales Representative</td><td>Obere Str. 57</td><td>Berlin</td><td>NULL</td><td>-1</td><td>1220</td></tr> <tr> <td>2 ANATR</td><td>Ana Trujillo Emparedados y helados</td><td>Ana Trujillo</td><td>Owner</td><td>Avda. de la ConstituciÃ³n 2222</td><td>MÃ©xico D.F.</td><td>NULL</td><td>-1</td><td>0502</td></tr> <tr> <td>3 ANTON</td><td>Antonio Moreno TaquerÃ;a</td><td>Antonio Moreno</td><td>Owner</td><td>Mataderos 2312</td><td>MÃ©xico D.F.</td><td>NULL</td><td>-1</td><td>0502</td></tr> <tr> <td>4 AROUT</td><td>Around the Horn</td><td>Thomas Hardy</td><td>Sales Representative</td><td>120 Hanover Sq.</td><td>London</td><td>NULL</td><td>-1</td><td>WA1</td></tr> <tr> <td>5 BERGS</td><td>Berglunds snabbköp</td><td>Christina Berglund</td><td>Order Administrator</td><td>BerguvsvÄgen 8</td><td>LuleÅ</td><td>NULL</td><td>-1</td><td>5-95!</td></tr> <tr> <td>6 BLAUS</td><td>Blauer See Delikatessen</td><td>Hanna Moos</td><td>Sales Representative</td><td>Fonsterstr. 57</td><td>Mannheim</td><td>NULL</td><td>-1</td><td>6830</td></tr> <tr> <td>7 BLONP</td><td>Blondesdell pÃ're et fils</td><td>FranÃ§oise Ceteaux</td><td>Marketing Manager</td><td>24 place KlÃ¶ber</td><td>Strasbourg</td><td>NULL</td><td>-1</td><td>6700</td></tr> <tr> <td>8 BOLID</td><td>BÃ±ido Comidas preparadas</td><td>MarÃ¡n Sommer</td><td>Owner</td><td>67C Aarquil</td><td>Madrid</td><td>NULL</td><td>-1</td><td>2802</td></tr> <tr> <td>9 BONAP</td><td>Bon app'</td><td>Laurence Lebihan</td><td>Owner</td><td>12 rue des Bouchers</td><td>Marseille</td><td>NULL</td><td>-1</td><td>1300</td></tr> <tr> <td>10 BOTTM</td><td>Bottom-Dollar Markets</td><td>Elizabeth Lincoln</td><td>Accounting Manager</td><td>23 Tsawassen Blvd.</td><td>Tsawassen</td><td>BC</td><td>-1</td><td>T2F I</td></tr> <tr> <td>11 BSBEV</td><td>B's Beverages</td><td>Victoria Ashworth</td><td>Sales Representative</td><td>Fauntlerooy Circus</td><td>London</td><td>NULL</td><td>-1</td><td>EC2</td></tr> <tr> <td>12 CACTU</td><td>Cactus Comidas para llevar</td><td>Patricia Simpson</td><td>Sales Agent</td><td>Cemta 333</td><td>Buenos Aires</td><td>NULL</td><td>-1</td><td>1010</td></tr> <tr> <td>13 CENTC</td><td>Centro comercial Moctezuma</td><td>Francisco Chang</td><td>Marketing Manager</td><td>Sierras de Granada 9993</td><td>MÃ©xico D.F.</td><td>NULL</td><td>-1</td><td>0502</td></tr> <tr> <td>14 CHOPS</td><td>Chop-suey Chinese</td><td>Yang Wang</td><td>Owner</td><td>Hauptstr. 29</td><td>Bern</td><td>NULL</td><td>-1</td><td>3012</td></tr> </tbody> </table>	Cus_Customer_CD	Cus_Company_Name	Cus_Contact_Name	Cus_Contact_Title	Cus_address	Cus_City	Cus_Region_cd	Cus_Region_id	Cus_J_A	1 ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57	Berlin	NULL	-1	1220	2 ANATR	Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Avda. de la ConstituciÃ³n 2222	MÃ©xico D.F.	NULL	-1	0502	3 ANTON	Antonio Moreno TaquerÃ;a	Antonio Moreno	Owner	Mataderos 2312	MÃ©xico D.F.	NULL	-1	0502	4 AROUT	Around the Horn	Thomas Hardy	Sales Representative	120 Hanover Sq.	London	NULL	-1	WA1	5 BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	BerguvsvÄgen 8	LuleÅ	NULL	-1	5-95!	6 BLAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Fonsterstr. 57	Mannheim	NULL	-1	6830	7 BLONP	Blondesdell pÃ're et fils	FranÃ§oise Ceteaux	Marketing Manager	24 place KlÃ¶ber	Strasbourg	NULL	-1	6700	8 BOLID	BÃ±ido Comidas preparadas	MarÃ¡n Sommer	Owner	67C Aarquil	Madrid	NULL	-1	2802	9 BONAP	Bon app'	Laurence Lebihan	Owner	12 rue des Bouchers	Marseille	NULL	-1	1300	10 BOTTM	Bottom-Dollar Markets	Elizabeth Lincoln	Accounting Manager	23 Tsawassen Blvd.	Tsawassen	BC	-1	T2F I	11 BSBEV	B's Beverages	Victoria Ashworth	Sales Representative	Fauntlerooy Circus	London	NULL	-1	EC2	12 CACTU	Cactus Comidas para llevar	Patricia Simpson	Sales Agent	Cemta 333	Buenos Aires	NULL	-1	1010	13 CENTC	Centro comercial Moctezuma	Francisco Chang	Marketing Manager	Sierras de Granada 9993	MÃ©xico D.F.	NULL	-1	0502	14 CHOPS	Chop-suey Chinese	Yang Wang	Owner	Hauptstr. 29	Bern	NULL	-1	3012
Cus_Customer_CD	Cus_Company_Name	Cus_Contact_Name	Cus_Contact_Title	Cus_address	Cus_City	Cus_Region_cd	Cus_Region_id	Cus_J_A																																																																																																																																
1 ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57	Berlin	NULL	-1	1220																																																																																																																																
2 ANATR	Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Avda. de la ConstituciÃ³n 2222	MÃ©xico D.F.	NULL	-1	0502																																																																																																																																
3 ANTON	Antonio Moreno TaquerÃ;a	Antonio Moreno	Owner	Mataderos 2312	MÃ©xico D.F.	NULL	-1	0502																																																																																																																																
4 AROUT	Around the Horn	Thomas Hardy	Sales Representative	120 Hanover Sq.	London	NULL	-1	WA1																																																																																																																																
5 BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	BerguvsvÄgen 8	LuleÅ	NULL	-1	5-95!																																																																																																																																
6 BLAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Fonsterstr. 57	Mannheim	NULL	-1	6830																																																																																																																																
7 BLONP	Blondesdell pÃ're et fils	FranÃ§oise Ceteaux	Marketing Manager	24 place KlÃ¶ber	Strasbourg	NULL	-1	6700																																																																																																																																
8 BOLID	BÃ±ido Comidas preparadas	MarÃ¡n Sommer	Owner	67C Aarquil	Madrid	NULL	-1	2802																																																																																																																																
9 BONAP	Bon app'	Laurence Lebihan	Owner	12 rue des Bouchers	Marseille	NULL	-1	1300																																																																																																																																
10 BOTTM	Bottom-Dollar Markets	Elizabeth Lincoln	Accounting Manager	23 Tsawassen Blvd.	Tsawassen	BC	-1	T2F I																																																																																																																																
11 BSBEV	B's Beverages	Victoria Ashworth	Sales Representative	Fauntlerooy Circus	London	NULL	-1	EC2																																																																																																																																
12 CACTU	Cactus Comidas para llevar	Patricia Simpson	Sales Agent	Cemta 333	Buenos Aires	NULL	-1	1010																																																																																																																																
13 CENTC	Centro comercial Moctezuma	Francisco Chang	Marketing Manager	Sierras de Granada 9993	MÃ©xico D.F.	NULL	-1	0502																																																																																																																																
14 CHOPS	Chop-suey Chinese	Yang Wang	Owner	Hauptstr. 29	Bern	NULL	-1	3012																																																																																																																																

### 3.12 Proceso Schema STG 12: ORDERS

JobName	STG_Orders.dtsx
Input	<pre>select * from [TMP].[ORDERS]</pre> <p></p>
Control Flow	 <pre> graph TD     StartLog([START LOG]) --&gt; ExecStgOrders[EXEC STG ORDERS]     ExecStgOrders -- Error --&gt; ErrorLog([ERROR LOG])     ExecStgOrders --&gt; EndLogOk([END LOG OK])     </pre>
Proceso	<pre> USE [TP_DWH_MCD_2025] GO /******** Object: StoredProcedure [dbo].[SP_STG_Customers] Script Date: 18/5/2025 22:46:13 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_STG_Orders] AS BEGIN     SET NOCOUNT ON;      -- Truncar la tabla STG     TRUNCATE TABLE [STG].[ODS_ORDERS];      -- Insertar los datos desde TMP con AUD_ROW_ID y acción INSERT     WITH REGIONS AS         (SELECT * from [DWH].[VW_LK_REL_REGIONS]),     COUNTRIES AS         (SELECT * from DWH.VW_LK_REL_COUNTRIES         ),     CUSTOMERS AS         ( SELECT * FROM ODS.CUSTOMERS         WHERE AUD_ACTIVE_FLAG = 1),     EMPLOYEE AS         (SELECT * from DWH.LK_EMPLOYEES         WHERE AUD_ACTIVE_FLAG = 1),     STG_ORDERS AS (     SELECT         LTRIM(RTRIM(Order_CD)) Ord_Order_CD,         LTRIM(RTRIM(Customer_cd)) Ord_Customer_cd,         COALESCE(cu.Cus_Customer_id,-1) Ord_Customer_id,         LTRIM(RTRIM(Employee_cd)) Ord_Employee_cd,         LTRIM(RTRIM(e.Emp_Employee_id)) Ord_Employee_id,         </pre>

```

COALESCE(TRY_CAST(
CASE
    WHEN LTRIM(RTRIM(Order_Date)) IS NULL OR
        LTRIM(RTRIM(Order_Date)) = ""
        THEN '1900-01-01'
        ELSE LTRIM(RTRIM(Order_Date))
    END
    AS DATE), CAST('1900-01-01' AS DATE)) AS Ord_Order_Date,
COALESCE(TRY_CAST(
CASE
    WHEN LTRIM(RTRIM(Required_Date)) IS NULL OR
        LTRIM(RTRIM(Required_Date)) = ""
        THEN '1900-01-01'
        ELSE LTRIM(RTRIM(Required_Date))
    END
    AS DATE), CAST('1900-01-01' AS DATE)) AS Ord_Required_Date,
COALESCE(TRY_CAST(
CASE
    WHEN LTRIM(RTRIM(Shipped_Date)) IS NULL OR
        LTRIM(RTRIM(Shipped_Date)) = ""
        THEN '1900-01-01'
        ELSE LTRIM(RTRIM(Shipped_Date))
    END
    AS DATE), CAST('1900-01-01' AS DATE)) AS Ord_Shipped_Date,
LTRIM(RTRIM(Ship_Via)) Ord_Ship_Via,
LTRIM(RTRIM(Freight)) Ord_Freight,
LTRIM(RTRIM(Ship_name)) as Ord_Ship_name,
LTRIM(RTRIM(Ship_Address)) Ord_Ship_Address,
LTRIM(RTRIM(Ship_City))Ord_Ship_City,
LTRIM(RTRIM(Ship_Region))Ord_Ship_Region_cd,
COALESCE(r.Region_Id,-1) as Ord_Ship_Region_Id,
LTRIM(RTRIM(Ship_PostalCode))Ord_Ship_PostalCode,
LTRIM(RTRIM(Ship_Country))Ord_Ship_Country_cd,
COALESCE (coshp.Ctry_Country_id,-1) Ord_Ship_Country_id
FROM [TMP].[ORDERS] c
LEFT JOIN REGIONS r
ON LTRIM(RTRIM(c.Ship_Region)) = r.Region_CD
LEFT JOIN CUSTOMERS cu
ON LTRIM(RTRIM(c.Customer_cd)) = cu.Cus_Customer_cd
LEFT JOIN EMPLOYEE e
ON LTRIM(RTRIM(c.Employee_cd)) = e.Emp_Employee_Cd
LEFT JOIN COUNTRIES coshp
ON LTRIM(RTRIM(c.Ship_Country)) = coshp.Country_CD
WHERE ISNULL(LTRIM(RTRIM(Order_CD)), "") <> "
)
-- Mecanismo de Control de Versiones
INSERT INTO [STG].[ODS_ORDERS] (
    Ord_Order_CD,
    Ord_Customer_cd,
    Ord_Customer_id,
    Ord_Employee_cd,
    Ord_Employee_id,
    Ord_Order_Date,
    Ord_Required_Date,
    Ord_Shipped_Date,
    Ord_Ship_Via,
    Ord_Freight,
    Ord_Ship_name,
    Ord_Ship_Address,
    Ord_Ship_City,
    Ord_Ship_Region_cd,
    Ord_Ship_Region_Id,
    Ord_Ship_PostalCode,
    Ord_Ship_Country_cd,
    Ord_Ship_Country_id,
    AUD_INSERT_DT,
    AUD_UPDATE_DT,
    AUD_USER_ID,
    AUD_IS_DELETED
)
SELECT
    Ord_Order_CD,
    Ord_Customer_cd,
    Ord_Customer_id,
    Ord_Employee_cd,
    Ord_Employee_id,
    Ord_Order_Date,
    Ord_Required_Date,
    Ord_Shipped_Date,
    Ord_Ship_Via,
    Ord_Freight,
    Ord_Ship_name,
    Ord_Ship_Address,
    Ord_Ship_City,
    Ord_Ship_Region_cd,
    Ord_Ship_Region_Id,
    Ord_Ship_PostalCode,
    Ord_Ship_Country_cd,
    Ord_Ship_Country_id,
    GETDATE(),
    NULL,
    NULL,
    0
FROM (
    SELECT
        Order_CD,
        Customer_cd,
        Customer_id,
        Employee_cd,
        Employee_id,
        Order_Date,
        Required_Date,
        Shipped_Date,
        Ship_Via,
        Freight,
        Ship_name,
        Ship_Address,
        Ship_City,
        Ship_Region_cd,
        Ship_Region_Id,
        Ship_PostalCode,
        Ship_Country_cd,
        Ship_Country_id,
        GETDATE(),
        NULL,
        0
    FROM [TMP].[ORDERS]
    WHERE ISNULL(LTRIM(RTRIM(Order_CD)), "") <> "
)

```

```

        AUD_USER_INSERT,
        AUD_ACTION,
        AUD_ROWID
    )
SELECT
    Ord_Order_CD,
    Ord_Customer_cd,
    Ord_Customer_id,
    Ord_Employee_cd,
    Ord_Employee_id,
    Ord_Order_Date,
    Ord_Required_Date,
    Ord_Shipped_Date,
    Ord_Ship_Via,
    Ord_Freight,
    Ord_Ship_name,
    Ord_Ship_Address,
    Ord_Ship_City,
    Ord_Ship_Region_cd,
    Ord_Ship_Region_Id,
    Ord_Ship_PostalCode,
    Ord_Ship_Country_cd,
    Ord_Ship_Country_id,
    GETDATE() AS AUD_INSERT_DT,
    SYSTEM_USER AS AUD_USER_INSERT,
    'INSERT' AS AUD_ACTION,
    -- Uso de CHECKSUM sobre la concatenación de cadenas
    CHECKSUM(
        ISNULL(bt.Ord_Order_CD, ""),
        ISNULL(bt.Ord_Customer_cd, ""),
        ISNULL(bt.Ord_Customer_id, ""),
        ISNULL(bt.Ord_Employee_id, ""),
        ISNULL(bt.Ord_Order_Date, ""),
        ISNULL(bt.Ord_Required_Date, ""),
        ISNULL(bt.Ord_Shipped_Date, ""),
        ISNULL(bt.Ord_Ship_Via, ""),
        ISNULL(bt.Ord_Freight, ""),
        ISNULL(bt.Ord_Ship_name, ""),
        ISNULL(bt.Ord_Ship_Address, ""),
        ISNULL(bt.Ord_Ship_City, ""),
        ISNULL(bt.Ord_Ship_Region_cd, ""),
        ISNULL(bt.Ord_Ship_Region_Id, ""),
        ISNULL(bt.Ord_Ship_PostalCode, ""),
        ISNULL(bt.Ord_Ship_Country_cd, ""),
        ISNULL(bt.Ord_Ship_Country_id, "")
    ) AS AUD_ROW_ID
FROM STG_ORDERS bt;

-- Inserto los BORRADOS LÓGICOS
INSERT INTO [STG].[ODS_ORDERS] (
    Ord_Order_CD,
    Ord_Customer_cd,
    Ord_Customer_id,
    Ord_Employee_cd,
    Ord_Employee_id,
    Ord_Order_Date,
    Ord_Required_Date,
    Ord_Shipped_Date,
    Ord_Ship_Via,
    Ord_Freight,
    Ord_Ship_name,
    Ord_Ship_Address,
    Ord_Ship_City,
    Ord_Ship_Region_cd,
    Ord_Ship_Region_Id,
    Ord_Ship_PostalCode,

```

	<pre> Ord_Ship_Country_cd, Ord_Ship_Country_id, AUD_INSERT_DT, AUD_USER_INSERT, AUD_ACTION, AUD_ROWID ) SELECT  dwh.Ord_Order_CD, dwh.Ord_Customer_cd, dwh.Ord_Customer_id, dwh.Ord_Employee_cd, dwh.Ord_Employee_id, dwh.Ord_Order_Date, dwh.Ord_Required_Date, dwh.Ord_Shipped_Date, dwh.Ord_Ship_Via, dwh.Ord_Freight, dwh.Ord_Ship_name, dwh.Ord_Ship_Address, dwh.Ord_Ship_City, dwh.Ord_Ship_Region_cd, dwh.Ord_Ship_Region_Id, dwh.Ord_Ship_PostalCode, dwh.Ord_Ship_Country_cd, dwh.Ord_Ship_Country_id, GETDATE() AS AUD_INSERT_DT, SYSTEM_USER AS AUD_USER_INSERT, 'DELETE' AS AUD_ACTION, dwh.AUD_ROWID FROM [ODS].[ORDERS] dwh LEFT JOIN [STG].[ODS_ORDERS] s ON dwh.AUD_ROWID = s.AUD_ROWID WHERE 1 = 1 AND dwh.AUD_ACTIVE_FLAG = 1 AND s.Ord_Order_CD IS NULL AND dwh.Ord_Order_id&lt;&gt;-1;  END; </pre>																																																																																																																																			
OUTPUT	<pre>select * from [STG].[ ODS_ORDERS]</pre> <table border="1"> <thead> <tr> <th>Ord_Order_CD</th><th>Ord_Customer_cd</th><th>Ord_Customer_id</th><th>Ord_Employee_cd</th><th>Ord_Employee_id</th><th>Ord_Order_Date</th><th>Ord_Required_Date</th><th>Ord_Shipped_Date</th><th>Ord_Ship_Via</th><th>Ord_Freight</th><th>Ord_Ship_name</th></tr> </thead> <tbody> <tr><td>251</td><td>10498</td><td>HILAA</td><td>35</td><td>8</td><td>2030</td><td>1997-04-07</td><td>1997-05-05</td><td>1997-04-11</td><td>2</td><td>29.75</td><td>HILARION Abasto</td></tr> <tr><td>252</td><td>10499</td><td>LILAS</td><td>46</td><td>4</td><td>2026</td><td>1997-04-08</td><td>1997-05-06</td><td>1997-04-16</td><td>2</td><td>102.02</td><td>LILA-Supermercado</td></tr> <tr><td>253</td><td>10500</td><td>LAMAI</td><td>41</td><td>6</td><td>2028</td><td>1997-04-09</td><td>1997-05-07</td><td>1997-04-17</td><td>1</td><td>42.68</td><td>La maison d'Aée</td></tr> <tr><td>254</td><td>10501</td><td>BLAUS</td><td>6</td><td>9</td><td>2031</td><td>1997-04-09</td><td>1997-05-07</td><td>1997-04-16</td><td>3</td><td>8.85</td><td>Blauer See Delika</td></tr> <tr><td>255</td><td>10502</td><td>PERIC</td><td>58</td><td>2</td><td>2012</td><td>1997-04-10</td><td>1997-05-08</td><td>1997-04-29</td><td>1</td><td>69.32</td><td>Pericles Comidas</td></tr> <tr><td>256</td><td>10503</td><td>HUNGO</td><td>37</td><td>6</td><td>2028</td><td>1997-04-11</td><td>1997-05-09</td><td>1997-04-16</td><td>2</td><td>16.74</td><td>Hungry Owl All-Nite</td></tr> <tr><td>257</td><td>10504</td><td>WHITC</td><td>89</td><td>4</td><td>2026</td><td>1997-04-11</td><td>1997-05-09</td><td>1997-04-18</td><td>3</td><td>59.13</td><td>White Clover Market</td></tr> <tr><td>258</td><td>10505</td><td>MEREPE</td><td>51</td><td>3</td><td>2025</td><td>1997-04-14</td><td>1997-05-12</td><td>1997-04-21</td><td>3</td><td>7.13</td><td>MÃ¢re Paillarde</td></tr> <tr><td>259</td><td>10506</td><td>KOENE</td><td>39</td><td>9</td><td>2031</td><td>1997-04-15</td><td>1997-05-13</td><td>1997-05-02</td><td>2</td><td>21.19</td><td>KÃ¶niglich Essen</td></tr> <tr><td>260</td><td>10507</td><td>ANTON</td><td>3</td><td>7</td><td>2029</td><td>1997-04-15</td><td>1997-05-13</td><td>1997-04-22</td><td>1</td><td>47.45</td><td>Antonio Moreno T</td></tr> </tbody> </table>	Ord_Order_CD	Ord_Customer_cd	Ord_Customer_id	Ord_Employee_cd	Ord_Employee_id	Ord_Order_Date	Ord_Required_Date	Ord_Shipped_Date	Ord_Ship_Via	Ord_Freight	Ord_Ship_name	251	10498	HILAA	35	8	2030	1997-04-07	1997-05-05	1997-04-11	2	29.75	HILARION Abasto	252	10499	LILAS	46	4	2026	1997-04-08	1997-05-06	1997-04-16	2	102.02	LILA-Supermercado	253	10500	LAMAI	41	6	2028	1997-04-09	1997-05-07	1997-04-17	1	42.68	La maison d'Aée	254	10501	BLAUS	6	9	2031	1997-04-09	1997-05-07	1997-04-16	3	8.85	Blauer See Delika	255	10502	PERIC	58	2	2012	1997-04-10	1997-05-08	1997-04-29	1	69.32	Pericles Comidas	256	10503	HUNGO	37	6	2028	1997-04-11	1997-05-09	1997-04-16	2	16.74	Hungry Owl All-Nite	257	10504	WHITC	89	4	2026	1997-04-11	1997-05-09	1997-04-18	3	59.13	White Clover Market	258	10505	MEREPE	51	3	2025	1997-04-14	1997-05-12	1997-04-21	3	7.13	MÃ¢re Paillarde	259	10506	KOENE	39	9	2031	1997-04-15	1997-05-13	1997-05-02	2	21.19	KÃ¶niglich Essen	260	10507	ANTON	3	7	2029	1997-04-15	1997-05-13	1997-04-22	1	47.45	Antonio Moreno T
Ord_Order_CD	Ord_Customer_cd	Ord_Customer_id	Ord_Employee_cd	Ord_Employee_id	Ord_Order_Date	Ord_Required_Date	Ord_Shipped_Date	Ord_Ship_Via	Ord_Freight	Ord_Ship_name																																																																																																																										
251	10498	HILAA	35	8	2030	1997-04-07	1997-05-05	1997-04-11	2	29.75	HILARION Abasto																																																																																																																									
252	10499	LILAS	46	4	2026	1997-04-08	1997-05-06	1997-04-16	2	102.02	LILA-Supermercado																																																																																																																									
253	10500	LAMAI	41	6	2028	1997-04-09	1997-05-07	1997-04-17	1	42.68	La maison d'Aée																																																																																																																									
254	10501	BLAUS	6	9	2031	1997-04-09	1997-05-07	1997-04-16	3	8.85	Blauer See Delika																																																																																																																									
255	10502	PERIC	58	2	2012	1997-04-10	1997-05-08	1997-04-29	1	69.32	Pericles Comidas																																																																																																																									
256	10503	HUNGO	37	6	2028	1997-04-11	1997-05-09	1997-04-16	2	16.74	Hungry Owl All-Nite																																																																																																																									
257	10504	WHITC	89	4	2026	1997-04-11	1997-05-09	1997-04-18	3	59.13	White Clover Market																																																																																																																									
258	10505	MEREPE	51	3	2025	1997-04-14	1997-05-12	1997-04-21	3	7.13	MÃ¢re Paillarde																																																																																																																									
259	10506	KOENE	39	9	2031	1997-04-15	1997-05-13	1997-05-02	2	21.19	KÃ¶niglich Essen																																																																																																																									
260	10507	ANTON	3	7	2029	1997-04-15	1997-05-13	1997-04-22	1	47.45	Antonio Moreno T																																																																																																																									

### 3.13 Proceso Schema STG 13: ORDERS DETAILS

JobName	STG_Order_Details.dtsx																																																																																																						
Input	<p>select * from [TMP].[ORDERS_DETAILS]</p> <table border="1"> <thead> <tr> <th></th> <th>Order_CD</th> <th>Product_cd</th> <th>Unit_Price</th> <th>Quantity</th> <th>Discount</th> </tr> </thead> <tbody> <tr><td>1</td><td>10248</td><td>11</td><td>14.00</td><td>12</td><td>0</td></tr> <tr><td>2</td><td>10248</td><td>42</td><td>9.80</td><td>10</td><td>0</td></tr> <tr><td>3</td><td>10248</td><td>72</td><td>34.80</td><td>5</td><td>0</td></tr> <tr><td>4</td><td>10249</td><td>14</td><td>18.60</td><td>9</td><td>0</td></tr> <tr><td>5</td><td>10249</td><td>51</td><td>42.40</td><td>40</td><td>0</td></tr> <tr><td>6</td><td>10250</td><td>41</td><td>7.70</td><td>10</td><td>0</td></tr> <tr><td>7</td><td>10250</td><td>51</td><td>42.40</td><td>35</td><td>0.15</td></tr> <tr><td>8</td><td>10250</td><td>65</td><td>16.80</td><td>15</td><td>0.15</td></tr> <tr><td>9</td><td>10251</td><td>22</td><td>16.80</td><td>6</td><td>0.05</td></tr> <tr><td>10</td><td>10251</td><td>57</td><td>15.60</td><td>15</td><td>0.05</td></tr> <tr><td>11</td><td>10251</td><td>65</td><td>16.80</td><td>20</td><td>0</td></tr> <tr><td>12</td><td>10252</td><td>20</td><td>64.80</td><td>40</td><td>0.05</td></tr> <tr><td>13</td><td>10252</td><td>33</td><td>2.00</td><td>25</td><td>0.05</td></tr> <tr><td>14</td><td>10252</td><td>60</td><td>27.20</td><td>40</td><td>0</td></tr> <tr><td>15</td><td>10253</td><td>31</td><td>10.00</td><td>20</td><td>0</td></tr> <tr><td>16</td><td>10252</td><td>29</td><td>14.40</td><td>42</td><td>0</td></tr> </tbody> </table>		Order_CD	Product_cd	Unit_Price	Quantity	Discount	1	10248	11	14.00	12	0	2	10248	42	9.80	10	0	3	10248	72	34.80	5	0	4	10249	14	18.60	9	0	5	10249	51	42.40	40	0	6	10250	41	7.70	10	0	7	10250	51	42.40	35	0.15	8	10250	65	16.80	15	0.15	9	10251	22	16.80	6	0.05	10	10251	57	15.60	15	0.05	11	10251	65	16.80	20	0	12	10252	20	64.80	40	0.05	13	10252	33	2.00	25	0.05	14	10252	60	27.20	40	0	15	10253	31	10.00	20	0	16	10252	29	14.40	42	0
	Order_CD	Product_cd	Unit_Price	Quantity	Discount																																																																																																		
1	10248	11	14.00	12	0																																																																																																		
2	10248	42	9.80	10	0																																																																																																		
3	10248	72	34.80	5	0																																																																																																		
4	10249	14	18.60	9	0																																																																																																		
5	10249	51	42.40	40	0																																																																																																		
6	10250	41	7.70	10	0																																																																																																		
7	10250	51	42.40	35	0.15																																																																																																		
8	10250	65	16.80	15	0.15																																																																																																		
9	10251	22	16.80	6	0.05																																																																																																		
10	10251	57	15.60	15	0.05																																																																																																		
11	10251	65	16.80	20	0																																																																																																		
12	10252	20	64.80	40	0.05																																																																																																		
13	10252	33	2.00	25	0.05																																																																																																		
14	10252	60	27.20	40	0																																																																																																		
15	10253	31	10.00	20	0																																																																																																		
16	10252	29	14.40	42	0																																																																																																		
Control Flow	<pre> graph TD     START[START LOG] --&gt; EXEC[EXEC STG ORDER_DETAILS]     EXEC -- Error --&gt; ERROR[ERROR LOG]     ERROR -- Error --&gt; EXEC     EXEC -- Error --&gt; END[END LOG OK]   </pre>																																																																																																						
Proceso	<pre> USE [TP_DWH_MCD_2025] GO ***** Object: StoredProcedure [dbo].[SP_STG_Orders] Script Date: 18/5/2025 23:48:06 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_STG_Orders_Details] AS BEGIN     SET NOCOUNT ON;      -- Truncar la tabla STG     TRUNCATE TABLE [STG].[ODS_ORDERS_DETAILS];      -- Insertar los datos desde TMP con AUD_ROW_ID y acción INSERT     WITH PRODUCTS AS         ( SELECT * FROM DWH.LK_PRODUCTS   </pre>																																																																																																						

```

                WHERE AUD_ACTIVE_FLAG = 1),
                ORDERS AS
                ( SELECT * from ODS.ORDERS
                  WHERE AUD_ACTIVE_FLAG = 1),
                STG_ORDERS_DETAILS AS (
SELECT
COALESCE(ord_order_id,-1) [OrdDet_Order_id],
LTRIM(RTRIM(Product_cd)) [OrdDet_Product_cd],
COALESCE(prod_product_id,-1) [OrdDet_Product_id],
TRY_CAST(LTRIM(RTRIM(Unit_Price)) as DECIMAL(10,2))
[OrdDet_Unit_Price],
TRY_CAST(LTRIM(RTRIM(Quantity)) as DECIMAL(10,2)) [OrdDet_Quantity],
TRY_CAST(LTRIM(RTRIM(Discount)) as DECIMAL(10,2)) [OrdDet_Discount]
FROM [TMP].[ORDERS_DETAILS] c
LEFT JOIN PRODUCTS r
ON LTRIM(RTRIM(c.Product_cd)) = r.prod_product_CD
LEFT JOIN ORDERS o
ON LTRIM(RTRIM(c.Order_cd)) = o.Old_Order_cd
WHERE ISNULL(LTRIM(RTRIM(Order_CD)), "") <> ""
)
-- Mecanismo de Control de Versiones
INSERT INTO [STG].[ODS_ORDERS_DETAILS] (
[OrdDet_Order_id],
[OrdDet_Product_cd],
[OrdDet_Product_id],
[OrdDet_Unit_Price],
[OrdDet_Quantity],
[OrdDet_Discount],
AUD_INSERT_DT,
AUD_USER_INSERT,
AUD_ACTION,
AUD_ROWID
)
SELECT
[OrdDet_Order_id],
[OrdDet_Product_cd],
[OrdDet_Product_id],
[OrdDet_Unit_Price],
[OrdDet_Quantity],
[OrdDet_Discount],
GETDATE() AS AUD_INSERT_DT,
SYSTEM_USER AS AUD_USER_INSERT,
'INSERT' AS AUD_ACTION,
-- Uso de CHECKSUM sobre la concatenación de cadenas
CHECKSUM(
ISNULL(bt.OrdDet_Order_id, ""),
ISNULL(bt.OrdDet_Product_cd, ""),
ISNULL(bt.OrdDet_Product_id, ""),
ISNULL(bt.OrdDet_Unit_Price, 0),
ISNULL(bt.OrdDet_Quantity, 0),
ISNULL(bt.OrdDet_Discount, 0)
) AS AUD_ROW_ID
FROM STG_ORDERS_DETAILS bt;

-- Inserto los BORRADOS LÓGICOS
INSERT INTO [STG].[ODS_ORDERS_DETAILS] (
[OrdDet_Order_id],
[OrdDet_Product_cd],
[OrdDet_Product_id],
[OrdDet_Unit_Price],
[OrdDet_Quantity],
[OrdDet_Discount],
AUD_INSERT_DT,
AUD_USER_INSERT,
AUD_ACTION,
AUD_ROWID

```

	<pre> ) SELECT          dwh.OrdDet_Order_id,         dwh.OrdDet_Product_cd,         dwh.OrdDet_Product_id,         dwh.OrdDet_Unit_Price,         dwh.OrdDet_Quantity,         dwh.OrdDet_Discount,         GETDATE() AS AUD_INSERT_DT,         SYSTEM_USER AS AUD_USER_INSERT,         'DELETE' AS AUD_ACTION,         dwh.AUD_ROWID     FROM [ODS].[ORDERS_DETAILS] dwh     LEFT JOIN [STG].[ODS_ORDERS_DETAILS] s     ON dwh.AUD_ROWID = s.AUD_ROWID     WHERE 1 = 1         AND dwh.AUD_ACTIVE_FLAG = 1     AND s.OrdDet_Order_id IS NULL         AND dwh.OrdDet_Order_Detail_id&lt;&gt;-1;  END; </pre>																																																																																																																																																
OUTPUT	<pre>select * from [STG].[ODS_ORDERS_DETAILS];</pre> <table border="1"> <thead> <tr> <th>OrdDet_Order_id</th><th>OrdDet_Product_cd</th><th>OrdDet_Product_id</th><th>OrdDet_Unit_Price</th><th>OrdDet_Quantity</th><th>OrdDet_Discount</th><th>AUD_INSERT_DT</th><th>AUD_USER_INSERT</th><th>AUD_ACTION</th></tr> </thead> <tbody> <tr><td>265</td><td>99</td><td>56</td><td>30.40</td><td>20.00</td><td>0.00</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> <tr><td>266</td><td>100</td><td>25</td><td>11.20</td><td>10.00</td><td>0.00</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> <tr><td>267</td><td>100</td><td>39</td><td>14.40</td><td>50.00</td><td>0.15</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> <tr><td>268</td><td>100</td><td>40</td><td>14.70</td><td>4.00</td><td>0.00</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> <tr><td>269</td><td>100</td><td>75</td><td>6.20</td><td>6.00</td><td>0.15</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> <tr><td>270</td><td>101</td><td>1</td><td>14.40</td><td>15.00</td><td>0.15</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> <tr><td>271</td><td>101</td><td>23</td><td>7.20</td><td>25.00</td><td>0.00</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> <tr><td>272</td><td>102</td><td>54</td><td>5.90</td><td>24.00</td><td>0.00</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> <tr><td>273</td><td>103</td><td>50</td><td>13.00</td><td>15.00</td><td>0.10</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> <tr><td>274</td><td>103</td><td>69</td><td>28.80</td><td>18.00</td><td>0.10</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> <tr><td>275</td><td>104</td><td>38</td><td>210.80</td><td>20.00</td><td>0.05</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> <tr><td>276</td><td>104</td><td>41</td><td>7.70</td><td>13.00</td><td>0.00</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> <tr><td>277</td><td>104</td><td>44</td><td>15.50</td><td>77.00</td><td>0.05</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> <tr><td>278</td><td>104</td><td>65</td><td>6.60</td><td>16.80</td><td>0.00</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> <tr><td>&lt;</td><td>105</td><td>24</td><td>2.00</td><td>10.00</td><td>0.00</td><td>2025-05-19 00:05:26.107</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td></tr> </tbody> </table> <p>Query executed successfully.</p> <p>DESKTOP-IAI1KNV (16.0 RTM)   DESKTOP-IAI1KNV\Ezequiel   TP_DWH_MCD_2025   00:00:00   2,155 rows</p>	OrdDet_Order_id	OrdDet_Product_cd	OrdDet_Product_id	OrdDet_Unit_Price	OrdDet_Quantity	OrdDet_Discount	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	265	99	56	30.40	20.00	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT	266	100	25	11.20	10.00	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT	267	100	39	14.40	50.00	0.15	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT	268	100	40	14.70	4.00	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT	269	100	75	6.20	6.00	0.15	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT	270	101	1	14.40	15.00	0.15	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT	271	101	23	7.20	25.00	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT	272	102	54	5.90	24.00	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT	273	103	50	13.00	15.00	0.10	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT	274	103	69	28.80	18.00	0.10	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT	275	104	38	210.80	20.00	0.05	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT	276	104	41	7.70	13.00	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT	277	104	44	15.50	77.00	0.05	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT	278	104	65	6.60	16.80	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT	<	105	24	2.00	10.00	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT
OrdDet_Order_id	OrdDet_Product_cd	OrdDet_Product_id	OrdDet_Unit_Price	OrdDet_Quantity	OrdDet_Discount	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION																																																																																																																																									
265	99	56	30.40	20.00	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									
266	100	25	11.20	10.00	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									
267	100	39	14.40	50.00	0.15	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									
268	100	40	14.70	4.00	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									
269	100	75	6.20	6.00	0.15	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									
270	101	1	14.40	15.00	0.15	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									
271	101	23	7.20	25.00	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									
272	102	54	5.90	24.00	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									
273	103	50	13.00	15.00	0.10	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									
274	103	69	28.80	18.00	0.10	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									
275	104	38	210.80	20.00	0.05	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									
276	104	41	7.70	13.00	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									
277	104	44	15.50	77.00	0.05	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									
278	104	65	6.60	16.80	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									
<	105	24	2.00	10.00	0.00	2025-05-19 00:05:26.107	DESKTOP-IAI1KNV\Ezequiel	INSERT																																																																																																																																									

## 4. Procesos de ingesta de Schema DWH (Dimensiones)

En éste apartado, cargaremos las tablas del schema DWH en función de los datos de STAGING.

Se implementa mediante el uso de MERGE.

### 4.1 Proceso Schema DWH 1: CATEGORIES

JobName	DWH_Categories.dtsx																																																																								
Input	<pre>select * from [STG].[CATEGORIES]</pre> <table border="1"> <thead> <tr> <th>Category_CD</th> <th>Category_Name</th> <th>Category_Description</th> <th>Category_Picture</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> <th>AUD_ACTION</th> <th>AUD_ROWID</th> </tr> </thead> <tbody> <tr><td>1</td><td>Beverages</td><td>Soft drinks coffees teas beers and ales</td><td>0x151C2F0002000000D000E0014002...</td><td>2025-05-06 00:35:35.673</td><td>DESKTOP-IAI1KVV\Esquel</td><td>INSERT</td><td>0xC380D616</td></tr> <tr><td>2</td><td>Condiments</td><td>Sweet and savory sauces relishes spreads a...</td><td>0x151C2F0002000000D000E0014002...</td><td>2025-05-06 00:35:35.673</td><td>DESKTOP-IAI1KVV\Esquel</td><td>INSERT</td><td>0x252F6B2</td></tr> <tr><td>3</td><td>Confections</td><td>Desserts candies and sweet breads</td><td>0x151C2F0002000000D000E0014002...</td><td>2025-05-06 00:35:35.673</td><td>DESKTOP-IAI1KVV\Esquel</td><td>INSERT</td><td>0xE38CD1</td></tr> <tr><td>4</td><td>Dairy Products</td><td>Cheeses</td><td>0x151C2F0002000000D000E0014002...</td><td>2025-05-06 00:35:35.673</td><td>DESKTOP-IAI1KVV\Esquel</td><td>INSERT</td><td>0xCAE7502C</td></tr> <tr><td>5</td><td>Grains/Cereals</td><td>Breads crackers pasta and cereal</td><td>0x151C2F0002000000D000E0014002...</td><td>2025-05-06 00:35:35.673</td><td>DESKTOP-IAI1KVV\Esquel</td><td>INSERT</td><td>0x81DAB582</td></tr> <tr><td>6</td><td>Meat/Poultry</td><td>Prepared meats</td><td>0x151C2F0002000000D000E0014002...</td><td>2025-05-06 00:35:35.673</td><td>DESKTOP-IAI1KVV\Esquel</td><td>INSERT</td><td>0x24D02387</td></tr> <tr><td>7</td><td>Produce</td><td>Dried fruit and bean curd</td><td>0x151C2F0002000000D000E0014002...</td><td>2025-05-06 00:35:35.673</td><td>DESKTOP-IAI1KVV\Esquel</td><td>INSERT</td><td>0x17500B53</td></tr> <tr><td>8</td><td>Seafood</td><td>Seaweed and fish</td><td>0x151C2F0002000000D000E0014002...</td><td>2025-05-06 00:35:35.673</td><td>DESKTOP-IAI1KVV\Esquel</td><td>INSERT</td><td>0x7E590312</td></tr> </tbody> </table>	Category_CD	Category_Name	Category_Description	Category_Picture	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID	1	Beverages	Soft drinks coffees teas beers and ales	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0xC380D616	2	Condiments	Sweet and savory sauces relishes spreads a...	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0x252F6B2	3	Confections	Desserts candies and sweet breads	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0xE38CD1	4	Dairy Products	Cheeses	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0xCAE7502C	5	Grains/Cereals	Breads crackers pasta and cereal	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0x81DAB582	6	Meat/Poultry	Prepared meats	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0x24D02387	7	Produce	Dried fruit and bean curd	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0x17500B53	8	Seafood	Seaweed and fish	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0x7E590312
Category_CD	Category_Name	Category_Description	Category_Picture	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID																																																																		
1	Beverages	Soft drinks coffees teas beers and ales	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0xC380D616																																																																		
2	Condiments	Sweet and savory sauces relishes spreads a...	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0x252F6B2																																																																		
3	Confections	Desserts candies and sweet breads	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0xE38CD1																																																																		
4	Dairy Products	Cheeses	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0xCAE7502C																																																																		
5	Grains/Cereals	Breads crackers pasta and cereal	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0x81DAB582																																																																		
6	Meat/Poultry	Prepared meats	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0x24D02387																																																																		
7	Produce	Dried fruit and bean curd	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0x17500B53																																																																		
8	Seafood	Seaweed and fish	0x151C2F0002000000D000E0014002...	2025-05-06 00:35:35.673	DESKTOP-IAI1KVV\Esquel	INSERT	0x7E590312																																																																		
Control Flow	<pre> graph TD     START[START LOG] --&gt; EXEC[EXEC DWH CATEGORIES]     EXEC --&gt; END[END LOG OK]     EXEC -- Error --&gt; ERROR[ERROR LOG]     END -- Error --&gt; ERROR     </pre>																																																																								
Proceso	<pre> ALTER PROCEDURE [dbo].[SP_DWH_Categories] AS BEGIN     SET NOCOUNT ON;      -- Inicializar Dimensión con valor NA      -- Verificar si el valor NA (-1) ya existe en la tabla LK_REGIONS     IF NOT EXISTS (SELECT 1 FROM [DWH].[LK_CATEGORIES] WHERE Category_Id = -1)     BEGIN         -- Habilitar IDENTITY_INSERT         SET IDENTITY_INSERT [DWH].[LK_CATEGORIES] ON;          -- Insertar el valor NA (-1)         INSERT INTO [DWH].[LK_CATEGORIES] (             Category_Id, -- Identity, por eso ahora se puede insertar explícitamente             AUD_INSERT_DT,             AUD_USER_INSERT,             AUD_ACTIVE_FLAG,             AUD_ROWID,             Category_CD,             Category_Name,             Category_Description         )     END END     </pre>																																																																								

	<pre> ) VALUES ( -1, GETDATE(), SYSTEM_USER, 1, 0, -- o algún valor identificador especial si tu lógica lo requiere '-1', 'Not Applicable', 'Not Applicable' );  -- Deshabilitar IDENTITY_INSERT SET IDENTITY_INSERT [DWH].[LK_CATEGORIES] OFF; END;  -- Realizando el MERGE en la tabla de destino con la tabla fuente  MERGE INTO [DWH].[LK_CATEGORIES] AS target USING [STG].[LK_CATEGORIES] AS source ON target.AUD_ROWID = source.AUD_ROWID AND target.AUD_ACTIVE_FLAG = 1 -- 1 representa TRUE para AUD_ACTIVE_FLAG en SQL Server WHEN NOT MATCHED BY TARGET AND source.AUD_ACTION = 'INSERT' THEN INSERT ( AUD_INSERT_DT, AUD_USER_INSERT, AUD_ACTIVE_FLAG, AUD_ROWID, Category_CD, Category_Name, Category_Description, Category_Picture ) VALUES ( GETDATE(), -- AUD_INSERT_DT SYSTEM_USER, -- AUD_USER_INSERT 1, -- AUD_ACTIVE_FLAG (TRUE) source.AUD_ROWID, source.Category_CD, source.Category_Name, source.Category_Description, source.Category_Picture ) WHEN MATCHED AND target.AUD_ACTIVE_FLAG = 1 AND source.AUD_ACTION = 'DELETE' THEN UPDATE SET target.AUD_INSERT_DT = GETDATE(), -- Mantener el campo de fecha actualizado target.AUD_USER_INSERT = SYSTEM_USER, -- Mantener el usuario actualizado target.AUD_ACTIVE_FLAG = 0 -- 0 representa FALSE para AUD_ACTIVE_FLAG ; END; </pre>																																																																																	
OUTPUT	<pre>select * from [DWH].[LK_CATEGORIES]</pre> <table border="1"> <thead> <tr> <th>Category_Id</th><th>Category_CD</th><th>Category_Name</th><th>Category_Description</th><th>Category_Picture</th><th>AUD_INSERT_DT</th><th>AUD_USER_INSERT</th><th>AUD_AC...</th><th>AUD_ROWID</th></tr> </thead> <tbody> <tr> <td>1</td><td>1</td><td>Beverages</td><td>Soft drinks coffees teas beers a...</td><td>0x151C2F00020000000000E0014002100...</td><td>2025-05-06 00:20:24.960</td><td>DESKTOP-IA1KNV\Ex...</td><td>1</td><td>0xC3B0D616</td></tr> <tr> <td>2</td><td>2</td><td>Condiments</td><td>Sweet and savory sauces relish...</td><td>0x151C2F00020000000000E0014002100...</td><td>2025-05-06 00:20:24.960</td><td>DESKTOP-IA1KNV\Ex...</td><td>1</td><td>0x5252F6B2</td></tr> <tr> <td>3</td><td>3</td><td>Confection</td><td>Desserts candies and sweet bre...</td><td>0x151C2F00020000000000E0014002100...</td><td>2025-05-06 00:20:24.960</td><td>DESKTOP-IA1KNV\Ex...</td><td>1</td><td>0xE38CDC1</td></tr> <tr> <td>4</td><td>4</td><td>Dairy Products</td><td>Cheeses</td><td>0x151C2F00020000000000E0014002100...</td><td>2025-05-06 00:20:24.960</td><td>DESKTOP-IA1KNV\Ex...</td><td>1</td><td>0xCAE7582C</td></tr> <tr> <td>5</td><td>5</td><td>Grains/Cereals</td><td>Breads crackers pasta and cereal</td><td>0x151C2F00020000000000E0014002100...</td><td>2025-05-06 00:20:24.960</td><td>DESKTOP-IA1KNV\Ex...</td><td>1</td><td>0x1DAB582</td></tr> <tr> <td>6</td><td>6</td><td>Meat/Poultry</td><td>Prepared meats</td><td>0x151C2F00020000000000E0014002100...</td><td>2025-05-06 00:20:24.960</td><td>DESKTOP-IA1KNV\Ex...</td><td>1</td><td>0x246D23B7</td></tr> <tr> <td>7</td><td>7</td><td>Produce</td><td>Dried fruit and bean curd</td><td>0x151C2F00020000000000E0014002100...</td><td>2025-05-06 00:20:24.960</td><td>DESKTOP-IA1KNV\Ex...</td><td>1</td><td>0x17580B53</td></tr> <tr> <td>8</td><td>8</td><td>Seafood</td><td>Seaweed and fish</td><td>0x151C2F00020000000000E0014002100...</td><td>2025-05-06 00:20:24.960</td><td>DESKTOP-IA1KNV\Ex...</td><td>1</td><td>0x75E90312</td></tr> </tbody> </table>	Category_Id	Category_CD	Category_Name	Category_Description	Category_Picture	AUD_INSERT_DT	AUD_USER_INSERT	AUD_AC...	AUD_ROWID	1	1	Beverages	Soft drinks coffees teas beers a...	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0xC3B0D616	2	2	Condiments	Sweet and savory sauces relish...	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0x5252F6B2	3	3	Confection	Desserts candies and sweet bre...	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0xE38CDC1	4	4	Dairy Products	Cheeses	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0xCAE7582C	5	5	Grains/Cereals	Breads crackers pasta and cereal	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0x1DAB582	6	6	Meat/Poultry	Prepared meats	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0x246D23B7	7	7	Produce	Dried fruit and bean curd	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0x17580B53	8	8	Seafood	Seaweed and fish	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0x75E90312
Category_Id	Category_CD	Category_Name	Category_Description	Category_Picture	AUD_INSERT_DT	AUD_USER_INSERT	AUD_AC...	AUD_ROWID																																																																										
1	1	Beverages	Soft drinks coffees teas beers a...	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0xC3B0D616																																																																										
2	2	Condiments	Sweet and savory sauces relish...	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0x5252F6B2																																																																										
3	3	Confection	Desserts candies and sweet bre...	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0xE38CDC1																																																																										
4	4	Dairy Products	Cheeses	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0xCAE7582C																																																																										
5	5	Grains/Cereals	Breads crackers pasta and cereal	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0x1DAB582																																																																										
6	6	Meat/Poultry	Prepared meats	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0x246D23B7																																																																										
7	7	Produce	Dried fruit and bean curd	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0x17580B53																																																																										
8	8	Seafood	Seaweed and fish	0x151C2F00020000000000E0014002100...	2025-05-06 00:20:24.960	DESKTOP-IA1KNV\Ex...	1	0x75E90312																																																																										

## 4.2 Proceso Schema DWH 2: REGIONS

Se ha considerado hacer una tabla de relaciones, como en Countries; Para mapear regiones que vienen desde Employees.

JobName	DWH_Regions.dtsx																																			
Input	<pre>select * from [STG].[REGIONS]</pre> <table border="1"> <thead> <tr> <th></th> <th>Region_CD</th> <th>Region_Description</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> <th>AUD_ACTION</th> <th>AUD_ROWID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1</td> <td>Eastern</td> <td>2025-05-06 22:18:32.280</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x7CBABA0</td> </tr> <tr> <td>2</td> <td>2</td> <td>Western</td> <td>2025-05-06 22:18:32.280</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x74EAB9B0</td> </tr> <tr> <td>3</td> <td>3</td> <td>Northem</td> <td>2025-05-06 22:18:32.280</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x273D7741</td> </tr> <tr> <td>4</td> <td>4</td> <td>Southern</td> <td>2025-05-06 22:18:32.280</td> <td>DESKTOP-IAI1KNV\Ezequiel</td> <td>INSERT</td> <td>0x26FA36A1</td> </tr> </tbody> </table>		Region_CD	Region_Description	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID	1	1	Eastern	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x7CBABA0	2	2	Western	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x74EAB9B0	3	3	Northem	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x273D7741	4	4	Southern	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x26FA36A1
	Region_CD	Region_Description	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID																														
1	1	Eastern	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x7CBABA0																														
2	2	Western	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x74EAB9B0																														
3	3	Northem	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x273D7741																														
4	4	Southern	2025-05-06 22:18:32.280	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x26FA36A1																														
Control Flow	<pre> graph TD     START[START LOG] --&gt; EXEC[EXEC DWH REGIONS]     EXEC -- Error --&gt; ERROR[ERROR LOG]     EXEC --&gt; END[END LOG OK]   </pre>																																			
Proceso	<pre> USE [TP_DWH_MCD_2025] GO /******** Object: StoredProcedure [dbo].[SP_DWH_Regions]  Script Date: 6/5/2025 23:01:26 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO  BEGIN     SET NOCOUNT ON;         -- Inicializar Dimensión con valor NA          -- Verificar si el valor NA (-1) ya existe en la tabla LK_REGIONS         IF NOT EXISTS (SELECT 1 FROM [DWH].[LK_REGIONS] WHERE Region_Id = -1)         BEGIN             -- Habilitar IDENTITY_INSERT             SET IDENTITY_INSERT [DWH].[LK_REGIONS] ON;              -- Insertar el valor NA (-1)             INSERT INTO [DWH].[LK_REGIONS] (                 Region_Id, -- Identity, por eso ahora se puede insertar explícitamente                 AUD_INSERT_DT,                 AUD_USER_INSERT,                 AUD_ACTIVE_FLAG,                 AUD_ROWID,                 Region_CD,                 Region_Description             )             VALUES (                 -1,                 GETDATE(),                 'Ezequiel',                 1,                 NEWID(),                 'NA',                 'NA'             );         END;     END;   </pre>																																			

	<pre>         GETDATE(),         SYSTEM_USER,         1,         0, -- o algún valor identificador especial si tu lógica lo requiere         '-1',         'Not Applicable'     );      -- Deshabilitar IDENTITY_INSERT     SET IDENTITY_INSERT [DWH].[LK_REGIONS] OFF; END;  -- Realizando el MERGE en la tabla de destino con la tabla fuente  MERGE INTO [DWH].[LK_REGIONS] AS target USING [STG].[LK_REGIONS] AS source     ON target.AUD_ROWID = source.AUD_ROWID     AND target.AUD_ACTIVE_FLAG = 1 WHEN NOT MATCHED BY TARGET AND source.AUD_ACTION = 'INSERT' THEN     INSERT (         AUD_INSERT_DT,         AUD_USER_INSERT,         AUD_ACTIVE_FLAG,         AUD_ROWID,         Region_CD,         Region_Description     )     VALUES (         GETDATE(), -- AUD_INSERT_DT         SYSTEM_USER, -- AUD_USER_INSERT         1, -- AUD_ACTIVE_FLAG (TRUE)         source.AUD_ROWID,         source.Region_CD,         source.Region_Description     ) WHEN MATCHED AND target.AUD_ACTIVE_FLAG = 1 AND source.AUD_ACTION = 'DELETE' THEN     UPDATE SET         target.AUD_INSERT_DT = GETDATE(), -- Mantener el campo de fecha actualizado         target.AUD_USER_INSERT = SYSTEM_USER, -- Mantener el usuario actualizado         target.AUD_ACTIVE_FLAG = 0 -- 0 representa FALSE para AUD_ACTIVE_FLAG     ; END; </pre>																																								
OUTPUT	<pre>select * from [DWH].[LK_REGIONS]</pre> <table border="1"> <thead> <tr> <th></th> <th>Region_Id</th> <th>Region_CD</th> <th>Region_Description</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> <th>AUD_ACTIVE_FLAG</th> <th>AUD_ROWID</th> </tr> </thead> <tbody> <tr> <td>1</td><td>1</td><td>1</td><td>Eastern</td><td>2025-05-06 22:33:27.450</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x7CBABA0</td></tr> <tr> <td>2</td><td>2</td><td>2</td><td>Western</td><td>2025-05-06 22:33:27.450</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x74EAB9B0</td></tr> <tr> <td>3</td><td>3</td><td>3</td><td>Northern</td><td>2025-05-06 22:33:27.450</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x273D7741</td></tr> <tr> <td>4</td><td>4</td><td>4</td><td>Southern</td><td>2025-05-06 22:33:27.450</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x26FA36A1</td></tr> </tbody> </table>		Region_Id	Region_CD	Region_Description	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTIVE_FLAG	AUD_ROWID	1	1	1	Eastern	2025-05-06 22:33:27.450	DESKTOP-IAI1KNV\Ezequiel	1	0x7CBABA0	2	2	2	Western	2025-05-06 22:33:27.450	DESKTOP-IAI1KNV\Ezequiel	1	0x74EAB9B0	3	3	3	Northern	2025-05-06 22:33:27.450	DESKTOP-IAI1KNV\Ezequiel	1	0x273D7741	4	4	4	Southern	2025-05-06 22:33:27.450	DESKTOP-IAI1KNV\Ezequiel	1	0x26FA36A1
	Region_Id	Region_CD	Region_Description	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTIVE_FLAG	AUD_ROWID																																		
1	1	1	Eastern	2025-05-06 22:33:27.450	DESKTOP-IAI1KNV\Ezequiel	1	0x7CBABA0																																		
2	2	2	Western	2025-05-06 22:33:27.450	DESKTOP-IAI1KNV\Ezequiel	1	0x74EAB9B0																																		
3	3	3	Northern	2025-05-06 22:33:27.450	DESKTOP-IAI1KNV\Ezequiel	1	0x273D7741																																		
4	4	4	Southern	2025-05-06 22:33:27.450	DESKTOP-IAI1KNV\Ezequiel	1	0x26FA36A1																																		
Registros de Relacion	<table border="1"> <thead> <tr> <th></th> <th>MAP_Empl_Region_Id</th> <th>MAP_External_RegionName</th> <th>MAP_Region_Name</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> <th>AUD_ACTIVE_FLAG</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> <td>WA</td> <td>Western</td> <td>2025-05-17 14:00:42.817</td> <td>dbo</td> <td>1</td> </tr> <tr> <td>2</td> <td>3</td> <td>NY</td> <td>Eastern</td> <td>2025-05-17 14:01:22.030</td> <td>dbo</td> <td>1</td> </tr> </tbody> </table>		MAP_Empl_Region_Id	MAP_External_RegionName	MAP_Region_Name	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTIVE_FLAG	1	2	WA	Western	2025-05-17 14:00:42.817	dbo	1	2	3	NY	Eastern	2025-05-17 14:01:22.030	dbo	1																			
	MAP_Empl_Region_Id	MAP_External_RegionName	MAP_Region_Name	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTIVE_FLAG																																			
1	2	WA	Western	2025-05-17 14:00:42.817	dbo	1																																			
2	3	NY	Eastern	2025-05-17 14:01:22.030	dbo	1																																			
View Final	<pre> CREATE VIEW [DWH].VW_LK_REL_REGIONS AS SELECT     c.Region_Id,     map.MAP_External_RegionName Region_Cd,     c.Region_Description FROM     [DWH].[REL_EMPLOYEEREGION_REGIONS] map     LEFT JOIN DWH.LK_REGIONS c         ON UPPER(LTRIM(RTRIM(c.Region_Description))) = UPPER(LTRIM(RTRIM(map.MAP_Region_NAme))) </pre>																																								

	<pre> WHERE map.AUD_ACTIVE_FLAG = 1 AND c.AUD_ACTIVE_FLAG = 1 UNION ALL SELECT c.Region_Id, c.Region_Cd, c.Region_Description FROM DWH.LK_REGIONS c WHERE c.AUD_ACTIVE_FLAG = 1 GO </pre>																																
OUTPUT VIEW	<table border="1"> <thead> <tr> <th></th> <th>Region_Id</th> <th>Region_Cd</th> <th>Region_Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2002</td> <td>NY</td> <td>Eastern</td> </tr> <tr> <td>2</td> <td>2003</td> <td>WA</td> <td>Western</td> </tr> <tr> <td>3</td> <td>-1</td> <td>-1</td> <td>Not Applicable</td> </tr> <tr> <td>4</td> <td>2002</td> <td>1</td> <td>Eastern</td> </tr> <tr> <td>5</td> <td>2003</td> <td>2</td> <td>Western</td> </tr> <tr> <td>6</td> <td>2004</td> <td>3</td> <td>Northern</td> </tr> <tr> <td>7</td> <td>2005</td> <td>4</td> <td>Southern</td> </tr> </tbody> </table>		Region_Id	Region_Cd	Region_Description	1	2002	NY	Eastern	2	2003	WA	Western	3	-1	-1	Not Applicable	4	2002	1	Eastern	5	2003	2	Western	6	2004	3	Northern	7	2005	4	Southern
	Region_Id	Region_Cd	Region_Description																														
1	2002	NY	Eastern																														
2	2003	WA	Western																														
3	-1	-1	Not Applicable																														
4	2002	1	Eastern																														
5	2003	2	Western																														
6	2004	3	Northern																														
7	2005	4	Southern																														

## 4.3 Proceso Schema DWH 3: SHIPPERS

JobName	DWH_Shippers.dtsx																																																	
Input	<pre>select * from [STG].[SHIPPERS]</pre> <table border="1"> <thead> <tr> <th>Ship_Shipper_CD</th> <th>Ship_Company_Name</th> <th>Ship_Phone</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> <th>AUD_ACTION</th> <th>AUD_ROWID</th> </tr> </thead> <tbody> <tr><td>1</td><td>Speedy Express</td><td>(503) 555-9831</td><td>2025-05-06 22:47:15.103</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x181723D4</td></tr> <tr><td>2</td><td>United Package</td><td>(503) 555-3199</td><td>2025-05-06 22:47:15.103</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x39F44780</td></tr> <tr><td>3</td><td>Federal Shipping</td><td>(503) 555-9931</td><td>2025-05-06 22:47:15.103</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x1E03941E</td></tr> <tr><td>4</td><td>Alliance Shippers</td><td>1-800-222-0451</td><td>2025-05-06 22:47:15.103</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x4ECC925D</td></tr> <tr><td>5</td><td>UPS</td><td>1-800-782-7892</td><td>2025-05-06 22:47:15.103</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x6D86E420</td></tr> <tr><td>6</td><td>DHL</td><td>1-800-225-5345</td><td>2025-05-06 22:47:15.103</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x6529F77E</td></tr> </tbody> </table>	Ship_Shipper_CD	Ship_Company_Name	Ship_Phone	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID	1	Speedy Express	(503) 555-9831	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x181723D4	2	United Package	(503) 555-3199	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x39F44780	3	Federal Shipping	(503) 555-9931	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x1E03941E	4	Alliance Shippers	1-800-222-0451	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x4ECC925D	5	UPS	1-800-782-7892	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x6D86E420	6	DHL	1-800-225-5345	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x6529F77E
Ship_Shipper_CD	Ship_Company_Name	Ship_Phone	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID																																												
1	Speedy Express	(503) 555-9831	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x181723D4																																												
2	United Package	(503) 555-3199	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x39F44780																																												
3	Federal Shipping	(503) 555-9931	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x1E03941E																																												
4	Alliance Shippers	1-800-222-0451	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x4ECC925D																																												
5	UPS	1-800-782-7892	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x6D86E420																																												
6	DHL	1-800-225-5345	2025-05-06 22:47:15.103	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x6529F77E																																												
Control Flow	<pre> graph TD     START[START LOG] --&gt; EXEC[EXEC DWH SHIPPERS]     EXEC -- Error --&gt; ERROR[ERROR LOG]     EXEC -- Success --&gt; END[END LOG OK]   </pre>																																																	
Proceso	<pre> CREATE PROCEDURE [dbo].[SP_DWH_Shippers] AS     -- Inicializar Dimensión con valor NA      -- Verificar si el valor NA (-1) ya existe en la tabla LK_REGIONS     IF NOT EXISTS (SELECT 1 FROM [DWH].[LK_SHIPPERS] WHERE Ship_Shipper_id = -1)     BEGIN         -- Habilitar IDENTITY_INSERT         SET IDENTITY_INSERT [DWH].[LK_SHIPPERS] ON;          -- Insertar el valor NA (-1)         INSERT INTO [DWH].[LK_SHIPPERS] (             Ship_Shipper_id, -- Identity, por eso ahora se puede insertar explícitamente             AUD_INSERT_DT,             AUD_USER_INSERT,             AUD_ACTIVE_FLAG,             AUD_ROWID,             Ship_Shipper_CD,             Ship_Company_Name         )         VALUES (             -1,             GETDATE(),             SYSTEM_USER,             1,             0, -- o algún valor identificador especial si tu lógica lo requiere             '-1',             'Not Applicable'         );          -- Deshabilitar IDENTITY_INSERT         SET IDENTITY_INSERT [DWH].[LK_SHIPPERS] OFF;     END;   </pre>																																																	

OUTPUT	select * from [DWH].[LK_SHIPPERS]								
	Ship_Shipper_id	Ship_Shipper_CD	Ship_Company_Name	Ship_Phone	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTIVE_FLAG	AUD_ROWID	
1	1	1	Speedy Express	(503) 555-9831	2025-05-06 23:10:30.690	DESKTOP-IAI1KNV\Ezequiel	1	0x181723D4	
2	2	2	United Package	(503) 555-3199	2025-05-06 23:10:30.690	DESKTOP-IAI1KNV\Ezequiel	1	0x39f447B0	
3	3	3	Federal Shipping	(503) 555-9931	2025-05-06 23:10:30.690	DESKTOP-IAI1KNV\Ezequiel	1	0xE03941E	
4	4	4	Alliance Shippers	1-800-222-0451	2025-05-06 23:10:30.690	DESKTOP-IAI1KNV\Ezequiel	1	0x4ECC925D	
5	5	5	UPS	1-800-782-7892	2025-05-06 23:10:30.690	DESKTOP-IAI1KNV\Ezequiel	1	0x6D86E420	
6	6	6	DHL	1-800-225-5345	2025-05-06 23:10:30.690	DESKTOP-IAI1KNV\Ezequiel	1	0x6529F77E	

## 4.4 Proceso Schema DWH 4: TERRITORIES

JobName	DWH_Territories.dtsx																																																																																				
Input	<pre>select * from [STG].[Territories]</pre> <table border="1"> <thead> <tr> <th>Territory_CD</th> <th>Territory_Description</th> <th>Territory_Region_Id</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> <th>AUD_ACTION</th> <th>AUD_ROWID</th> </tr> </thead> <tbody> <tr><td>01581</td><td>Westboro</td><td>1</td><td>2025-05-06 23:29:50.730</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x35B2F206</td></tr> <tr><td>01730</td><td>Bedford</td><td>1</td><td>2025-05-06 23:29:50.730</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0xD144E97D</td></tr> <tr><td>01833</td><td>Georgetown</td><td>1</td><td>2025-05-06 23:29:50.730</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x84210774</td></tr> <tr><td>02116</td><td>Boston</td><td>1</td><td>2025-05-06 23:29:50.730</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0xB1D00D01</td></tr> <tr><td>02139</td><td>Cambridge</td><td>1</td><td>2025-05-06 23:29:50.730</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0xE60C4121</td></tr> <tr><td>02184</td><td>Braintree</td><td>1</td><td>2025-05-06 23:29:50.730</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0xB008FA51</td></tr> <tr><td>02903</td><td>Providence</td><td>1</td><td>2025-05-06 23:29:50.730</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x85AC0127</td></tr> <tr><td>03049</td><td>Hollis</td><td>3</td><td>2025-05-06 23:29:50.730</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x29AC5025</td></tr> <tr><td>03801</td><td>Portsmouth</td><td>3</td><td>2025-05-06 23:29:50.730</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0xFC47CC1E</td></tr> <tr><td>06897</td><td>Wilton</td><td>1</td><td>2025-05-06 23:29:50.730</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x93C8D879</td></tr> <tr><td>07960</td><td>Monistown</td><td>1</td><td>2025-05-06 23:29:50.730</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x943B0C88</td></tr> </tbody> </table>	Territory_CD	Territory_Description	Territory_Region_Id	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID	01581	Westboro	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x35B2F206	01730	Bedford	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xD144E97D	01833	Georgetown	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x84210774	02116	Boston	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xB1D00D01	02139	Cambridge	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xE60C4121	02184	Braintree	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xB008FA51	02903	Providence	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x85AC0127	03049	Hollis	3	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x29AC5025	03801	Portsmouth	3	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xFC47CC1E	06897	Wilton	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x93C8D879	07960	Monistown	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x943B0C88
Territory_CD	Territory_Description	Territory_Region_Id	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID																																																																															
01581	Westboro	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x35B2F206																																																																															
01730	Bedford	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xD144E97D																																																																															
01833	Georgetown	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x84210774																																																																															
02116	Boston	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xB1D00D01																																																																															
02139	Cambridge	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xE60C4121																																																																															
02184	Braintree	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xB008FA51																																																																															
02903	Providence	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x85AC0127																																																																															
03049	Hollis	3	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x29AC5025																																																																															
03801	Portsmouth	3	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xFC47CC1E																																																																															
06897	Wilton	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x93C8D879																																																																															
07960	Monistown	1	2025-05-06 23:29:50.730	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x943B0C88																																																																															
Control Flow	<pre> graph TD     StartLog([START LOG]) --&gt; ExecDwhTerritories[EXEC DWH TERRITORIES]     ExecDwhTerritories --&gt; EndLogOk([END LOG OK])     ExecDwhTerritories -- Error --&gt; ErrorLog([ERROR LOG])     ExecDwhTerritories -- Error --&gt; ErrorLog     ExecDwhTerritories -- Error --&gt; ErrorLog   </pre>																																																																																				
Proceso	<pre> CREATE PROCEDURE [dbo].[SP_DWH_Territories] AS BEGIN     SET NOCOUNT ON;      -- Inicializar Dimensión con valor NA      -- Verificar si el valor NA (-1) ya existe en la tabla LK_REGIONS     IF NOT EXISTS (SELECT 1 FROM [DWH].[LK_TERRITORIES] WHERE Territory_Id = -1)     BEGIN         -- Habilitar IDENTITY_INSERT         SET IDENTITY_INSERT [DWH].[LK_TERRITORIES] ON;          -- Insertar el valor NA (-1)         INSERT INTO [DWH].[LK_TERRITORIES] (             Territory_Id, -- Identity, por eso ahora se puede insertar explicitamente             AUD_INSERT_DT,             AUD_USER_INSERT,             AUD_ACTIVE_FLAG,             AUD_ROWID,             Territory_CD,             Territory_Description,             Territory_Region_Id         )         VALUES (             -1,             GETDATE(),             SYSTEM_USER,             1,             0, -- o algún valor identificador especial si tu lógica lo requiere             '-1',             'Not Applicable'         )     END END   </pre>																																																																																				

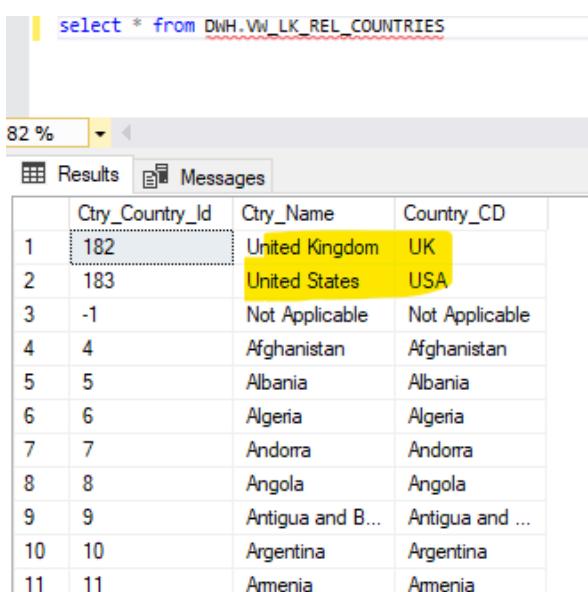
	<pre> -1 );  -- Deshabilitar IDENTITY_INSERT SET IDENTITY_INSERT [DWH].[LK_TERRITORIES] OFF; END;  -- Realizando el MERGE en la tabla de destino con la tabla fuente  MERGE INTO [DWH].[LK_TERRITORIES] AS target USING [STG].[LK_TERRITORIES] AS source     ON target.AUD_ROWID = source.AUD_ROWID     AND target.AUD_ACTIVE_FLAG = 1 WHEN NOT MATCHED BY TARGET AND source.AUD_ACTION = 'INSERT' THEN     INSERT (         AUD_INSERT_DT,         AUD_USER_INSERT,         AUD_ACTIVE_FLAG,         AUD_ROWID,         Territory_CD,         Territory_Description,         Territory_Region_Id     )     VALUES (         GETDATE(), -- AUD_INSERT_DT         SYSTEM_USER, -- AUD_USER_INSERT         1, -- AUD_ACTIVE_FLAG (TRUE)         source.AUD_ROWID,         source.Territory_CD,         source.Territory_Description,         source.Territory_Region_Id     ) WHEN MATCHED AND target.AUD_ACTIVE_FLAG = 1 AND source.AUD_ACTION = 'DELETE' THEN     UPDATE SET         target.AUD_INSERT_DT = GETDATE(), -- Mantener el campo de fecha actualizado         target.AUD_USER_INSERT = SYSTEM_USER, -- Mantener el usuario actualizado         target.AUD_ACTIVE_FLAG = 0 -- 0 representa FALSE para AUD_ACTIVE_FLAG     ; END; </pre>																																																																																																
OUTPUT	<pre>select * from [DWH].[LK_TERRITORIES]</pre> <table border="1"> <thead> <tr> <th>Territory_Id</th><th>Territory_CD</th><th>Territory_Description</th><th>Territory_Region_Id</th><th>AUD_INSERT_DT</th><th>AUD_USER_INSERT</th><th>AUD_ACTIVE_FLAG</th><th>AUD_ROWID</th></tr> </thead> <tbody> <tr><td>1</td><td>1</td><td>Westboro</td><td>1</td><td>2025-05-06 23:36:19.890</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x35B2F206</td></tr> <tr><td>2</td><td>2</td><td>Bedford</td><td>1</td><td>2025-05-06 23:36:19.890</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0xD1A4E97D</td></tr> <tr><td>3</td><td>3</td><td>Georgetown</td><td>1</td><td>2025-05-06 23:36:19.890</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x4210774</td></tr> <tr><td>4</td><td>4</td><td>Boston</td><td>1</td><td>2025-05-06 23:36:19.890</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0xB1D00D01</td></tr> <tr><td>5</td><td>5</td><td>Cambridge</td><td>1</td><td>2025-05-06 23:36:19.890</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0xE60C4121</td></tr> <tr><td>6</td><td>6</td><td>Braintree</td><td>1</td><td>2025-05-06 23:36:19.890</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0xB008FA51</td></tr> <tr><td>7</td><td>7</td><td>Providence</td><td>1</td><td>2025-05-06 23:36:19.890</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0xB5AC0127</td></tr> <tr><td>8</td><td>8</td><td>Hollis</td><td>3</td><td>2025-05-06 23:36:19.890</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x29AC5025</td></tr> <tr><td>9</td><td>9</td><td>Portsmouth</td><td>3</td><td>2025-05-06 23:36:19.890</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0xFC47CC1E</td></tr> <tr><td>10</td><td>10</td><td>Wilton</td><td>1</td><td>2025-05-06 23:36:19.890</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x93C8D879</td></tr> <tr><td>11</td><td>11</td><td>Momtstown</td><td>1</td><td>2025-05-06 23:36:19.890</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x943B0C88</td></tr> </tbody> </table>	Territory_Id	Territory_CD	Territory_Description	Territory_Region_Id	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTIVE_FLAG	AUD_ROWID	1	1	Westboro	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0x35B2F206	2	2	Bedford	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0xD1A4E97D	3	3	Georgetown	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0x4210774	4	4	Boston	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0xB1D00D01	5	5	Cambridge	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0xE60C4121	6	6	Braintree	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0xB008FA51	7	7	Providence	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0xB5AC0127	8	8	Hollis	3	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0x29AC5025	9	9	Portsmouth	3	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0xFC47CC1E	10	10	Wilton	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0x93C8D879	11	11	Momtstown	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0x943B0C88
Territory_Id	Territory_CD	Territory_Description	Territory_Region_Id	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTIVE_FLAG	AUD_ROWID																																																																																										
1	1	Westboro	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0x35B2F206																																																																																										
2	2	Bedford	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0xD1A4E97D																																																																																										
3	3	Georgetown	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0x4210774																																																																																										
4	4	Boston	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0xB1D00D01																																																																																										
5	5	Cambridge	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0xE60C4121																																																																																										
6	6	Braintree	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0xB008FA51																																																																																										
7	7	Providence	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0xB5AC0127																																																																																										
8	8	Hollis	3	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0x29AC5025																																																																																										
9	9	Portsmouth	3	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0xFC47CC1E																																																																																										
10	10	Wilton	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0x93C8D879																																																																																										
11	11	Momtstown	1	2025-05-06 23:36:19.890	DESKTOP-IAI1KNV\Ezequiel	1	0x943B0C88																																																																																										

## 4.5 Proceso Schema DWH 5: COUNTRIES

Particularmente, en ésta dimensión, se hace un tratamiento diferente; Puesto que es necesario una tabla de relación, para manejar Distintos nombres del mismo país

JobName	DWH_Countries.dtsx																																																																																																									
Input	<pre>select * from [STG].[COUNTRIES]</pre> <table border="1"> <thead> <tr> <th></th> <th>Country_CD</th> <th>Country_Name</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> <th>AUD_ACTION</th> <th>AUD_ROWID</th> </tr> </thead> <tbody> <tr><td>1</td><td>AF</td><td>Afghanistan</td><td>2025-05-07 23:14:20.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x55BD037F</td></tr> <tr><td>2</td><td>AL</td><td>Albania</td><td>2025-05-07 23:14:20.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0xFF4EDB9E</td></tr> <tr><td>3</td><td>DZ</td><td>Algeria</td><td>2025-05-07 23:14:20.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0xEF29DBD6</td></tr> <tr><td>4</td><td>AD</td><td>Andorra</td><td>2025-05-07 23:14:20.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0xDF5658C9</td></tr> <tr><td>5</td><td>AO</td><td>Angola</td><td>2025-05-07 23:14:20.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x211FC306</td></tr> <tr><td>6</td><td>AG</td><td>Antigua and Barbuda</td><td>2025-05-07 23:14:20.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x09316491</td></tr> <tr><td>7</td><td>AR</td><td>Argentina</td><td>2025-05-07 23:14:20.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x5CDB1923</td></tr> <tr><td>8</td><td>AM</td><td>Amenia</td><td>2025-05-07 23:14:20.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x6FFED7F9</td></tr> <tr><td>9</td><td>AU</td><td>Australia</td><td>2025-05-07 23:14:20.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x86719904</td></tr> <tr><td>10</td><td>AT</td><td>Austria</td><td>2025-05-07 23:14:20.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0xEE4057D5</td></tr> <tr><td>11</td><td>AZ</td><td>Azerbaijan</td><td>2025-05-07 23:14:20.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x377F0691</td></tr> <tr><td>12</td><td>BS</td><td>The Bahamas</td><td>2025-05-07 23:14:20.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x9B039E95</td></tr> <tr><td>13</td><td>BH</td><td>Bahrain</td><td>2025-05-07 23:14:20.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0xBFA8EE5A</td></tr> <tr><td>14</td><td>BD</td><td>Bangladesh</td><td>2025-05-07 23:14:20.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0xFB7C2E74</td></tr> </tbody> </table>		Country_CD	Country_Name	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID	1	AF	Afghanistan	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x55BD037F	2	AL	Albania	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xFF4EDB9E	3	DZ	Algeria	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xEF29DBD6	4	AD	Andorra	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xDF5658C9	5	AO	Angola	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x211FC306	6	AG	Antigua and Barbuda	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x09316491	7	AR	Argentina	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x5CDB1923	8	AM	Amenia	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x6FFED7F9	9	AU	Australia	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x86719904	10	AT	Austria	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xEE4057D5	11	AZ	Azerbaijan	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x377F0691	12	BS	The Bahamas	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x9B039E95	13	BH	Bahrain	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xBFA8EE5A	14	BD	Bangladesh	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xFB7C2E74
	Country_CD	Country_Name	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID																																																																																																				
1	AF	Afghanistan	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x55BD037F																																																																																																				
2	AL	Albania	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xFF4EDB9E																																																																																																				
3	DZ	Algeria	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xEF29DBD6																																																																																																				
4	AD	Andorra	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xDF5658C9																																																																																																				
5	AO	Angola	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x211FC306																																																																																																				
6	AG	Antigua and Barbuda	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x09316491																																																																																																				
7	AR	Argentina	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x5CDB1923																																																																																																				
8	AM	Amenia	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x6FFED7F9																																																																																																				
9	AU	Australia	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x86719904																																																																																																				
10	AT	Austria	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xEE4057D5																																																																																																				
11	AZ	Azerbaijan	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x377F0691																																																																																																				
12	BS	The Bahamas	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x9B039E95																																																																																																				
13	BH	Bahrain	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xBFA8EE5A																																																																																																				
14	BD	Bangladesh	2025-05-07 23:14:20.963	DESKTOP-IAI1KNV\Ezequiel	INSERT	0xFB7C2E74																																																																																																				
Control Flow	<pre> graph TD     StartLog([START LOG]) --&gt; ExecCOUNTRIES[EXEC DWH COUNTRIES]     ExecCOUNTRIES -- Error --&gt; ErrorLog([ERROR LOG])     ErrorLog -- Error --&gt; EndLogOK([END LOG OK])     </pre>																																																																																																									
Proceso	<pre> ALTER PROCEDURE [dbo].[SP_DWH_Countries] AS BEGIN     SET NOCOUNT ON;      -- Inicializar Dimensión con valor NA      -- Verificar si el valor NA (-1) ya existe en la tabla LK_REGIONS     IF NOT EXISTS (SELECT 1 FROM [DWH].[LK_COUNTRIES] WHERE Ctry_Country_Id = -1)     BEGIN         -- Habilitar IDENTITY_INSERT         SET IDENTITY_INSERT [DWH].[LK_COUNTRIES] ON;          -- Insertar el valor NA (-1)         INSERT INTO [DWH].[LK_COUNTRIES] (             Ctry_Country_Id, -- Identity, por eso ahora se puede insertar explícitamente             AUD_INSERT_DT,             AUD_USER_INSERT,             AUD_ACTIVE_FLAG,             AUD_ROWID,             Country_CD,             Ctry_Name         )         VALUES (     </pre>																																																																																																									

	<pre> -1, GETDATE(), SYSTEM_USER, 1, 0, -- o algún valor identificador especial si tu lógica lo requiere '-1', 'Not Applicable' );  -- Deshabilitar IDENTITY_INSERT SET IDENTITY_INSERT [DWH].[LK_COUNTRIES] OFF; END;  -- Realizando el MERGE en la tabla de destino con la tabla fuente  MERGE INTO [DWH].[LK_COUNTRIES] AS target USING [STG].[LK_COUNTRIES] AS source ON target.AUD_ROWID = source.AUD_ROWID AND target.AUD_ACTIVE_FLAG = 1 WHEN NOT MATCHED BY TARGET AND source.AUD_ACTION = 'INSERT' THEN INSERT (     AUD_INSERT_DT,     AUD_USER_INSERT,     AUD_ACTIVE_FLAG,     AUD_ROWID,     Country_CD,     Ctry_Name ) VALUES (     GETDATE(), -- AUD_INSERT_DT     SYSTEM_USER, -- AUD_USER_INSERT     1, -- AUD_ACTIVE_FLAG (TRUE)     source.AUD_ROWID,     source.Country_CD,     source.Country_Name ) WHEN MATCHED AND target.AUD_ACTIVE_FLAG = 1 AND source.AUD_ACTION = 'DELETE' THEN UPDATE SET     target.AUD_INSERT_DT = GETDATE(), -- Mantener el campo de fecha actualizado     target.AUD_USER_INSERT = SYSTEM_USER, -- Mantener el usuario actualizado     target.AUD_ACTIVE_FLAG = 0 -- 0 representa FALSE para AUD_ACTIVE_FLAG ; END; </pre>																																																																																															
OUTPUT	select * from [DWH].[LK_COUNTRIES]																																																																																															
	<table border="1"> <thead> <tr> <th>Ctry_Country_Id</th><th>Ctry_Name</th><th>Country_CD</th><th>AUD_INSERT_DT</th><th>AUD_USER_INSERT</th><th>AUD_ROWID</th><th>AUD_ACTIVE_FLAG</th></tr> </thead> <tbody> <tr><td>1</td><td>4</td><td>Afghanistan</td><td>AF</td><td>2025-05-07 23:25:14.763</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>0x55BD037F</td><td>1</td></tr> <tr><td>2</td><td>5</td><td>Albania</td><td>AL</td><td>2025-05-07 23:25:14.763</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>0xFF4EDB9E</td><td>1</td></tr> <tr><td>3</td><td>6</td><td>Algeria</td><td>DZ</td><td>2025-05-07 23:25:14.763</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>0xEF29DBD6</td><td>1</td></tr> <tr><td>4</td><td>7</td><td>Andorra</td><td>AD</td><td>2025-05-07 23:25:14.763</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>0xDF565C9</td><td>1</td></tr> <tr><td>5</td><td>8</td><td>Angola</td><td>AO</td><td>2025-05-07 23:25:14.763</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>0x211FC306</td><td>1</td></tr> <tr><td>6</td><td>9</td><td>Antigua and Barbuda</td><td>AG</td><td>2025-05-07 23:25:14.763</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>0x09316491</td><td>1</td></tr> <tr><td>7</td><td>10</td><td>Argentina</td><td>AR</td><td>2025-05-07 23:25:14.763</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>0x5CDB1923</td><td>1</td></tr> <tr><td>8</td><td>11</td><td>Amenia</td><td>AM</td><td>2025-05-07 23:25:14.763</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>0x6FFED7F9</td><td>1</td></tr> <tr><td>9</td><td>12</td><td>Australia</td><td>AU</td><td>2025-05-07 23:25:14.763</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>0x86719904</td><td>1</td></tr> <tr><td>10</td><td>13</td><td>Austria</td><td>AT</td><td>2025-05-07 23:25:14.763</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>0xEE4057D5</td><td>1</td></tr> <tr><td>11</td><td>14</td><td>Azerbaijan</td><td>AZ</td><td>2025-05-07 23:25:14.763</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>0x377F0691</td><td>1</td></tr> </tbody> </table>	Ctry_Country_Id	Ctry_Name	Country_CD	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ROWID	AUD_ACTIVE_FLAG	1	4	Afghanistan	AF	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0x55BD037F	1	2	5	Albania	AL	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0xFF4EDB9E	1	3	6	Algeria	DZ	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0xEF29DBD6	1	4	7	Andorra	AD	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0xDF565C9	1	5	8	Angola	AO	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0x211FC306	1	6	9	Antigua and Barbuda	AG	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0x09316491	1	7	10	Argentina	AR	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0x5CDB1923	1	8	11	Amenia	AM	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0x6FFED7F9	1	9	12	Australia	AU	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0x86719904	1	10	13	Austria	AT	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0xEE4057D5	1	11	14	Azerbaijan	AZ	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0x377F0691	1
Ctry_Country_Id	Ctry_Name	Country_CD	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ROWID	AUD_ACTIVE_FLAG																																																																																										
1	4	Afghanistan	AF	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0x55BD037F	1																																																																																									
2	5	Albania	AL	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0xFF4EDB9E	1																																																																																									
3	6	Algeria	DZ	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0xEF29DBD6	1																																																																																									
4	7	Andorra	AD	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0xDF565C9	1																																																																																									
5	8	Angola	AO	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0x211FC306	1																																																																																									
6	9	Antigua and Barbuda	AG	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0x09316491	1																																																																																									
7	10	Argentina	AR	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0x5CDB1923	1																																																																																									
8	11	Amenia	AM	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0x6FFED7F9	1																																																																																									
9	12	Australia	AU	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0x86719904	1																																																																																									
10	13	Austria	AT	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0xEE4057D5	1																																																																																									
11	14	Azerbaijan	AZ	2025-05-07 23:25:14.763	DESKTOP-IAI1KNV\Ezequiel	0x377F0691	1																																																																																									
TABLA DE RELACION	select * from DWH.REL_SUPPLIER_COUNTRY																																																																																															
	<table border="1"> <thead> <tr> <th>MAP_Supp_Country_Id</th><th>MAP_External_Name</th><th>MAP_Ctry_Country_Name</th><th>AUD_INSERT_DT</th><th>AUD_USER_INSERT</th><th>AUD_ACTIVE_FLAG</th></tr> </thead> <tbody> <tr><td>1</td><td>USA</td><td>United States</td><td>2025-05-17 13:30:07.597</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td></tr> <tr><td>2</td><td>UK</td><td>United Kingdom</td><td>2025-05-17 13:30:11.140</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td></tr> </tbody> </table>	MAP_Supp_Country_Id	MAP_External_Name	MAP_Ctry_Country_Name	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTIVE_FLAG	1	USA	United States	2025-05-17 13:30:07.597	DESKTOP-IAI1KNV\Ezequiel	1	2	UK	United Kingdom	2025-05-17 13:30:11.140	DESKTOP-IAI1KNV\Ezequiel	1																																																																													
MAP_Supp_Country_Id	MAP_External_Name	MAP_Ctry_Country_Name	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTIVE_FLAG																																																																																											
1	USA	United States	2025-05-17 13:30:07.597	DESKTOP-IAI1KNV\Ezequiel	1																																																																																											
2	UK	United Kingdom	2025-05-17 13:30:11.140	DESKTOP-IAI1KNV\Ezequiel	1																																																																																											
VIEW	CREATE VIEW DWH.VW_LK_REL_COUNTRIES as SELECT																																																																																															

	<pre> c.Ctry_Country_Id, c.Ctry_Name, map.MAP_External_Name Country_CD FROM DWH.REL_SUPPLIER_COUNTRY map LEFT JOIN DWH.LK_COUNTRIES c     ON UPPER(LTRIM(RTRIM(c.Ctry_Name))) = UPPER(LTRIM(RTRIM(map.MAP_Ctry_Country_Name))) WHERE map.AUD_ACTIVE_FLAG = 1 AND c.AUD_ACTIVE_FLAG = 1 UNION ALL SELECT c.Ctry_Country_Id, c.Ctry_Name, c.Ctry_Name Country_CD FROM DWH.LK_COUNTRIES c WHERE c.AUD_ACTIVE_FLAG = 1 </pre>																																																
OUTPUT VIEW	<p>De ésta forma complementa TABLA con RELACIONES</p>  <p>The screenshot shows a SQL query results window with the following details:</p> <ul style="list-style-type: none"> <li><b>Query:</b> <code>select * from DWH.VW_LK_REL_COUNTRIES</code></li> <li><b>Progress:</b> 82 %</li> <li><b>Results Tab:</b> Displays a table with columns: Ctry_Country_Id, Ctry_Name, and Country_CD.</li> <li><b>Data:</b> <table border="1"> <thead> <tr> <th></th> <th>Ctry_Country_Id</th> <th>Ctry_Name</th> <th>Country_CD</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>182</td> <td>United Kingdom</td> <td>UK</td> </tr> <tr> <td>2</td> <td>183</td> <td>United States</td> <td>USA</td> </tr> <tr> <td>3</td> <td>-1</td> <td>Not Applicable</td> <td>Not Applicable</td> </tr> <tr> <td>4</td> <td>4</td> <td>Afghanistan</td> <td>Afghanistan</td> </tr> <tr> <td>5</td> <td>5</td> <td>Albania</td> <td>Albania</td> </tr> <tr> <td>6</td> <td>6</td> <td>Algeria</td> <td>Algeria</td> </tr> <tr> <td>7</td> <td>7</td> <td>Andorra</td> <td>Andorra</td> </tr> <tr> <td>8</td> <td>8</td> <td>Angola</td> <td>Angola</td> </tr> <tr> <td>9</td> <td>9</td> <td>Antigua and B...</td> <td>Antigua and ...</td> </tr> <tr> <td>10</td> <td>10</td> <td>Argentina</td> <td>Argentina</td> </tr> <tr> <td>11</td> <td>11</td> <td>Armenia</td> <td>Armenia</td> </tr> </tbody> </table> </li> <li><b>Messages Tab:</b> Not visible in the screenshot.</li> </ul>		Ctry_Country_Id	Ctry_Name	Country_CD	1	182	United Kingdom	UK	2	183	United States	USA	3	-1	Not Applicable	Not Applicable	4	4	Afghanistan	Afghanistan	5	5	Albania	Albania	6	6	Algeria	Algeria	7	7	Andorra	Andorra	8	8	Angola	Angola	9	9	Antigua and B...	Antigua and ...	10	10	Argentina	Argentina	11	11	Armenia	Armenia
	Ctry_Country_Id	Ctry_Name	Country_CD																																														
1	182	United Kingdom	UK																																														
2	183	United States	USA																																														
3	-1	Not Applicable	Not Applicable																																														
4	4	Afghanistan	Afghanistan																																														
5	5	Albania	Albania																																														
6	6	Algeria	Algeria																																														
7	7	Andorra	Andorra																																														
8	8	Angola	Angola																																														
9	9	Antigua and B...	Antigua and ...																																														
10	10	Argentina	Argentina																																														
11	11	Armenia	Armenia																																														

## 4.6 Proceso Schema DWH 6: EMPLOYEES

JobName	DWH_Employees.dtsx
Input	<pre>select * from [STG].[EMPLOYEES]</pre>
Control Flow	
Proceso	<pre> USE [TP_DWH_MCD_2025] GO ***** Object: StoredProcedure [dbo].[SP_DWH_Employees] Script Date: 17/5/2025 15:31:06 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO  ALTER PROCEDURE [dbo].[SP_DWH_Employees] AS BEGIN     SET NOCOUNT ON;      -- Inicializar Dimensión con valor NA      -- Verificar si el valor NA (-1) ya existe en la tabla LK_EMPLOYEES     IF NOT EXISTS (SELECT 1 FROM [DWH].[LK_EMPLOYEES] WHERE Emp_Employee_id = -1)     BEGIN         -- Habilitar IDENTITY_INSERT         SET IDENTITY_INSERT [DWH].[LK_EMPLOYEES] ON;          -- Insertar el valor NA (-1)         INSERT INTO [DWH].[LK_EMPLOYEES] (             Emp_Employee_id, -- Identity, por eso ahora se puede insertar explícitamente             AUD_INSERT_DT,             AUD_USER_INSERT,             AUD_ACTIVE_FLAG,             AUD_ROWID,             Emp_Employee_CD,             Emp_Last_name,             Emp_First_name,             Emp_report_to_id         )     END END </pre>

```

)
VALUES (
-1,
GETDATE(),
SYSTEM_USER,
1,
0, -- o algún valor identificador especial si tu lógica lo requiere
'-1',
'Not Applicable',
'Not Applicable',
-1
);

-- Deshabilitar IDENTITY_INSERT
SET IDENTITY_INSERT [DWH].[LK_EMPLOYEES] OFF;
END;

-- Realizando el MERGE en la tabla de destino con la tabla fuente

MERGE INTO [DWH].[LK_EMPLOYEES] AS target
USING [STG].[LK_EMPLOYEES] AS source
ON target.AUD_ROWID = source.AUD_ROWID
AND target.AUD_ACTIVE_FLAG = 1 -- 1 representa TRUE para AUD_ACTIVE_FLAG en SQL Server
WHEN NOT MATCHED BY TARGET AND source.AUD_ACTION = 'INSERT' THEN
    INSERT (
        AUD_INSERT_DT,
        AUD_USER_INSERT,
        AUD_ACTIVE_FLAG,
        AUD_ROWID,
        Emp_Employee_CD,
        Emp_Last_name,
        Emp_First_name,
        Emp_title,
        Emp_title_of_courtesy,
        Emp_birth_date,
        Emp_hire_date,
        Emp_address,
        Emp_city,
        Emp_Region_id,
        Emp_postal_Code,
        Emp_home_phone,
        Emp_extension,
        Emp_photo,
        Emp_notes,
        Emp_report_to_id,
        Emp_photo_path
    )
VALUES (
    GETDATE(), -- AUD_INSERT_DT
    SYSTEM_USER, -- AUD_USER_INSERT
    1, -- AUD_ACTIVE_FLAG (TRUE)
    source.AUD_ROWID,
    source.Emp_Employee_CD,
    source.Emp_Last_name,
    source.Emp_First_name,
    source.Emp_title,
    source.Emp_title_of_courtesy,
    source.Emp_birth_date,
    source.Emp_hire_date,
    source.Emp_address,
    source.Emp_city,
    source.Emp_Region_id,
    source.Emp_postal_Code,
    source.Emp_home_phone,
    source.Emp_extension,
    source.Emp_photo,
)

```

```

        source.Emp_notes,
        source.Emp_report_to_id,
        source.Emp_photo_path
    )
WHEN MATCHED AND target.AUD_ACTIVE_FLAG = 1 AND source.AUD_ACTION = 'DELETE' THEN
    UPDATE SET
        target.AUD_INSERT_DT = GETDATE(), -- Mantener el campo de fecha actualizado
        target.AUD_USER_INSERT = SYSTEM_USER, -- Mantener el usuario actualizado
        target.AUD_ACTIVE_FLAG = 0 -- 0 representa FALSE para AUD_ACTIVE_FLAG;
    ;

    -- RECALCULO DE JERARQUIAS

    -- Tabla temporal para almacenar los IDs de empleados que fueron modificados
    IF OBJECT_ID('tempdb..#Empleados_Modificados') IS NOT NULL DROP TABLE #Empleados_Modificados;

    Select
        delta.*,
        r.Emp_Employee_id AS new_mngr
    INTO #Empleados_Modificados
    FROM
    (
        Select t.Emp_Employee_id,
               stg.Emp_report_to_cd,
               t.Emp_report_to_id
        FROM
        (
            SELECT tgt.Emp_Employee_id,
                   Emp_Employee_CD,
                   tgt.Emp_report_to_id
            FROM [DWH].[LK_EMPLOYEES] tgt
            WHERE tgt.AUD_ACTIVE_FLAG = 1
        ) t
        INNER JOIN [STG].[LK_EMPLOYEES] stg
        ON t.Emp_Employee_CD = stg.Emp_Employee_CD
        WHERE AUD_ACTION = 'INSERT'
    ) delta
    INNER JOIN [DWH].[LK_EMPLOYEES] r
    ON delta.Emp_report_to_cd = r.Emp_Employee_CD
    WHERE r.AUD_ACTIVE_FLAG = 1
    AND COALESCE(r.Emp_Employee_id,-1) <> COALESCE(delta.Emp_report_to_id,-1);

    -- Hacer el UPDATE solo sobre los que cambiaron
    UPDATE tgt
    SET tgt.Emp_report_to_id = COALESCE(mgr.new_mngr, -1)
    FROM [DWH].[LK_EMPLOYEES] tgt
    INNER JOIN #Empleados_Modificados mgr
        ON tgt.Emp_Employee_id = mgr.Emp_Employee_id
    WHERE AUD_ACTIVE_FLAG = 1;

    -- Recalcular el AUD_ROWID solo para los que fueron modificados
    UPDATE e
    SET AUD_ROWID = CHECKSUM(
        ISNULL(Emp_Employee_CD, ''),
        ISNULL(Emp_Employee_CD, ''),
        ISNULL(Emp_Last_name, ''),
        ISNULL(Emp_First_name, ''),
        ISNULL(Emp_title, ''),
        ISNULL(Emp_title_of_courtesy, ''),
        ISNULL(Emp_birth_date, ''),
        ISNULL(Emp_hire_date, ''),
        ISNULL(Emp_address, ''),
        ISNULL(Emp_city, ''),
        ISNULL(Emp_Region_id, ''),
        ISNULL(Emp_postal_Code, '')
    );

```

	<pre> ISNULL(Emp_home_phone, ""), ISNULL(Emp_extension, ""), ISNULL(Emp_photo, ""), ISNULL(Emp_notes, ""), ISNULL(Emp_report_to_id, ""), ISNULL(Emp_photo_path, "") ) FROM [DWH].[LK_EMPLOYEES] e WHERE      e.Emp_Employee_id     IN      (SELECT      Emp_Employee_id      FROM #Empleados_Modificados AND e.AUD_ACTIVE_FLAG = 1;  END; </pre>																																																																																																														
OUTPUT	<pre>select * from [DWH].[LK_EMPLOYEES]</pre> <table border="1"> <thead> <tr> <th></th><th>Emp_Employee_id</th><th>Emp_Employee_CD</th><th>Emp_Last_name</th><th>Emp_First_name</th><th>Emp_title</th><th>Emp_title_of_courtesy</th><th>Emp_birth_date</th><th>Emp_hire_date</th><th>Emp_adr</th></tr> </thead> <tbody> <tr><td>1</td><td>-1</td><td>-1</td><td>Not Applicable</td><td>Not Applicable</td><td>NULL</td><td>NULL</td><td>NULL</td><td>NULL</td><td>NULL</td></tr> <tr><td>2</td><td>24</td><td>1</td><td>Davolio</td><td>Nancy</td><td>Sales Representative</td><td>Ms.</td><td>1948-12-08</td><td>1992-05-01</td><td>507 20th</td></tr> <tr><td>3</td><td>25</td><td>2</td><td>Fuller</td><td>Andrew</td><td>Vice President Sales</td><td>Dr.</td><td>1952-02-19</td><td>1992-08-14</td><td>908 W. M</td></tr> <tr><td>4</td><td>26</td><td>3</td><td>Leverling</td><td>Janet</td><td>Sales Representative</td><td>Ms.</td><td>1963-08-30</td><td>1992-04-01</td><td>722 Mos</td></tr> <tr><td>5</td><td>27</td><td>4</td><td>Peacock</td><td>Margaret</td><td>Sales Representative</td><td>Mrs.</td><td>1937-09-19</td><td>1993-05-03</td><td>4110 Ok</td></tr> <tr><td>6</td><td>28</td><td>5</td><td>Buchanan</td><td>Steven</td><td>Sales Manager</td><td>Mr.</td><td>1955-03-04</td><td>1993-10-17</td><td>14 Game</td></tr> <tr><td>7</td><td>29</td><td>6</td><td>Suyama</td><td>Michael</td><td>Sales Representative</td><td>Mr.</td><td>1963-07-02</td><td>1993-10-17</td><td>Coventry</td></tr> <tr><td>8</td><td>30</td><td>7</td><td>King</td><td>Robert</td><td>Sales Representative</td><td>Mr.</td><td>1960-05-29</td><td>1994-01-02</td><td>Edgeham</td></tr> <tr><td>9</td><td>31</td><td>8</td><td>Callahan</td><td>Laura</td><td>Inside Sales Coordinator</td><td>Ms.</td><td>1958-01-09</td><td>1994-03-05</td><td>4726 11</td></tr> <tr><td>10</td><td>32</td><td>9</td><td>Dodsworth</td><td>Anne</td><td>Sales Representative</td><td>Ms.</td><td>1966-01-27</td><td>1994-11-15</td><td>7 Hounds</td></tr> </tbody> </table>		Emp_Employee_id	Emp_Employee_CD	Emp_Last_name	Emp_First_name	Emp_title	Emp_title_of_courtesy	Emp_birth_date	Emp_hire_date	Emp_adr	1	-1	-1	Not Applicable	Not Applicable	NULL	NULL	NULL	NULL	NULL	2	24	1	Davolio	Nancy	Sales Representative	Ms.	1948-12-08	1992-05-01	507 20th	3	25	2	Fuller	Andrew	Vice President Sales	Dr.	1952-02-19	1992-08-14	908 W. M	4	26	3	Leverling	Janet	Sales Representative	Ms.	1963-08-30	1992-04-01	722 Mos	5	27	4	Peacock	Margaret	Sales Representative	Mrs.	1937-09-19	1993-05-03	4110 Ok	6	28	5	Buchanan	Steven	Sales Manager	Mr.	1955-03-04	1993-10-17	14 Game	7	29	6	Suyama	Michael	Sales Representative	Mr.	1963-07-02	1993-10-17	Coventry	8	30	7	King	Robert	Sales Representative	Mr.	1960-05-29	1994-01-02	Edgeham	9	31	8	Callahan	Laura	Inside Sales Coordinator	Ms.	1958-01-09	1994-03-05	4726 11	10	32	9	Dodsworth	Anne	Sales Representative	Ms.	1966-01-27	1994-11-15	7 Hounds
	Emp_Employee_id	Emp_Employee_CD	Emp_Last_name	Emp_First_name	Emp_title	Emp_title_of_courtesy	Emp_birth_date	Emp_hire_date	Emp_adr																																																																																																						
1	-1	-1	Not Applicable	Not Applicable	NULL	NULL	NULL	NULL	NULL																																																																																																						
2	24	1	Davolio	Nancy	Sales Representative	Ms.	1948-12-08	1992-05-01	507 20th																																																																																																						
3	25	2	Fuller	Andrew	Vice President Sales	Dr.	1952-02-19	1992-08-14	908 W. M																																																																																																						
4	26	3	Leverling	Janet	Sales Representative	Ms.	1963-08-30	1992-04-01	722 Mos																																																																																																						
5	27	4	Peacock	Margaret	Sales Representative	Mrs.	1937-09-19	1993-05-03	4110 Ok																																																																																																						
6	28	5	Buchanan	Steven	Sales Manager	Mr.	1955-03-04	1993-10-17	14 Game																																																																																																						
7	29	6	Suyama	Michael	Sales Representative	Mr.	1963-07-02	1993-10-17	Coventry																																																																																																						
8	30	7	King	Robert	Sales Representative	Mr.	1960-05-29	1994-01-02	Edgeham																																																																																																						
9	31	8	Callahan	Laura	Inside Sales Coordinator	Ms.	1958-01-09	1994-03-05	4726 11																																																																																																						
10	32	9	Dodsworth	Anne	Sales Representative	Ms.	1966-01-27	1994-11-15	7 Hounds																																																																																																						

## 4.7 Proceso Schema DWH 7: SUPPLIERS

JobName	DWH_Suppliers.dtsx																																																																																								
Input	<pre>select * from [STG].[LK_SUPPLIERS]</pre> <table border="1"> <thead> <tr> <th></th> <th>Supp_CD</th> <th>Supp_companyName</th> <th>Supp_contactName</th> <th>Supp_contactTitle</th> <th>Supp_address</th> <th>Supp_City</th> <th>Supp_postalCode</th> </tr> </thead> <tbody> <tr><td>1</td><td>1</td><td>Exotic Liquids</td><td>Charlotte Cooper</td><td>Purchasing Manager</td><td>49 Gilbert St.</td><td>London</td><td>-1</td></tr> <tr><td>2</td><td>2</td><td>New Orleans Cajun Delights</td><td>Shelley Burke</td><td>Order Administrator</td><td>P.O. Box 78934</td><td>New Orleans</td><td>-1</td></tr> <tr><td>3</td><td>3</td><td>Grandma Kelly's Homestead</td><td>Regina Murphy</td><td>Sales Representative</td><td>707 Oxford Rd.</td><td>Ann Arbor</td><td>-1</td></tr> <tr><td>4</td><td>4</td><td>Tokyo Traders</td><td>Yoshi Nagase</td><td>Marketing Manager</td><td>9-8 Sekimai Musashino-shi</td><td>Tokyo</td><td>-1</td></tr> <tr><td>5</td><td>5</td><td>Cooperativa de Quesos 'Las Cabras'</td><td>Antonio del Valle Saavedra</td><td>Export Administrator</td><td>Calle del Rosal 4</td><td>Oviedo</td><td>-1</td></tr> <tr><td>6</td><td>6</td><td>Mayumi's</td><td>Mayumi Ohno</td><td>Marketing Representative</td><td>92 Setsuko Chuo-ku</td><td>Osaka</td><td>-1</td></tr> <tr><td>7</td><td>7</td><td>Pavlova Ltd.</td><td>Ian Devling</td><td>Marketing Manager</td><td>74 Rose St. Moonie Ponds</td><td>Melbourne</td><td>-1</td></tr> <tr><td>8</td><td>8</td><td>Specialty Biscuits Ltd.</td><td>Peter Wilson</td><td>Sales Representative</td><td>29 King's Way</td><td>Manchester</td><td>-1</td></tr> <tr><td>9</td><td>9</td><td>PB Knäckebrot AB</td><td>Lars Peterson</td><td>Sales Agent</td><td>Kalodagatan 13</td><td>Göteborg</td><td>-1</td></tr> <tr><td>10</td><td>10</td><td>Refrescos Americanas LTDA</td><td>Carlos Diaz</td><td>Marketing Manager</td><td>Av. das Americanas 12.890</td><td>Sao Paulo</td><td>-1</td></tr> </tbody> </table>		Supp_CD	Supp_companyName	Supp_contactName	Supp_contactTitle	Supp_address	Supp_City	Supp_postalCode	1	1	Exotic Liquids	Charlotte Cooper	Purchasing Manager	49 Gilbert St.	London	-1	2	2	New Orleans Cajun Delights	Shelley Burke	Order Administrator	P.O. Box 78934	New Orleans	-1	3	3	Grandma Kelly's Homestead	Regina Murphy	Sales Representative	707 Oxford Rd.	Ann Arbor	-1	4	4	Tokyo Traders	Yoshi Nagase	Marketing Manager	9-8 Sekimai Musashino-shi	Tokyo	-1	5	5	Cooperativa de Quesos 'Las Cabras'	Antonio del Valle Saavedra	Export Administrator	Calle del Rosal 4	Oviedo	-1	6	6	Mayumi's	Mayumi Ohno	Marketing Representative	92 Setsuko Chuo-ku	Osaka	-1	7	7	Pavlova Ltd.	Ian Devling	Marketing Manager	74 Rose St. Moonie Ponds	Melbourne	-1	8	8	Specialty Biscuits Ltd.	Peter Wilson	Sales Representative	29 King's Way	Manchester	-1	9	9	PB Knäckebrot AB	Lars Peterson	Sales Agent	Kalodagatan 13	Göteborg	-1	10	10	Refrescos Americanas LTDA	Carlos Diaz	Marketing Manager	Av. das Americanas 12.890	Sao Paulo	-1
	Supp_CD	Supp_companyName	Supp_contactName	Supp_contactTitle	Supp_address	Supp_City	Supp_postalCode																																																																																		
1	1	Exotic Liquids	Charlotte Cooper	Purchasing Manager	49 Gilbert St.	London	-1																																																																																		
2	2	New Orleans Cajun Delights	Shelley Burke	Order Administrator	P.O. Box 78934	New Orleans	-1																																																																																		
3	3	Grandma Kelly's Homestead	Regina Murphy	Sales Representative	707 Oxford Rd.	Ann Arbor	-1																																																																																		
4	4	Tokyo Traders	Yoshi Nagase	Marketing Manager	9-8 Sekimai Musashino-shi	Tokyo	-1																																																																																		
5	5	Cooperativa de Quesos 'Las Cabras'	Antonio del Valle Saavedra	Export Administrator	Calle del Rosal 4	Oviedo	-1																																																																																		
6	6	Mayumi's	Mayumi Ohno	Marketing Representative	92 Setsuko Chuo-ku	Osaka	-1																																																																																		
7	7	Pavlova Ltd.	Ian Devling	Marketing Manager	74 Rose St. Moonie Ponds	Melbourne	-1																																																																																		
8	8	Specialty Biscuits Ltd.	Peter Wilson	Sales Representative	29 King's Way	Manchester	-1																																																																																		
9	9	PB Knäckebrot AB	Lars Peterson	Sales Agent	Kalodagatan 13	Göteborg	-1																																																																																		
10	10	Refrescos Americanas LTDA	Carlos Diaz	Marketing Manager	Av. das Americanas 12.890	Sao Paulo	-1																																																																																		
Control Flow	<pre> graph TD     StartLog([START LOG]) --&gt; ExecDWH[EXEC DWH SUPPLIERS]     ExecDWH -- Error --&gt; ErrorLog([ERROR LOG])     ErrorLog --&gt; EndLogOK([END LOG OK])     ExecDWH -- Success --&gt; EndLogOK   </pre>																																																																																								
Proceso	<pre> USE [TP_DWH_MCD_2025] GO /******** Object: StoredProcedure [dbo].[SP_DWH_Suppliers]  Script Date: 13/5/2025 23:20:01 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_DWH_Suppliers] AS BEGIN     SET NOCOUNT ON;      -- Inicializar Dimensión con valor NA      -- Verificar si el valor NA (-1) ya existe en la tabla LK_REGIONS     IF NOT EXISTS (SELECT 1 FROM [DWH].[LK_SUPPLIERS] WHERE Supp_Supplier_Id = -1)     BEGIN         -- Habilitar IDENTITY_INSERT         SET IDENTITY_INSERT [DWH].[LK_SUPPLIERS] ON;          -- Insertar el valor NA (-1)         INSERT INTO [DWH].[LK_SUPPLIERS] (             Supp_Supplier_Id, -- Identity, por eso ahora se puede insertar explícitamente             [Supp_Id_Region],             [Supp_ID_DatoContacto],             [Supp_Id_Country],             AUD_INSERT_DT,             AUD_USER_INSERT,             AUD_ACTIVE_FLAG,             AUD_ROWID,             Supp_CD,             Supp_companyName         )     END </pre>																																																																																								

```

)
VALUES (
-1,
-1,
-1,
-1,
GETDATE(),
SYSTEM_USER,
1,
0, -- o algún valor identificador especial si tu lógica lo requiere
'-1',
'Not Applicable'
);

-- Deshabilitar IDENTITY_INSERT
SET IDENTITY_INSERT [DWH].[LK_SUPPLIERS] OFF;
END;

-- Realizando el MERGE en la tabla de destino con la tabla fuente

MERGE INTO [DWH].[LK_SUPPLIERS] AS target
USING [STG].[LK_SUPPLIERS] AS source
ON target.AUD_ROWID = source.AUD_ROWID
AND target.AUD_ACTIVE_FLAG = 1
WHEN NOT MATCHED BY TARGET AND source.AUD_ACTION = 'INSERT' THEN
INSERT (
AUD_INSERT_DT,
AUD_USER_INSERT,
AUD_ACTIVE_FLAG,
AUD_ROWID,
Supp_CD,
Supp_companyName,
Supp_contactName,
Supp_contactTitle,
Supp_address,
Supp_City,
Supp_Id_Region,
Supp_PostalCode,
Supp_Id_Country,
Supp_ID_DatoContacto
)
VALUES (
GETDATE(), -- AUD_INSERT_DT
SYSTEM_USER, -- AUD_USER_INSERT
1, -- AUD_ACTIVE_FLAG (TRUE)
source.AUD_ROWID,
source.Supp_CD,
source.Supp_companyName,
source.Supp_contactName,
source.Supp_contactTitle,
source.Supp_address,
source.Supp_City,
source.Supp_Id_Region,
source.Supp_PostalCode,
source.Supp_Id_Country,
source.Supp_ID_DatoContacto
)
WHEN MATCHED AND target.AUD_ACTIVE_FLAG = 1 AND source.AUD_ACTION = 'DELETE' THEN
UPDATE SET
target.AUD_INSERT_DT = GETDATE(), -- Mantener el campo de fecha actualizado
target.AUD_USER_INSERT = SYSTEM_USER, -- Mantener el usuario actualizado
target.AUD_ACTIVE_FLAG = 0 -- 0 representa FALSE para AUD_ACTIVE_FLAG
;
END;
'

```

select * from [DWH].[LK_SUPPLIERS]								
	Supp_Supplier_Id	Supp_CD	Supp_companyName	Supp_contactName	Supp_contactTitle	Supp_address	Supp_City	Supp_Country
1	-1	1	Not Applicable	NULL	NULL	NULL	NULL	-1
2	30	1	Exotic Liquids	Charlotte Cooper	Purchasing Manager	49 Gilbert St.	London	-1
3	31	2	New Orleans Cajun Delights	Shelley Burke	Order Administrator	P.O. Box 78934	New Orleans	-1
4	32	3	Grandma Kelly's Homestead	Regina Murphy	Sales Representative	707 Oxford Rd.	Ann Arbor	-1
5	33	4	Tokyo Traders	Yoshi Nagase	Marketing Manager	9-8 Sekimai Musashino-shi	Tokyo	-1
6	34	5	'Cooperativa de Quesos 'Las Cabras'	Antonio del Valle Saavedra	Export Administrator	Calle del Rosal 4	Oviedo	-1
7	35	6	Mayumi's	Mayumi Ohno	Marketing Representative	92 Setsuko Chuo-ku	Osaka	-1
8	36	7	Pavlova Ltd.	Ian Devling	Marketing Manager	74 Rose St. Moonie Ponds	Melbourne	-1
9	37	8	Specialty Biscuits Ltd.	Peter Wilson	Sales Representative	29 King's Way	Manchester	-1
10	38	9	PB Kraftekbergs AB	Lars Peterson	Sales Agent	Kaledagatan 13	Gäteborg	-1
<   >								

## 4.8 Proceso Schema DWH 8: SUPPLIERS DATOS CONTACTO

JobName	DWH_Suppliers_Datos_Contacto.dtsx
Input	<pre>select * from [STG].[LK_SUPPLIERS]</pre>
Control Flow	<pre> graph TD     StartLog([START LOG]) --&gt; ExecDWH[EXEC DWH SUPPLIERS DATOS]     ExecDWH -- Error --&gt; ErrorLog([ERROR LOG])     ErrorLog -- Error --&gt; ExecDWH     ExecDWH --&gt; EndLogOK([END LOG OK])   </pre>
Proceso	<pre> USE [TP_DWH_MCD_2025] GO /******** Object: .StoredProcedure [dbo].[SP_DWH_Suppliers_Datos_Contacto]   Script Date: 16/5/2025 19:00:25 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_DWH_Suppliers_Datos_Contacto] AS BEGIN     SET NOCOUNT ON;      -- Inicializar Dimensión con valor NA      -- Verificar si el valor NA (-1) ya existe en la tabla LK_REGIONS     IF NOT EXISTS (SELECT 1 FROM [DWH].LK_SUPPLIERS_DATOS_Contacto WHERE DatC_Contacto_Id = -1)     BEGIN         -- Habilitar IDENTITY_INSERT         SET IDENTITY_INSERT [DWH].LK_SUPPLIERS_DATOS_Contacto ON;          -- Insertar el valor NA (-1)         INSERT INTO [DWH].LK_SUPPLIERS_DATOS_Contacto (             DatC_Contacto_Id, -- Identity, por eso ahora se puede insertar explícitamente             Dat_SupplierId,             AUD_INSERT_DT,             AUD_USER_INSERT,             AUD_ACTIVE_FLAG,             AUD_ROWID         )         VALUES (             -1,             GETDATE(),             'Ezequiel',             1,             NEWID()         );     END; END;   </pre>

```

    -1,
    GETDATE(),
    SYSTEM_USER,
    1,
    0 -- o algún valor identificador especial si tu lógica lo requiere
);

-- Deshabilitar IDENTITY_INSERT
SET IDENTITY_INSERT [DWH].LK_SUPPLIERS_DATOS_Contacto OFF;
END;

MERGE INTO [DWH].LK_SUPPLIERS_DATOS_Contacto AS target
USING [STG].LK_SUPPLIERS_DATOS_Contacto AS source
ON target.AUD_ROWID = source.AUD_ROWID
AND target.AUD_ACTIVE_FLAG = 1
WHEN NOT MATCHED BY TARGET AND source.AUD_ACTION = 'INSERT' THEN
INSERT (
    AUD_INSERT_DT,
    AUD_USER_INSERT,
    AUD_ACTIVE_FLAG,
    AUD_ROWID,
    Dat_SupplierId,
    Dat_Phone,
    Dat_Fax,
    Dat_HomePage
)
VALUES (
    GETDATE(), -- AUD_INSERT_DT
    SYSTEM_USER, -- AUD_USER_INSERT
    1, -- AUD_ACTIVE_FLAG (TRUE)
    source.AUD_ROWID,
    source.Dat_SupplierId,
    source.Dat_Phone,
    source.Dat_Fax,
    source.Dat_HomePage
)
WHEN MATCHED AND target.AUD_ACTIVE_FLAG = 1 AND source.AUD_ACTION = 'DELETE' THEN
UPDATE SET
    target.AUD_INSERT_DT = GETDATE(), -- Mantener el campo de fecha actualizado
    target.AUD_USER_INSERT = SYSTEM_USER, -- Mantener el usuario actualizado
    target.AUD_ACTIVE_FLAG = 0; -- 0 representa FALSE para AUD_ACTIVE_FLAG;

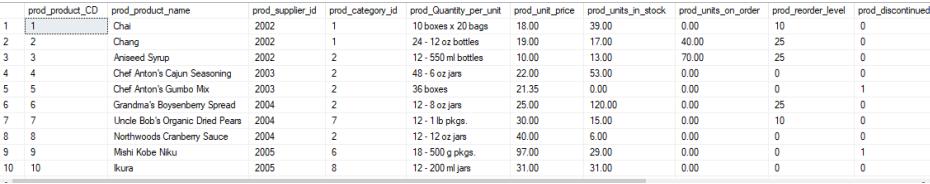
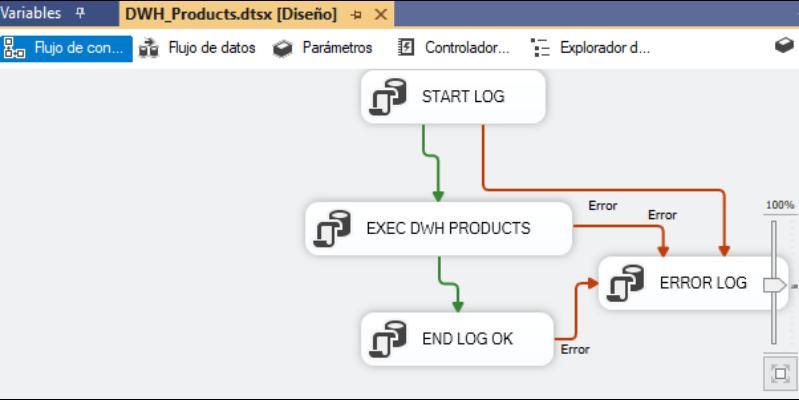
-----
--ACTUALIZACION DE SUPPLIERS

UPDATE SP
SET
    SP.Supp_ID_DatoContacto = DC.DatC_Contacto_Id,
    SP.AUD_ROWID = CHECKSUM(
        ISNULL(SP.Supp_CD, ''),
        ISNULL(SP.Supp_companyName, ''),
        ISNULL(SP.Supp_contactName, ''),
        ISNULL(SP.Supp_contactTitle, ''),
        ISNULL(SP.Supp_address, ''),
        ISNULL(SP.Supp_City, ''),
        ISNULL(SP.Supp_Id_Region, ''),
        ISNULL(SP.Supp_PostalCode, ''),
        ISNULL(SP.Supp_Id_Country, ''),
        ISNULL(DC.DatC_Contacto_Id, '')
    )
FROM [DWH].[LK_Suppliers] SP
INNER JOIN [DWH].[LK_SUPPLIERS_DATOS_Contacto] DC
    ON SP.Supp_Supplier_Id = DC.Dat_SupplierId
WHERE ISNULL(SP.Supp_ID_DatoContacto, -1) <> DC.DatC_Contacto_Id;

```

	<pre> END;  ' </pre>																																																																													
OUTPUT	<pre>select * from [DWH].[LK_SUPPLIERS_DATOS_Contacto]</pre> <table border="1"> <thead> <tr> <th>DatC_Contacto_Id</th> <th>Dat_SupplierId</th> <th>Dat_Phone</th> <th>Dat_Fax</th> <th>Dat_HomePage</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> </tr> </thead> <tbody> <tr><td>1</td><td>-1</td><td>NULL</td><td>NULL</td><td>NULL</td><td>2025-05-13 23:05:47.180</td><td>DESKTOP-IAI1KNV\Ezequiel</td></tr> <tr><td>2</td><td>1</td><td>(71) 555-2222</td><td>NULL</td><td>NULL</td><td>2025-05-16 01:30:11.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td></tr> <tr><td>3</td><td>2</td><td>31</td><td>(100) 555-4822</td><td>NULL</td><td>2025-05-16 01:30:11.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td></tr> <tr><td>4</td><td>3</td><td>32</td><td>(313) 555-5735</td><td>(313) 555-3349</td><td>2025-05-16 01:30:11.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td></tr> <tr><td>5</td><td>4</td><td>33</td><td>(03) 3555-5011</td><td>NULL</td><td>2025-05-16 01:30:11.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td></tr> <tr><td>6</td><td>5</td><td>34</td><td>(99) 598-7654</td><td>NULL</td><td>2025-05-16 01:30:11.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td></tr> <tr><td>7</td><td>6</td><td>35</td><td>(06) 431-7877</td><td>NULL</td><td>2025-05-16 01:30:11.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td></tr> <tr><td>8</td><td>7</td><td>36</td><td>(03) 444-2343</td><td>(03) 444-6588</td><td>2025-05-16 01:30:11.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td></tr> <tr><td>9</td><td>8</td><td>37</td><td>(161) 555-4448</td><td>NULL</td><td>2025-05-16 01:30:11.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td></tr> <tr><td>10</td><td>9</td><td>38</td><td>031-987 65 43</td><td>031-987 65 91</td><td>2025-05-16 01:30:11.963</td><td>DESKTOP-IAI1KNV\Ezequiel</td></tr> </tbody> </table>	DatC_Contacto_Id	Dat_SupplierId	Dat_Phone	Dat_Fax	Dat_HomePage	AUD_INSERT_DT	AUD_USER_INSERT	1	-1	NULL	NULL	NULL	2025-05-13 23:05:47.180	DESKTOP-IAI1KNV\Ezequiel	2	1	(71) 555-2222	NULL	NULL	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel	3	2	31	(100) 555-4822	NULL	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel	4	3	32	(313) 555-5735	(313) 555-3349	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel	5	4	33	(03) 3555-5011	NULL	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel	6	5	34	(99) 598-7654	NULL	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel	7	6	35	(06) 431-7877	NULL	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel	8	7	36	(03) 444-2343	(03) 444-6588	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel	9	8	37	(161) 555-4448	NULL	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel	10	9	38	031-987 65 43	031-987 65 91	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel
DatC_Contacto_Id	Dat_SupplierId	Dat_Phone	Dat_Fax	Dat_HomePage	AUD_INSERT_DT	AUD_USER_INSERT																																																																								
1	-1	NULL	NULL	NULL	2025-05-13 23:05:47.180	DESKTOP-IAI1KNV\Ezequiel																																																																								
2	1	(71) 555-2222	NULL	NULL	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel																																																																								
3	2	31	(100) 555-4822	NULL	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel																																																																								
4	3	32	(313) 555-5735	(313) 555-3349	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel																																																																								
5	4	33	(03) 3555-5011	NULL	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel																																																																								
6	5	34	(99) 598-7654	NULL	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel																																																																								
7	6	35	(06) 431-7877	NULL	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel																																																																								
8	7	36	(03) 444-2343	(03) 444-6588	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel																																																																								
9	8	37	(161) 555-4448	NULL	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel																																																																								
10	9	38	031-987 65 43	031-987 65 91	2025-05-16 01:30:11.963	DESKTOP-IAI1KNV\Ezequiel																																																																								

## 4.9 Proceso Schema DWH 9: PRODUCTS

JobName	DWH_Products.dtsx
Input	<pre>select * from [STG].[LK_PRODUCTS]</pre> <p></p>
Control Flow	
Proceso	<pre> USE [TP_DWH_MCD_2025] GO /***** Object: StoredProcedure [dbo].[SP_DWH_Products] Script Date: 17/5/2025 12:37:35 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_DWH_Products] AS BEGIN     SET NOCOUNT ON;      -- Inicializar Dimensión con valor NA      -- Verificar si el valor NA (-1) ya existe en la tabla LK_Products     IF NOT EXISTS (SELECT 1 FROM [DWH].[LK_PRODUCTS] WHERE prod_product_id = -1)     BEGIN         -- Habilitar IDENTITY_INSERT         SET IDENTITY_INSERT [DWH].[LK_PRODUCTS] ON;          -- Insertar el valor NA (-1)         INSERT INTO [DWH].[LK_PRODUCTS] (             prod_product_id, -- Identity, por eso ahora se puede insertar explícitamente             prod_product_CD,             prod_product_name,             prod_supplier_id,             prod_category_id,             prod_discontinued,             AUD_INSERT_DT,             AUD_USER_INSERT,             AUD_ACTIVE_FLAG,             AUD_ROWID         )     </pre>

	<pre> VALUES (     -1,     -1,     'Not Applicable',     -1,     -1,     0,     GETDATE(),     SYSTEM_USER,     1,     0 );  -- Desabilitar IDENTITY_INSERT SET IDENTITY_INSERT [DWH].[LK_PRODUCTS] OFF; END;  -- Realizando el MERGE en la tabla de destino con la tabla fuente  MERGE INTO [DWH].[LK_PRODUCTS] AS target USING [STG].[LK_PRODUCTS] AS source ON target.AUD_ROWID = source.AUD_ROWID AND target.AUD_ACTIVE_FLAG = 1 WHEN NOT MATCHED BY TARGET AND source.AUD_ACTION = 'INSERT' THEN     INSERT (         AUD_INSERT_DT,         AUD_USER_INSERT,         AUD_ACTIVE_FLAG,         AUD_ROWID,         prod_product_CD,         prod_product_name,         prod_supplier_id,         prod_category_id,         prod_Quantity_per_unit,         prod_unit_price,         prod_units_in_stock,         prod_units_on_order,         prod_reorder_level,         prod_discontinued     ) VALUES (     GETDATE(), -- AUD_INSERT_DT     SYSTEM_USER, -- AUD_USER_INSERT     1, -- AUD_ACTIVE_FLAG (TRUE)     source.AUD_ROWID,     source.prod_product_CD,     source.prod_product_name,     source.prod_supplier_id,     source.prod_category_id,     source.prod_Quantity_per_unit,     source.prod_unit_price,     source.prod_units_in_stock,     source.prod_units_on_order,     source.prod_reorder_level,     source.prod_discontinued ) WHEN MATCHED AND target.AUD_ACTIVE_FLAG = 1 AND source.AUD_ACTION = 'DELETE' THEN     UPDATE SET         target.AUD_INSERT_DT = GETDATE(), -- Mantener el campo de fecha actualizado         target.AUD_USER_INSERT = SYSTEM_USER, -- Mantener el usuario actualizado         target.AUD_ACTIVE_FLAG = 0 -- 0 representa FALSE para AUD_ACTIVE_FLAG ; END; </pre>
OUTPUT	select * from [DWH].[LK_PRODUCTS]

	prod_product_id	prod_product_CD	prod_product_name	prod_supplier_id	prod_category_id	prod_Quantity_per_unit	prod_unit_price	prod_units_in_stock	pn .
1	-1	-1	Not Applicable	-1	-1	NULL	NULL	NULL	N
2	1	1	Chai	2002	1	10 boxes x 20 bags	18.00	39.00	0
3	2	2	Chang	2002	1	24 - 12 oz bottles	19.00	17.00	41
4	3	3	Aniseed Syrup	2002	2	12 - 550 ml bottles	10.00	13.00	71
5	4	4	Chef Anton's Cajun Seasoning	2003	2	48 - 6 oz jars	22.00	53.00	0
6	5	5	Chef Anton's Gumbo Mix	2003	2	36 boxes	21.35	0.00	0
7	6	6	Grandma's Boysenberry Spread	2004	2	12 - 8 oz jars	25.00	120.00	0
8	7	7	Uncle Bob's Organic Dried Pears	2004	7	12 - 1 lb pkgs.	30.00	15.00	0
9	8	8	Northwoods Cranberry Sauce	2004	2	12 - 12 oz jars	40.00	6.00	0
10	9	9	Mishi Kobe Niku	2005	6	18 - 500 g pkgs.	97.00	29.00	0

## 4.10 Proceso Schema DWH 10: EMPLOYEES TERRITORIES

JobName	DWH_Employee_Territories.dtsx																																																																																				
Input	<pre>select * from [STG].[LK_EMPLOYEE_TERRITORIES]</pre> <table border="1"> <thead> <tr> <th></th> <th>EmpTer_Employee_id</th> <th>EmpTer_Territory_id</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> <th>AUD_ACTION</th> <th>AUD_ROWID</th> </tr> </thead> <tbody> <tr><td>1</td><td>2024</td><td>1011</td><td>2025-05-17 17:37:18.373</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x00007D73</td></tr> <tr><td>2</td><td>2024</td><td>1019</td><td>2025-05-17 17:37:18.373</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x00007D7B</td></tr> <tr><td>3</td><td>2012</td><td>1002</td><td>2025-05-17 17:37:18.373</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x00007E2A</td></tr> <tr><td>4</td><td>2012</td><td>1003</td><td>2025-05-17 17:37:18.373</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x00007E2B</td></tr> <tr><td>5</td><td>2012</td><td>1004</td><td>2025-05-17 17:37:18.373</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x00007E2C</td></tr> <tr><td>6</td><td>2012</td><td>1005</td><td>2025-05-17 17:37:18.373</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x00007E2D</td></tr> <tr><td>7</td><td>2012</td><td>1006</td><td>2025-05-17 17:37:18.373</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x00007E2E</td></tr> <tr><td>8</td><td>2012</td><td>1007</td><td>2025-05-17 17:37:18.373</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x00007E2F</td></tr> <tr><td>9</td><td>2012</td><td>1028</td><td>2025-05-17 17:37:18.373</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x000079C4</td></tr> <tr><td>10</td><td>2025</td><td>1024</td><td>2025-05-17 17:37:18.373</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x00007A90</td></tr> <tr><td>11</td><td>2025</td><td>1025</td><td>2025-05-17 17:37:18.373</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>INSERT</td><td>0x00007A91</td></tr> </tbody> </table>		EmpTer_Employee_id	EmpTer_Territory_id	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID	1	2024	1011	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007D73	2	2024	1019	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007D7B	3	2012	1002	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007E2A	4	2012	1003	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007E2B	5	2012	1004	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007E2C	6	2012	1005	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007E2D	7	2012	1006	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007E2E	8	2012	1007	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007E2F	9	2012	1028	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x000079C4	10	2025	1024	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007A90	11	2025	1025	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007A91
	EmpTer_Employee_id	EmpTer_Territory_id	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTION	AUD_ROWID																																																																															
1	2024	1011	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007D73																																																																															
2	2024	1019	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007D7B																																																																															
3	2012	1002	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007E2A																																																																															
4	2012	1003	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007E2B																																																																															
5	2012	1004	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007E2C																																																																															
6	2012	1005	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007E2D																																																																															
7	2012	1006	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007E2E																																																																															
8	2012	1007	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007E2F																																																																															
9	2012	1028	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x000079C4																																																																															
10	2025	1024	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007A90																																																																															
11	2025	1025	2025-05-17 17:37:18.373	DESKTOP-IAI1KNV\Ezequiel	INSERT	0x00007A91																																																																															
Control Flow																																																																																					
Proceso	<pre> USE [TP_DWH_MCD_2025] GO /******** Object: StoredProcedure [dbo].[SP_DWH_Regions] Script Date: 17/5/2025 17:38:47 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO  CREATE PROCEDURE [dbo].[SP_DWH_Employee_Territories] AS BEGIN     SET NOCOUNT ON;         -- Inicializar Dimensión con valor NA          -- Verificar si el valor NA (-1) ya existe en la tabla LK_REGIONS         IF NOT EXISTS (SELECT 1 FROM [DWH].[LK_EMPLOYEES_TERRITORIES] WHERE EmpTer_Employee_id = -1)         BEGIN             -- Habilitar IDENTITY_INSERT             SET IDENTITY_INSERT [DWH].[LK_EMPLOYEES_TERRITORIES] ON;              -- Insertar el valor NA (-1)             INSERT INTO [DWH].[LK_EMPLOYEES_TERRITORIES] (                 EmpTer_EmployeeTerritory_id, -- Identity, por eso ahora se puede insertar explícitamente                 AUD_INSERT_DT,                 AUD_USER_INSERT,                 AUD_ACTIVE_FLAG,                 AUD_ROWID,                 EmpTer_Employee_id,                 AUD_ACTION,                 AUD_ROWID             )             VALUES (-1, GETDATE(), 'Ezequiel', 1, NEWID(), -1, 'INSERT', NEWID());         END     END </pre>																																																																																				

	<pre>         EmpTer_Territory_Id     ) VALUES (     -1,     GETDATE(),     SYSTEM_USER,     1,     0, -- o algún valor identificador especial si tu lógica lo requiere     -1,     -1 );  -- Deshabilitar IDENTITY_INSERT SET IDENTITY_INSERT [DWH].[LK_EMPLOYEES_TERRITORIES] OFF; END;  -- Realizando el MERGE en la tabla de destino con la tabla fuente  MERGE INTO [DWH].[LK_EMPLOYEES_TERRITORIES] AS target USING [STG].[LK_EMPLOYEE_TERRITORIES] AS source ON target.AUD_ROWID = source.AUD_ROWID AND target.AUD_ACTIVE_FLAG = 1 WHEN NOT MATCHED BY TARGET AND source.AUD_ACTION = 'INSERT' THEN     INSERT (         AUD_INSERT_DT,         AUD_USER_INSERT,         AUD_ACTIVE_FLAG,         AUD_ROWID,         EmpTer_Employee_id,         EmpTer_Territory_Id     ) VALUES (     GETDATE(), -- AUD_INSERT_DT     SYSTEM_USER, -- AUD_USER_INSERT     1, -- AUD_ACTIVE_FLAG (TRUE)     source.AUD_ROWID,     source.EmpTer_Employee_id,     source.EmpTer_Territory_Id ) WHEN MATCHED AND target.AUD_ACTIVE_FLAG = 1 AND source.AUD_ACTION = 'DELETE' THEN     UPDATE SET         target.AUD_INSERT_DT = GETDATE(), -- Mantener el campo de fecha actualizado         target.AUD_USER_INSERT = SYSTEM_USER, -- Mantener el usuario actualizado         target.AUD_ACTIVE_FLAG = 0 -- 0 representa FALSE para AUD_ACTIVE_FLAG ; END; </pre>																																																																																								
OUTPUT	<pre>select * from [DWH].[LK_EMPLOYEE_TERRITORIES]</pre> <table border="1"> <thead> <tr> <th></th><th>EmpTer_EmployeeTerritory_Id</th><th>EmpTer_Employee_id</th><th>EmpTer_Territory_Id</th><th>AUD_INSERT_DT</th><th>AUD_USER_INSERT</th><th>AUD_ACTIVE_FLAG</th><th>AUD_ROWID</th></tr> </thead> <tbody> <tr> <td>1</td><td>-1</td><td>-1</td><td>-1</td><td>2025-05-17 17:43:13.777</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x00000000</td></tr> <tr> <td>2</td><td>1</td><td>2024</td><td>1011</td><td>2025-05-17 17:43:13.820</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x00007D73</td></tr> <tr> <td>3</td><td>2</td><td>2024</td><td>1019</td><td>2025-05-17 17:43:13.820</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x00007D7B</td></tr> <tr> <td>4</td><td>3</td><td>2012</td><td>1002</td><td>2025-05-17 17:43:13.820</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x00007E2A</td></tr> <tr> <td>5</td><td>4</td><td>2012</td><td>1003</td><td>2025-05-17 17:43:13.820</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x00007E2B</td></tr> <tr> <td>6</td><td>5</td><td>2012</td><td>1004</td><td>2025-05-17 17:43:13.820</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x00007E2C</td></tr> <tr> <td>7</td><td>6</td><td>2012</td><td>1005</td><td>2025-05-17 17:43:13.820</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x00007E2D</td></tr> <tr> <td>8</td><td>7</td><td>2012</td><td>1006</td><td>2025-05-17 17:43:13.820</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x00007E2E</td></tr> <tr> <td>9</td><td>8</td><td>2012</td><td>1007</td><td>2025-05-17 17:43:13.820</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x00007E2F</td></tr> <tr> <td>10</td><td>9</td><td>2012</td><td>1028</td><td>2025-05-17 17:43:13.820</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td><td>0x000079C4</td></tr> </tbody> </table>		EmpTer_EmployeeTerritory_Id	EmpTer_Employee_id	EmpTer_Territory_Id	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTIVE_FLAG	AUD_ROWID	1	-1	-1	-1	2025-05-17 17:43:13.777	DESKTOP-IAI1KNV\Ezequiel	1	0x00000000	2	1	2024	1011	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007D73	3	2	2024	1019	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007D7B	4	3	2012	1002	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007E2A	5	4	2012	1003	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007E2B	6	5	2012	1004	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007E2C	7	6	2012	1005	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007E2D	8	7	2012	1006	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007E2E	9	8	2012	1007	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007E2F	10	9	2012	1028	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x000079C4
	EmpTer_EmployeeTerritory_Id	EmpTer_Employee_id	EmpTer_Territory_Id	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTIVE_FLAG	AUD_ROWID																																																																																		
1	-1	-1	-1	2025-05-17 17:43:13.777	DESKTOP-IAI1KNV\Ezequiel	1	0x00000000																																																																																		
2	1	2024	1011	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007D73																																																																																		
3	2	2024	1019	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007D7B																																																																																		
4	3	2012	1002	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007E2A																																																																																		
5	4	2012	1003	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007E2B																																																																																		
6	5	2012	1004	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007E2C																																																																																		
7	6	2012	1005	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007E2D																																																																																		
8	7	2012	1006	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007E2E																																																																																		
9	8	2012	1007	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x00007E2F																																																																																		
10	9	2012	1028	2025-05-17 17:43:13.820	DESKTOP-IAI1KNV\Ezequiel	1	0x000079C4																																																																																		

## 4.11 Proceso Schema DWH 11: LK\_TIEMPO

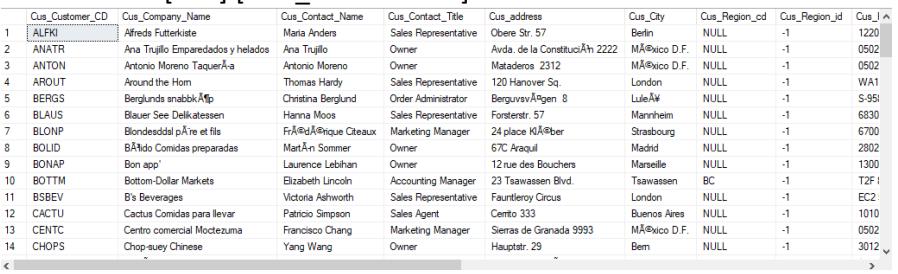
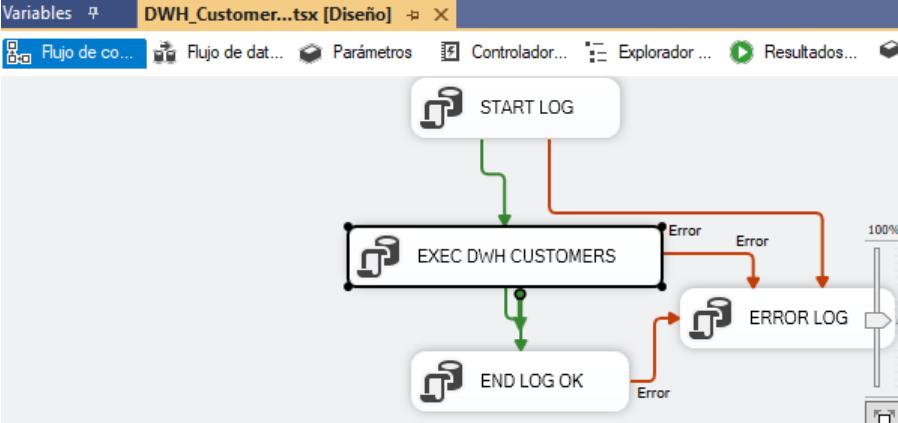
JobName	-
Input	- Tabla de Origen MANUAL
Proceso	<pre> CREATE OR ALTER PROCEDURE DWH.SP_CREA_DIM_TIEMPO AS BEGIN     SET NOCOUNT ON;      -- Crear la tabla si no existe     IF OBJECT_ID('DWH.LK_TIEMPO', 'U') IS NULL     BEGIN         CREATE TABLE DWH.LK_TIEMPO (             Fecha_ID      INT PRIMARY KEY,          -- Clave surrogate: YYYYMMDD             Fecha         DATE NOT NULL,             Anio          INT NOT NULL,             Mes           INT NOT NULL,             Dia           INT NOT NULL,             Nombre_Mes    VARCHAR(20) NOT NULL,             Nombre_Dia_Semana VARCHAR(20) NOT NULL,             Numero_Dia_Semana INT NOT NULL,             Dia_Anio      INT NOT NULL,             Trimestre     INT NOT NULL,             Es_Fin_Semana BIT NOT NULL,             Es_Laborable   BIT NOT NULL         );     END      -- Borrar datos existentes (opcional, según tu flujo de carga)     DELETE FROM DWH.LK_TIEMPO;      -- Insertar fila para valores desconocidos (con fecha ficticia)     INSERT INTO DWH.LK_TIEMPO (         Fecha_ID,         Fecha,         Anio,         Mes,         Dia,         Nombre_Mes,         Nombre_Dia_Semana,         Numero_Dia_Semana,         Dia_Anio,         Trimestre,         Es_Fin_Semana,         Es_Laborable     )     VALUES (         -1,         '19000101',    -- Fecha ficticia         -1,         -1,         -1,         'Desconocido',         'Desconocido',         -1,         -1,         -1,         0,         0     );      -- Carga de fechas válidas desde 1995-01-01 hasta 2000-12-31 </pre>

	<pre> DECLARE @Fecha DATE = '19950101'; DECLARE @Fecha_Fin DATE = '20001231';  WHILE @Fecha &lt;= @Fecha_Fin BEGIN     INSERT INTO DWH.LK_TIEMPO (         Fecha_ID,         Fecha,         Anio,         Mes,         Dia,         Nombre_Mes,         Nombre_Dia_Semana,         Numero_Dia_Semana,         Dia_Año,         Trimestre,         Es_Fin_Semana,         Es_Laborable     )     VALUES (         CONVERT(INT, FORMAT(@Fecha, 'yyyyMMdd')),         @Fecha,         YEAR(@Fecha),         MONTH(@Fecha),         DAY(@Fecha),         DATENAME(MONTH, @Fecha),         DATENAME(WEEKDAY, @Fecha),         DATEPART(WEEKDAY, @Fecha),         DATEPART(DAYOFYEAR, @Fecha),         DATEPART(QUARTER, @Fecha),         CASE WHEN DATENAME(WEEKDAY, @Fecha) IN ('Saturday', 'Sunday') THEN 1 ELSE 0 END,         CASE WHEN DATENAME(WEEKDAY, @Fecha) IN ('Saturday', 'Sunday') THEN 0 ELSE 1 END     );      SET @Fecha = DATEADD(DAY, 1, @Fecha); END END; GO </pre>																																																																																																																																																												
OUTPUT	<pre>select * from [DWH].[LK_TIEMPO]</pre> <table border="1"> <thead> <tr> <th></th><th>Fecha_ID</th><th>Fecha</th><th>Anio</th><th>Mes</th><th>Dia</th><th>Nombre_Mes</th><th>Nombre_Dia_Semana</th><th>Numero_Dia_Semana</th><th>Dia_Año</th><th>Trimestre</th><th>Es_Fin_Semana</th><th>Es_Laborable</th></tr> </thead> <tbody> <tr><td>1</td><td>-1</td><td>1900-01-01</td><td>-1</td><td>-1</td><td>-1</td><td>Desconocido</td><td>Desconocido</td><td>-1</td><td>-1</td><td>-1</td><td>0</td><td>0</td></tr> <tr><td>2</td><td>19950101</td><td>1995-01-01</td><td>1995</td><td>1</td><td>1</td><td>January</td><td>Sunday</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>3</td><td>19950102</td><td>1995-01-02</td><td>1995</td><td>1</td><td>2</td><td>January</td><td>Monday</td><td>2</td><td>2</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>4</td><td>19950103</td><td>1995-01-03</td><td>1995</td><td>1</td><td>3</td><td>January</td><td>Tuesday</td><td>3</td><td>3</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>5</td><td>19950104</td><td>1995-01-04</td><td>1995</td><td>1</td><td>4</td><td>January</td><td>Wednesday</td><td>4</td><td>4</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>6</td><td>19950105</td><td>1995-01-05</td><td>1995</td><td>1</td><td>5</td><td>January</td><td>Thursday</td><td>5</td><td>5</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>7</td><td>19950106</td><td>1995-01-06</td><td>1995</td><td>1</td><td>6</td><td>January</td><td>Friday</td><td>6</td><td>6</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>8</td><td>19950107</td><td>1995-01-07</td><td>1995</td><td>1</td><td>7</td><td>January</td><td>Saturday</td><td>7</td><td>7</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>9</td><td>19950108</td><td>1995-01-08</td><td>1995</td><td>1</td><td>8</td><td>January</td><td>Sunday</td><td>1</td><td>8</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>10</td><td>19950109</td><td>1995-01-09</td><td>1995</td><td>1</td><td>9</td><td>January</td><td>Monday</td><td>2</td><td>9</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>11</td><td>19950110</td><td>1995-01-10</td><td>1995</td><td>1</td><td>10</td><td>January</td><td>Tuesday</td><td>3</td><td>10</td><td>1</td><td>0</td><td>1</td></tr> </tbody> </table>		Fecha_ID	Fecha	Anio	Mes	Dia	Nombre_Mes	Nombre_Dia_Semana	Numero_Dia_Semana	Dia_Año	Trimestre	Es_Fin_Semana	Es_Laborable	1	-1	1900-01-01	-1	-1	-1	Desconocido	Desconocido	-1	-1	-1	0	0	2	19950101	1995-01-01	1995	1	1	January	Sunday	1	1	1	1	0	3	19950102	1995-01-02	1995	1	2	January	Monday	2	2	1	0	1	4	19950103	1995-01-03	1995	1	3	January	Tuesday	3	3	1	0	1	5	19950104	1995-01-04	1995	1	4	January	Wednesday	4	4	1	0	1	6	19950105	1995-01-05	1995	1	5	January	Thursday	5	5	1	0	1	7	19950106	1995-01-06	1995	1	6	January	Friday	6	6	1	0	1	8	19950107	1995-01-07	1995	1	7	January	Saturday	7	7	1	1	0	9	19950108	1995-01-08	1995	1	8	January	Sunday	1	8	1	1	0	10	19950109	1995-01-09	1995	1	9	January	Monday	2	9	1	0	1	11	19950110	1995-01-10	1995	1	10	January	Tuesday	3	10	1	0	1
	Fecha_ID	Fecha	Anio	Mes	Dia	Nombre_Mes	Nombre_Dia_Semana	Numero_Dia_Semana	Dia_Año	Trimestre	Es_Fin_Semana	Es_Laborable																																																																																																																																																	
1	-1	1900-01-01	-1	-1	-1	Desconocido	Desconocido	-1	-1	-1	0	0																																																																																																																																																	
2	19950101	1995-01-01	1995	1	1	January	Sunday	1	1	1	1	0																																																																																																																																																	
3	19950102	1995-01-02	1995	1	2	January	Monday	2	2	1	0	1																																																																																																																																																	
4	19950103	1995-01-03	1995	1	3	January	Tuesday	3	3	1	0	1																																																																																																																																																	
5	19950104	1995-01-04	1995	1	4	January	Wednesday	4	4	1	0	1																																																																																																																																																	
6	19950105	1995-01-05	1995	1	5	January	Thursday	5	5	1	0	1																																																																																																																																																	
7	19950106	1995-01-06	1995	1	6	January	Friday	6	6	1	0	1																																																																																																																																																	
8	19950107	1995-01-07	1995	1	7	January	Saturday	7	7	1	1	0																																																																																																																																																	
9	19950108	1995-01-08	1995	1	8	January	Sunday	1	8	1	1	0																																																																																																																																																	
10	19950109	1995-01-09	1995	1	9	January	Monday	2	9	1	0	1																																																																																																																																																	
11	19950110	1995-01-10	1995	1	10	January	Tuesday	3	10	1	0	1																																																																																																																																																	

## 5. Procesos de ingesta de Schema ODS

En éste capítulo, documentaremos la carga de los ODS

### 5.1 Proceso Schema ODS 1: CUSTOMERS

JobName	DWH_Customers.dtsx
Input	<pre>select * from [STG].[ODS_CUSTOMERS]</pre> 
Control Flow	
Proceso	<pre>USE [TP_DWH_MCD_2025] GO /******** Object: StoredProcedure [dbo].[SP_ODS_Customers]  Script Date: 18/5/2025 21:43:10 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_ODS_Customers] AS BEGIN     SET NOCOUNT ON;      -- Inicializar Dimensión con valor NA      -- Verificar si el valor NA (-1) ya existe en la tabla LK_REGIONS     IF NOT EXISTS (SELECT 1 FROM [ODS].[CUSTOMERS] WHERE cus_customer_id = -1)     BEGIN         -- Habilitar IDENTITY_INSERT         SET IDENTITY_INSERT [ODS].[CUSTOMERS] ON;          -- Insertar el valor NA (-1)         INSERT INTO [ODS].[CUSTOMERS] ( </pre>

```

cus_customer_id, -- Identity, por eso ahora se puede insertar explícitamente
AUD_INSERT_DT,
AUD_USER_INSERT,
AUD_ACTIVE_FLAG,
AUD_ROWID,
Cus_Customer_CD,
Cus_Company_Name,
Cus_Region_id,
Cus_Country_id
)
VALUES (
-1,
GETDATE(),
SYSTEM_USER,
1,
0, -- o algún valor identificador especial si tu lógica lo requiere
'-1',
'Not Applicable',
-1,
-1
);

-- Deshabilitar IDENTITY_INSERT
SET IDENTITY_INSERT [ODS].[CUSTOMERS] OFF;
END;

-- Realizando el MERGE en la tabla de destino con la tabla fuente

MERGE INTO [ODS].[CUSTOMERS] AS target
USING [STG].[ODS_CUSTOMERS] AS source
ON target.AUD_ROWID = source.AUD_ROWID
AND target.AUD_ACTIVE_FLAG = 1
WHEN NOT MATCHED BY TARGET AND source.AUD_ACTION = 'INSERT' THEN
INSERT (
AUD_INSERT_DT,
AUD_USER_INSERT,
AUD_ACTIVE_FLAG,
AUD_ROWID,
Cus_Customer_CD,
Cus_Company_Name,
Cus_Contact_Name,
Cus_Contact_Title,
Cus_address,
Cus_City,
Cus_Region_cd,
Cus_Region_id,
Cus_Postal_Code,
Cus_Country_cd,
Cus_Country_id,
Cus_Phone,
Cus_fax
)
VALUES (
GETDATE(), -- AUD_INSERT_DT
SYSTEM_USER, -- AUD_USER_INSERT
1, -- AUD_ACTIVE_FLAG (TRUE)
source.AUD_ROWID,
source.Cus_Customer_CD,
source.Cus_Company_Name,
source.Cus_Contact_Name,
source.Cus_Contact_Title,
source.Cus_address,
source.Cus_City,
source.Cus_Region_cd,
source.Cus_Region_id,
source.Cus_Postal_Code,

```

	<pre>         source.Cus_Country_cd,         source.Cus_Country_id,         source.Cus_Phone,         source.Cus_fax     ) WHEN MATCHED AND target.AUD_ACTIVE_FLAG = 1 AND source.AUD_ACTION = 'DELETE' THEN     UPDATE SET         target.AUD_INSERT_DT = GETDATE(), -- Mantener el campo de fecha actualizado         target.AUD_USER_INSERT = SYSTEM_USER, -- Mantener el usuario actualizado         target.AUD_ACTIVE_FLAG = 0 -- 0 representa FALSE para AUD_ACTIVE_FLAG ; END; </pre>																																																																																																																																							
OUTPUT	<pre>select * from [ODS].[CUSTOMERS]</pre> <table border="1"> <thead> <tr> <th></th> <th>Cus_Customer_id</th> <th>Cus_Customer_CD</th> <th>Cus_Company_Name</th> <th>Cus_Contact_Name</th> <th>Cus_Contact_Title</th> <th>Cus_address</th> <th>Cus_City</th> <th>Cu</th> </tr> </thead> <tbody> <tr><td>1</td><td>-1</td><td>-1</td><td>Not Applicable</td><td>NULL</td><td>NULL</td><td>NULL</td><td>NULL</td><td>-1</td></tr> <tr><td>2</td><td>1</td><td>ALFKI</td><td>Alfreds Futterkiste</td><td>Maria Anders</td><td>Sales Representative</td><td>Obere Str. 57</td><td>Berlin</td><td>-1</td></tr> <tr><td>3</td><td>2</td><td>ANATR</td><td>Ana Trujillo Emparedados y helados</td><td>Ana Trujillo</td><td>Owner</td><td>Avda. de la ConstituciÃ³n 2222</td><td>MÃ©xico D.F.</td><td>-1</td></tr> <tr><td>4</td><td>3</td><td>ANTON</td><td>Antonio Moreno TaquerÃ‐a</td><td>Antonio Moreno</td><td>Owner</td><td>Mataderos 2312</td><td>MÃ©xico D.F.</td><td>-1</td></tr> <tr><td>5</td><td>4</td><td>AROUT</td><td>Around the Horn</td><td>Thomas Hardy</td><td>Sales Representative</td><td>120 Hanover Sq.</td><td>London</td><td>-1</td></tr> <tr><td>6</td><td>5</td><td>BERGS</td><td>Berglunds snabbköp</td><td>Christina Berglund</td><td>Order Administrator</td><td>BerguvsvÄgen 8</td><td>LuleÃ¶</td><td>-1</td></tr> <tr><td>7</td><td>6</td><td>BLAUS</td><td>Blauer See Delikatessen</td><td>Hanna Moos</td><td>Sales Representative</td><td>Fonterestr. 57</td><td>Mannheim</td><td>-1</td></tr> <tr><td>8</td><td>7</td><td>BLONP</td><td>Blondesddsl pÃ‐re et fils</td><td>FrÃ©dÃ©rique Citeaux</td><td>Marketing Manager</td><td>24 place KlÃ¶ber</td><td>Strasbourg</td><td>-1</td></tr> <tr><td>9</td><td>8</td><td>BOLID</td><td>BÃ¢lio Comidas preparadas</td><td>MartÃn Sommer</td><td>Owner</td><td>67C AragÃºil</td><td>Madrid</td><td>-1</td></tr> <tr><td>10</td><td>9</td><td>BONAP</td><td>Bon app'</td><td>Laurence Lebihan</td><td>Owner</td><td>12 rue des Bouchers</td><td>Marseille</td><td>-1</td></tr> <tr><td>11</td><td>10</td><td>BOTTM</td><td>Bottom-Dollar Markets</td><td>Elizabeth Lincoln</td><td>Accounting Manager</td><td>23 Tsawassen Blvd.</td><td>Tsawassen</td><td>-1</td></tr> <tr><td>12</td><td>11</td><td>BSEV</td><td>B's Beverages</td><td>Victoria Ashworth</td><td>Sales Representative</td><td>Fauntleroy Circus</td><td>London</td><td>-1</td></tr> <tr><td>13</td><td>12</td><td>CACTU</td><td>Cactus Comidas para llevar</td><td>Patricia Simpson</td><td>Sales Agent</td><td>Cento 333</td><td>Buenos Aires</td><td>-1</td></tr> <tr><td>14</td><td>13</td><td>CENTC</td><td>Centro comercial Moctezuma</td><td>Francisco Chang</td><td>Marketing Manager</td><td>Sierras de Granada 9993</td><td>MÃ©xico D.F.</td><td>-1</td></tr> </tbody> </table>		Cus_Customer_id	Cus_Customer_CD	Cus_Company_Name	Cus_Contact_Name	Cus_Contact_Title	Cus_address	Cus_City	Cu	1	-1	-1	Not Applicable	NULL	NULL	NULL	NULL	-1	2	1	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57	Berlin	-1	3	2	ANATR	Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Avda. de la ConstituciÃ³n 2222	MÃ©xico D.F.	-1	4	3	ANTON	Antonio Moreno TaquerÃ‐a	Antonio Moreno	Owner	Mataderos 2312	MÃ©xico D.F.	-1	5	4	AROUT	Around the Horn	Thomas Hardy	Sales Representative	120 Hanover Sq.	London	-1	6	5	BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	BerguvsvÄgen 8	LuleÃ¶	-1	7	6	BLAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Fonterestr. 57	Mannheim	-1	8	7	BLONP	Blondesddsl pÃ‐re et fils	FrÃ©dÃ©rique Citeaux	Marketing Manager	24 place KlÃ¶ber	Strasbourg	-1	9	8	BOLID	BÃ¢lio Comidas preparadas	MartÃn Sommer	Owner	67C AragÃºil	Madrid	-1	10	9	BONAP	Bon app'	Laurence Lebihan	Owner	12 rue des Bouchers	Marseille	-1	11	10	BOTTM	Bottom-Dollar Markets	Elizabeth Lincoln	Accounting Manager	23 Tsawassen Blvd.	Tsawassen	-1	12	11	BSEV	B's Beverages	Victoria Ashworth	Sales Representative	Fauntleroy Circus	London	-1	13	12	CACTU	Cactus Comidas para llevar	Patricia Simpson	Sales Agent	Cento 333	Buenos Aires	-1	14	13	CENTC	Centro comercial Moctezuma	Francisco Chang	Marketing Manager	Sierras de Granada 9993	MÃ©xico D.F.	-1
	Cus_Customer_id	Cus_Customer_CD	Cus_Company_Name	Cus_Contact_Name	Cus_Contact_Title	Cus_address	Cus_City	Cu																																																																																																																																
1	-1	-1	Not Applicable	NULL	NULL	NULL	NULL	-1																																																																																																																																
2	1	ALFKI	Alfreds Futterkiste	Maria Anders	Sales Representative	Obere Str. 57	Berlin	-1																																																																																																																																
3	2	ANATR	Ana Trujillo Emparedados y helados	Ana Trujillo	Owner	Avda. de la ConstituciÃ³n 2222	MÃ©xico D.F.	-1																																																																																																																																
4	3	ANTON	Antonio Moreno TaquerÃ‐a	Antonio Moreno	Owner	Mataderos 2312	MÃ©xico D.F.	-1																																																																																																																																
5	4	AROUT	Around the Horn	Thomas Hardy	Sales Representative	120 Hanover Sq.	London	-1																																																																																																																																
6	5	BERGS	Berglunds snabbköp	Christina Berglund	Order Administrator	BerguvsvÄgen 8	LuleÃ¶	-1																																																																																																																																
7	6	BLAUS	Blauer See Delikatessen	Hanna Moos	Sales Representative	Fonterestr. 57	Mannheim	-1																																																																																																																																
8	7	BLONP	Blondesddsl pÃ‐re et fils	FrÃ©dÃ©rique Citeaux	Marketing Manager	24 place KlÃ¶ber	Strasbourg	-1																																																																																																																																
9	8	BOLID	BÃ¢lio Comidas preparadas	MartÃn Sommer	Owner	67C AragÃºil	Madrid	-1																																																																																																																																
10	9	BONAP	Bon app'	Laurence Lebihan	Owner	12 rue des Bouchers	Marseille	-1																																																																																																																																
11	10	BOTTM	Bottom-Dollar Markets	Elizabeth Lincoln	Accounting Manager	23 Tsawassen Blvd.	Tsawassen	-1																																																																																																																																
12	11	BSEV	B's Beverages	Victoria Ashworth	Sales Representative	Fauntleroy Circus	London	-1																																																																																																																																
13	12	CACTU	Cactus Comidas para llevar	Patricia Simpson	Sales Agent	Cento 333	Buenos Aires	-1																																																																																																																																
14	13	CENTC	Centro comercial Moctezuma	Francisco Chang	Marketing Manager	Sierras de Granada 9993	MÃ©xico D.F.	-1																																																																																																																																

## 5.2 Proceso Schema ODS 2: ORDERS

JobName	DWH_Orders.dtsx																																																																																																																																			
Input	<p>select * from [STG].[ODS_ORDERS]</p> <table border="1"> <thead> <tr> <th>Ord_Order_CD</th> <th>Ord_Customer_cd</th> <th>Ord_Customer_id</th> <th>Ord_Employee_cd</th> <th>Ord_Employee_id</th> <th>Ord_Order_Date</th> <th>Ord_Required_Date</th> <th>Ord_Shipped_Date</th> <th>Ord_Ship_Via</th> <th>Ord_Freight</th> <th>Ord_Ship_name</th> </tr> </thead> <tbody> <tr><td>251</td><td>10498</td><td>HILAA</td><td>35</td><td>8</td><td>2030</td><td>1997-04-07</td><td>1997-05-05</td><td>1997-04-11</td><td>2</td><td>29.75</td><td>HILARION-Abastc</td></tr> <tr><td>252</td><td>10499</td><td>LILAS</td><td>46</td><td>4</td><td>2026</td><td>1997-04-08</td><td>1997-05-06</td><td>1997-04-16</td><td>2</td><td>102.02</td><td>LILA-Supermercac</td></tr> <tr><td>253</td><td>10500</td><td>LAMAI</td><td>41</td><td>6</td><td>2028</td><td>1997-04-09</td><td>1997-05-07</td><td>1997-04-17</td><td>1</td><td>42.68</td><td>La maison d'Asie</td></tr> <tr><td>254</td><td>10501</td><td>BLAUS</td><td>6</td><td>9</td><td>2031</td><td>1997-04-09</td><td>1997-05-07</td><td>1997-04-16</td><td>3</td><td>8.35</td><td>Blauer See Delik</td></tr> <tr><td>255</td><td>10502</td><td>PERIC</td><td>58</td><td>2</td><td>2012</td><td>1997-04-10</td><td>1997-05-08</td><td>1997-04-29</td><td>1</td><td>69.32</td><td>Percles Comidas c</td></tr> <tr><td>256</td><td>10503</td><td>HUNGO</td><td>37</td><td>6</td><td>2028</td><td>1997-04-11</td><td>1997-05-09</td><td>1997-04-16</td><td>2</td><td>16.74</td><td>Hungry Owl All-Nig</td></tr> <tr><td>257</td><td>10504</td><td>WHTTC</td><td>89</td><td>4</td><td>2026</td><td>1997-04-11</td><td>1997-05-09</td><td>1997-04-18</td><td>3</td><td>59.13</td><td>White Clover Mark</td></tr> <tr><td>258</td><td>10505</td><td>MEREP</td><td>51</td><td>3</td><td>2025</td><td>1997-04-14</td><td>1997-05-12</td><td>1997-04-21</td><td>3</td><td>7.13</td><td>MÁrcie Pallarde</td></tr> <tr><td>259</td><td>10506</td><td>KOENE</td><td>39</td><td>9</td><td>2031</td><td>1997-04-15</td><td>1997-05-13</td><td>1997-05-02</td><td>2</td><td>21.19</td><td>KÄffinglich Essen</td></tr> <tr><td>260</td><td>10507</td><td>ANTON</td><td>3</td><td>7</td><td>2029</td><td>1997-04-15</td><td>1997-05-13</td><td>1997-04-22</td><td>1</td><td>47.45</td><td>Antonio Moreno T</td></tr> </tbody> </table>	Ord_Order_CD	Ord_Customer_cd	Ord_Customer_id	Ord_Employee_cd	Ord_Employee_id	Ord_Order_Date	Ord_Required_Date	Ord_Shipped_Date	Ord_Ship_Via	Ord_Freight	Ord_Ship_name	251	10498	HILAA	35	8	2030	1997-04-07	1997-05-05	1997-04-11	2	29.75	HILARION-Abastc	252	10499	LILAS	46	4	2026	1997-04-08	1997-05-06	1997-04-16	2	102.02	LILA-Supermercac	253	10500	LAMAI	41	6	2028	1997-04-09	1997-05-07	1997-04-17	1	42.68	La maison d'Asie	254	10501	BLAUS	6	9	2031	1997-04-09	1997-05-07	1997-04-16	3	8.35	Blauer See Delik	255	10502	PERIC	58	2	2012	1997-04-10	1997-05-08	1997-04-29	1	69.32	Percles Comidas c	256	10503	HUNGO	37	6	2028	1997-04-11	1997-05-09	1997-04-16	2	16.74	Hungry Owl All-Nig	257	10504	WHTTC	89	4	2026	1997-04-11	1997-05-09	1997-04-18	3	59.13	White Clover Mark	258	10505	MEREP	51	3	2025	1997-04-14	1997-05-12	1997-04-21	3	7.13	MÁrcie Pallarde	259	10506	KOENE	39	9	2031	1997-04-15	1997-05-13	1997-05-02	2	21.19	KÄffinglich Essen	260	10507	ANTON	3	7	2029	1997-04-15	1997-05-13	1997-04-22	1	47.45	Antonio Moreno T
Ord_Order_CD	Ord_Customer_cd	Ord_Customer_id	Ord_Employee_cd	Ord_Employee_id	Ord_Order_Date	Ord_Required_Date	Ord_Shipped_Date	Ord_Ship_Via	Ord_Freight	Ord_Ship_name																																																																																																																										
251	10498	HILAA	35	8	2030	1997-04-07	1997-05-05	1997-04-11	2	29.75	HILARION-Abastc																																																																																																																									
252	10499	LILAS	46	4	2026	1997-04-08	1997-05-06	1997-04-16	2	102.02	LILA-Supermercac																																																																																																																									
253	10500	LAMAI	41	6	2028	1997-04-09	1997-05-07	1997-04-17	1	42.68	La maison d'Asie																																																																																																																									
254	10501	BLAUS	6	9	2031	1997-04-09	1997-05-07	1997-04-16	3	8.35	Blauer See Delik																																																																																																																									
255	10502	PERIC	58	2	2012	1997-04-10	1997-05-08	1997-04-29	1	69.32	Percles Comidas c																																																																																																																									
256	10503	HUNGO	37	6	2028	1997-04-11	1997-05-09	1997-04-16	2	16.74	Hungry Owl All-Nig																																																																																																																									
257	10504	WHTTC	89	4	2026	1997-04-11	1997-05-09	1997-04-18	3	59.13	White Clover Mark																																																																																																																									
258	10505	MEREP	51	3	2025	1997-04-14	1997-05-12	1997-04-21	3	7.13	MÁrcie Pallarde																																																																																																																									
259	10506	KOENE	39	9	2031	1997-04-15	1997-05-13	1997-05-02	2	21.19	KÄffinglich Essen																																																																																																																									
260	10507	ANTON	3	7	2029	1997-04-15	1997-05-13	1997-04-22	1	47.45	Antonio Moreno T																																																																																																																									
Control Flow	<pre> graph TD     START_LOG([START LOG]) --&gt; EXEC_DWH_ORDERS[EXEC DWH ORDERS]     EXEC_DWH_ORDERS --&gt; END_LOG_OK([END LOG OK])     EXEC_DWH_ORDERS -- Error --&gt; ERROR_LOG([ERROR LOG])     ERROR_LOG --&gt; END_LOG_OK     </pre>																																																																																																																																			
Proceso	<pre> USE [TP_DWH_MCD_2025] GO /******** Object: StoredProcedure [dbo].[SP_ODS_Customers] Script Date: 18/5/2025 23:31:19 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_ODS_Orders] AS BEGIN     SET NOCOUNT ON;      -- Inicializar Dimensión con valor NA      -- Verificar si el valor NA (-1) ya existe en la tabla LK_REGIONS     IF NOT EXISTS (SELECT 1 FROM [ODS].[ORDERS] WHERE Ord_Order_id = -1)     BEGIN         -- Habilitar IDENTITY_INSERT         SET IDENTITY_INSERT [ODS].[ORDERS] ON;          -- Insertar el valor NA (-1)         INSERT INTO [ODS].[ORDERS] (             Ord_Order_id, -- Identity, por eso ahora se puede insertar explícitamente             AUD_INSERT_DT,             AUD_USER_INSERT,             AUD_ACTIVE_FLAG,             AUD_ROWID,             Ord_Order_Date,             Ord_Ship_Country_id,             Ord_Ship_Region_Id         )         VALUES (             -1,             GETDATE(),             </pre>																																																																																																																																			

```

    SYSTEM_USER,
    1,
    0, -- o algún valor identificador especial si tu lógica lo requiere
    TRY_CAST('1900-01-01' AS DATE),
        -1,
        -1
    );

    -- Deshabilitar IDENTITY_INSERT
    SET IDENTITY_INSERT [ODS].[ORDERS] OFF;
END;

-- Realizando el MERGE en la tabla de destino con la tabla fuente

MERGE INTO [ODS].[ORDERS] AS target
USING [STG].[ODS_ORDERS] AS source
ON target.AUD_ROWID = source.AUD_ROWID
AND target.AUD_ACTIVE_FLAG = 1
WHEN NOT MATCHED BY TARGET AND source.AUD_ACTION = 'INSERT' THEN
    INSERT (
        AUD_INSERT_DT,
        AUD_USER_INSERT,
        AUD_ACTIVE_FLAG,
        AUD_ROWID,
        Ord_Order_CD,
        Ord_Customer_cd,
        Ord_Customer_id,
        Ord_Employee_cd,
        Ord_Employee_id,
        Ord_Order_Date,
        Ord_Required_Date,
        Ord_Shipped_Date,
        Ord_Ship_Via,
        Ord_Freight,
        Ord_Ship_name,
        Ord_Ship_Address,
        Ord_Ship_City,
        Ord_Ship_Region_cd,
        Ord_Ship_Region_Id,
        Ord_Ship_PostalCode,
        Ord_Ship_Country_cd,
        Ord_Ship_Country_id
    )
VALUES (
    GETDATE(), -- AUD_INSERT_DT
    SYSTEM_USER, -- AUD_USER_INSERT
    1, -- AUD_ACTIVE_FLAG (TRUE)
    source.AUD_ROWID,
    source.Ord_Order_CD,
        source.Ord_Customer_cd,
        source.Ord_Customer_id,
        source.Ord_Employee_cd,
        source.Ord_Employee_id,
        source.Ord_Order_Date,
        source.Ord_Required_Date,
        source.Ord_Shipped_Date,
        source.Ord_Ship_Via,
        source.Ord_Freight,
        source.Ord_Ship_name,
        source.Ord_Ship_Address,
        source.Ord_Ship_City,
        source.Ord_Ship_Region_cd,
        source.Ord_Ship_Region_Id,
        source.Ord_Ship_PostalCode,
        source.Ord_Ship_Country_cd,
        source.Ord_Ship_Country_id
)

```

	<pre>         ) WHEN MATCHED AND target.AUD_ACTIVE_FLAG = 1 AND source.AUD_ACTION = 'DELETE' THEN     UPDATE SET         target.AUD_INSERT_DT = GETDATE(), -- Mantener el campo de fecha actualizado         target.AUD_USER_INSERT = SYSTEM_USER, -- Mantener el usuario actualizado         target.AUD_ACTIVE_FLAG = 0 -- 0 representa FALSE para AUD_ACTIVE_FLAG     ; END; </pre>																																																																																																																									
OUTPUT	<pre>select * from [ODS].[ORDERS]</pre> <table border="1"> <thead> <tr> <th>Ord_Order_Id</th> <th>Ord_Order_CD</th> <th>Ord_Customer_cd</th> <th>Ord_Customer_Id</th> <th>Ord_Employee_cd</th> <th>Ord_Employee_Id</th> <th>Ord_Order_Date</th> <th>Ord_Required_Date</th> <th>Ord_Shipped_Date</th> <th>Ord_Ship_Via</th> <th>Ord_Freight</th> </tr> </thead> <tbody> <tr><td>1</td><td>10248</td><td>VINET</td><td>85</td><td>5</td><td>2027</td><td>1996-07-04</td><td>1996-08-01</td><td>1996-07-16</td><td>3</td><td>32.38</td></tr> <tr><td>2</td><td>10249</td><td>TOMSP</td><td>79</td><td>6</td><td>2028</td><td>1996-07-05</td><td>1996-08-16</td><td>1996-07-10</td><td>1</td><td>11.61</td></tr> <tr><td>3</td><td>10250</td><td>HANAR</td><td>34</td><td>4</td><td>2026</td><td>1996-07-08</td><td>1996-08-05</td><td>1996-07-12</td><td>2</td><td>65.83</td></tr> <tr><td>4</td><td>10251</td><td>VICTE</td><td>84</td><td>3</td><td>2025</td><td>1996-07-08</td><td>1996-08-05</td><td>1996-07-15</td><td>1</td><td>41.34</td></tr> <tr><td>5</td><td>10252</td><td>SUPRD</td><td>76</td><td>4</td><td>2026</td><td>1996-07-09</td><td>1996-08-06</td><td>1996-07-11</td><td>2</td><td>51.30</td></tr> <tr><td>6</td><td>10253</td><td>HANAR</td><td>34</td><td>3</td><td>2025</td><td>1996-07-10</td><td>1996-07-24</td><td>1996-07-16</td><td>2</td><td>58.17</td></tr> <tr><td>7</td><td>10254</td><td>CHOPS</td><td>14</td><td>5</td><td>2027</td><td>1996-07-11</td><td>1996-08-08</td><td>1996-07-23</td><td>2</td><td>22.98</td></tr> <tr><td>8</td><td>10255</td><td>RICSU</td><td>68</td><td>9</td><td>2031</td><td>1996-07-12</td><td>1996-08-09</td><td>1996-07-15</td><td>3</td><td>148.33</td></tr> <tr><td>9</td><td>10256</td><td>WELLI</td><td>88</td><td>3</td><td>2025</td><td>1996-07-15</td><td>1996-08-12</td><td>1996-07-17</td><td>2</td><td>13.97</td></tr> <tr><td>10</td><td>10257</td><td>HILAA</td><td>35</td><td>4</td><td>2026</td><td>1996-07-16</td><td>1996-08-13</td><td>1996-07-22</td><td>3</td><td>81.91</td></tr> </tbody> </table>	Ord_Order_Id	Ord_Order_CD	Ord_Customer_cd	Ord_Customer_Id	Ord_Employee_cd	Ord_Employee_Id	Ord_Order_Date	Ord_Required_Date	Ord_Shipped_Date	Ord_Ship_Via	Ord_Freight	1	10248	VINET	85	5	2027	1996-07-04	1996-08-01	1996-07-16	3	32.38	2	10249	TOMSP	79	6	2028	1996-07-05	1996-08-16	1996-07-10	1	11.61	3	10250	HANAR	34	4	2026	1996-07-08	1996-08-05	1996-07-12	2	65.83	4	10251	VICTE	84	3	2025	1996-07-08	1996-08-05	1996-07-15	1	41.34	5	10252	SUPRD	76	4	2026	1996-07-09	1996-08-06	1996-07-11	2	51.30	6	10253	HANAR	34	3	2025	1996-07-10	1996-07-24	1996-07-16	2	58.17	7	10254	CHOPS	14	5	2027	1996-07-11	1996-08-08	1996-07-23	2	22.98	8	10255	RICSU	68	9	2031	1996-07-12	1996-08-09	1996-07-15	3	148.33	9	10256	WELLI	88	3	2025	1996-07-15	1996-08-12	1996-07-17	2	13.97	10	10257	HILAA	35	4	2026	1996-07-16	1996-08-13	1996-07-22	3	81.91
Ord_Order_Id	Ord_Order_CD	Ord_Customer_cd	Ord_Customer_Id	Ord_Employee_cd	Ord_Employee_Id	Ord_Order_Date	Ord_Required_Date	Ord_Shipped_Date	Ord_Ship_Via	Ord_Freight																																																																																																																
1	10248	VINET	85	5	2027	1996-07-04	1996-08-01	1996-07-16	3	32.38																																																																																																																
2	10249	TOMSP	79	6	2028	1996-07-05	1996-08-16	1996-07-10	1	11.61																																																																																																																
3	10250	HANAR	34	4	2026	1996-07-08	1996-08-05	1996-07-12	2	65.83																																																																																																																
4	10251	VICTE	84	3	2025	1996-07-08	1996-08-05	1996-07-15	1	41.34																																																																																																																
5	10252	SUPRD	76	4	2026	1996-07-09	1996-08-06	1996-07-11	2	51.30																																																																																																																
6	10253	HANAR	34	3	2025	1996-07-10	1996-07-24	1996-07-16	2	58.17																																																																																																																
7	10254	CHOPS	14	5	2027	1996-07-11	1996-08-08	1996-07-23	2	22.98																																																																																																																
8	10255	RICSU	68	9	2031	1996-07-12	1996-08-09	1996-07-15	3	148.33																																																																																																																
9	10256	WELLI	88	3	2025	1996-07-15	1996-08-12	1996-07-17	2	13.97																																																																																																																
10	10257	HILAA	35	4	2026	1996-07-16	1996-08-13	1996-07-22	3	81.91																																																																																																																

### 5.3 Proceso Schema ODS 3: ORDERS DETAILS

JobName	DWH_Order_Details.dtsx																																																																																																																																			
Input	<pre>select * from [STG].[ODS_ORDERS]</pre> <table border="1"> <thead> <tr> <th>Ord_Order_CD</th> <th>Ord_Customer_cd</th> <th>Ord_Customer_id</th> <th>Ord_Employee_cd</th> <th>Ord_Employee_id</th> <th>Ord_Order_Date</th> <th>Ord_Required_Date</th> <th>Ord_Shipped_Date</th> <th>Ord_Ship_Via</th> <th>Ord_Freight</th> <th>Ord_Ship_name</th> </tr> </thead> <tbody> <tr><td>251</td><td>10498</td><td>HILAA</td><td>35</td><td>8</td><td>2030</td><td>1997-04-07</td><td>1997-05-05</td><td>1997-04-11</td><td>2</td><td>23.75</td><td>HILARION Abasto</td></tr> <tr><td>252</td><td>10499</td><td>LILAS</td><td>46</td><td>4</td><td>2026</td><td>1997-04-08</td><td>1997-05-06</td><td>1997-04-16</td><td>2</td><td>102.02</td><td>LILA-Supermercado</td></tr> <tr><td>253</td><td>10500</td><td>LAMAI</td><td>41</td><td>6</td><td>2028</td><td>1997-04-09</td><td>1997-05-07</td><td>1997-04-17</td><td>1</td><td>42.68</td><td>La maison d'Aie</td></tr> <tr><td>254</td><td>10501</td><td>BLAUS</td><td>6</td><td>9</td><td>2031</td><td>1997-04-09</td><td>1997-05-07</td><td>1997-04-16</td><td>3</td><td>8.85</td><td>Bauer See Delikat</td></tr> <tr><td>255</td><td>10502</td><td>PERIC</td><td>58</td><td>2</td><td>2012</td><td>1997-04-10</td><td>1997-05-08</td><td>1997-04-29</td><td>1</td><td>69.32</td><td>Petites Comidas c</td></tr> <tr><td>256</td><td>10503</td><td>HUNGO</td><td>37</td><td>6</td><td>2028</td><td>1997-04-11</td><td>1997-05-09</td><td>1997-04-16</td><td>2</td><td>16.74</td><td>Hungry Owl All-Nite</td></tr> <tr><td>257</td><td>10504</td><td>WHTTC</td><td>89</td><td>4</td><td>2026</td><td>1997-04-11</td><td>1997-05-09</td><td>1997-04-18</td><td>3</td><td>58.13</td><td>White Clover Market</td></tr> <tr><td>258</td><td>10505</td><td>MEREP</td><td>51</td><td>3</td><td>2025</td><td>1997-04-14</td><td>1997-05-12</td><td>1997-04-21</td><td>3</td><td>7.13</td><td>MÃ®re Fallarde</td></tr> <tr><td>259</td><td>10506</td><td>KOENE</td><td>39</td><td>9</td><td>2031</td><td>1997-04-15</td><td>1997-05-13</td><td>1997-05-02</td><td>2</td><td>21.19</td><td>KÃ¶niglich Essen</td></tr> <tr><td>260</td><td>10507</td><td>ANTON</td><td>3</td><td>7</td><td>2029</td><td>1997-04-15</td><td>1997-05-13</td><td>1997-04-22</td><td>1</td><td>47.45</td><td>Antonio Moreno T</td></tr> </tbody> </table>	Ord_Order_CD	Ord_Customer_cd	Ord_Customer_id	Ord_Employee_cd	Ord_Employee_id	Ord_Order_Date	Ord_Required_Date	Ord_Shipped_Date	Ord_Ship_Via	Ord_Freight	Ord_Ship_name	251	10498	HILAA	35	8	2030	1997-04-07	1997-05-05	1997-04-11	2	23.75	HILARION Abasto	252	10499	LILAS	46	4	2026	1997-04-08	1997-05-06	1997-04-16	2	102.02	LILA-Supermercado	253	10500	LAMAI	41	6	2028	1997-04-09	1997-05-07	1997-04-17	1	42.68	La maison d'Aie	254	10501	BLAUS	6	9	2031	1997-04-09	1997-05-07	1997-04-16	3	8.85	Bauer See Delikat	255	10502	PERIC	58	2	2012	1997-04-10	1997-05-08	1997-04-29	1	69.32	Petites Comidas c	256	10503	HUNGO	37	6	2028	1997-04-11	1997-05-09	1997-04-16	2	16.74	Hungry Owl All-Nite	257	10504	WHTTC	89	4	2026	1997-04-11	1997-05-09	1997-04-18	3	58.13	White Clover Market	258	10505	MEREP	51	3	2025	1997-04-14	1997-05-12	1997-04-21	3	7.13	MÃ®re Fallarde	259	10506	KOENE	39	9	2031	1997-04-15	1997-05-13	1997-05-02	2	21.19	KÃ¶niglich Essen	260	10507	ANTON	3	7	2029	1997-04-15	1997-05-13	1997-04-22	1	47.45	Antonio Moreno T
Ord_Order_CD	Ord_Customer_cd	Ord_Customer_id	Ord_Employee_cd	Ord_Employee_id	Ord_Order_Date	Ord_Required_Date	Ord_Shipped_Date	Ord_Ship_Via	Ord_Freight	Ord_Ship_name																																																																																																																										
251	10498	HILAA	35	8	2030	1997-04-07	1997-05-05	1997-04-11	2	23.75	HILARION Abasto																																																																																																																									
252	10499	LILAS	46	4	2026	1997-04-08	1997-05-06	1997-04-16	2	102.02	LILA-Supermercado																																																																																																																									
253	10500	LAMAI	41	6	2028	1997-04-09	1997-05-07	1997-04-17	1	42.68	La maison d'Aie																																																																																																																									
254	10501	BLAUS	6	9	2031	1997-04-09	1997-05-07	1997-04-16	3	8.85	Bauer See Delikat																																																																																																																									
255	10502	PERIC	58	2	2012	1997-04-10	1997-05-08	1997-04-29	1	69.32	Petites Comidas c																																																																																																																									
256	10503	HUNGO	37	6	2028	1997-04-11	1997-05-09	1997-04-16	2	16.74	Hungry Owl All-Nite																																																																																																																									
257	10504	WHTTC	89	4	2026	1997-04-11	1997-05-09	1997-04-18	3	58.13	White Clover Market																																																																																																																									
258	10505	MEREP	51	3	2025	1997-04-14	1997-05-12	1997-04-21	3	7.13	MÃ®re Fallarde																																																																																																																									
259	10506	KOENE	39	9	2031	1997-04-15	1997-05-13	1997-05-02	2	21.19	KÃ¶niglich Essen																																																																																																																									
260	10507	ANTON	3	7	2029	1997-04-15	1997-05-13	1997-04-22	1	47.45	Antonio Moreno T																																																																																																																									
Control Flow	<pre> graph TD     START[START LOG] --&gt; EXEC[EXEC DWH ORDERS]     EXEC --&gt; END[END LOG OK]     EXEC -- Error --&gt; ERROR[ERROR LOG]     ERROR -- Error --&gt; FINAL[Final Log Task]   </pre>																																																																																																																																			
Proceso	<pre> USE [TP_DWH_MCD_2025] GO /******** Object: StoredProcedure [dbo].[SP_ODS_Customers]  Script Date: 18/5/2025 23:31:19 *****/ SET ANSI_NULLS ON GO SET QUOTED_IDENTIFIER ON GO ALTER PROCEDURE [dbo].[SP_ODS_Orders] AS BEGIN     SET NOCOUNT ON;      -- Inicializar DimensiÃ³n con valor NA      -- Verificar si el valor NA (-1) ya existe en la tabla LK_REGIONS     IF NOT EXISTS (SELECT 1 FROM [ODS].[ORDERS] WHERE Ord_Order_id = -1)     BEGIN         -- Habilitar IDENTITY_INSERT         SET IDENTITY_INSERT [ODS].[ORDERS] ON;          -- Insertar el valor NA (-1)         INSERT INTO [ODS].[ORDERS] (             Ord_Order_id, -- Identity, por eso ahora se puede insertar explÃ©citamente             AUD_INSERT_DT,             AUD_USER_INSERT,             AUD_ACTIVE_FLAG,             AUD_ROWID,             Ord_Order_Date,             Ord_Ship_Country_id,             Ord_Ship_Region_Id         )         VALUES (             -1,             GETDATE(),             SYSTEM_USER,         )     END END   </pre>																																																																																																																																			

```

1,
0, -- o algún valor identificador especial si tu lógica lo requiere
TRY_CAST('1900-01-01' AS DATE),
    -1,
    -1
);

-- Deshabilitar IDENTITY_INSERT
SET IDENTITY_INSERT [ODS].[ORDERS] OFF;
END;

-- Realizando el MERGE en la tabla de destino con la tabla fuente

MERGE INTO [ODS].[ORDERS] AS target
USING [STG].[ODS_ORDERS] AS source
ON target.AUD_ROWID = source.AUD_ROWID
AND target.AUD_ACTIVE_FLAG = 1
WHEN NOT MATCHED BY TARGET AND source.AUD_ACTION = 'INSERT' THEN
INSERT (
    AUD_INSERT_DT,
    AUD_USER_INSERT,
    AUD_ACTIVE_FLAG,
    AUD_ROWID,
    Ord_Order_CD,
    Ord_Customer_cd,
    Ord_Customer_id,
    Ord_Employee_cd,
    Ord_Employee_id,
    Ord_Order_Date,
    Ord_Required_Date,
    Ord_Shipped_Date,
    Ord_Ship_Via,
    Ord_Freight,
    Ord_Ship_name,
    Ord_Ship_Address,
    Ord_Ship_City,
    Ord_Ship_Region_cd,
    Ord_Ship_Region_Id,
    Ord_Ship_PostalCode,
    Ord_Ship_Country_cd,
    Ord_Ship_Country_id
)
VALUES (
    GETDATE(), -- AUD_INSERT_DT
    SYSTEM_USER, -- AUD_USER_INSERT
    1, -- AUD_ACTIVE_FLAG (TRUE)
    source.AUD_ROWID,
    source.Ord_Order_CD,
    source.Ord_Customer_cd,
    source.Ord_Customer_id,
    source.Ord_Employee_cd,
    source.Ord_Employee_id,
    source.Ord_Order_Date,
    source.Ord_Required_Date,
    source.Ord_Shipped_Date,
    source.Ord_Ship_Via,
    source.Ord_Freight,
    source.Ord_Ship_name,
    source.Ord_Ship_Address,
    source.Ord_Ship_City,
    source.Ord_Ship_Region_cd,
    source.Ord_Ship_Region_Id,
    source.Ord_Ship_PostalCode,
    source.Ord_Ship_Country_cd,
    source.Ord_Ship_Country_id
)
)

```

	<pre> WHEN MATCHED AND target.AUD_ACTIVE_FLAG = 1 AND source.AUD_ACTION = 'DELETE' THEN     UPDATE SET         target.AUD_INSERT_DT = GETDATE(), -- Mantener el campo de fecha actualizado         target.AUD_USER_INSERT = SYSTEM_USER, -- Mantener el usuario actualizado         target.AUD_ACTIVE_FLAG = 0 -- 0 representa FALSE para AUD_ACTIVE_FLAG     ; END; </pre>																																																																																																														
OUTPUT	<pre>select * from [ODS].[ORDERS_DETAILS]</pre> <table border="1"> <thead> <tr> <th>OrdDet_Order_Detail_Id</th> <th>OrdDet_Order_Id</th> <th>OrdDet_Product_cd</th> <th>OrdDet_Product_Id</th> <th>OrdDet_Unit_Price</th> <th>OrdDet_Quantity</th> <th>OrdDet_Discount</th> <th>AUD_INSERT_DT</th> <th>AUD_USER_INSERT</th> <th>AUD_ACTIVE_FLAG</th> </tr> </thead> <tbody> <tr><td>1</td><td>1</td><td>11</td><td>11</td><td>14.00</td><td>12.00</td><td>0.00</td><td>2025-05-19 00:14:35.460</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td></tr> <tr><td>2</td><td>2</td><td>1</td><td>42</td><td>9.80</td><td>10.00</td><td>0.00</td><td>2025-05-19 00:14:35.460</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td></tr> <tr><td>3</td><td>3</td><td>1</td><td>72</td><td>34.80</td><td>5.00</td><td>0.00</td><td>2025-05-19 00:14:35.460</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td></tr> <tr><td>4</td><td>4</td><td>2</td><td>14</td><td>18.60</td><td>9.00</td><td>0.00</td><td>2025-05-19 00:14:35.460</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td></tr> <tr><td>5</td><td>5</td><td>2</td><td>51</td><td>42.40</td><td>40.00</td><td>0.00</td><td>2025-05-19 00:14:35.460</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td></tr> <tr><td>6</td><td>6</td><td>3</td><td>41</td><td>7.70</td><td>10.00</td><td>0.00</td><td>2025-05-19 00:14:35.460</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td></tr> <tr><td>7</td><td>7</td><td>3</td><td>51</td><td>42.40</td><td>35.00</td><td>0.15</td><td>2025-05-19 00:14:35.460</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td></tr> <tr><td>8</td><td>8</td><td>3</td><td>65</td><td>16.80</td><td>15.00</td><td>0.15</td><td>2025-05-19 00:14:35.460</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td></tr> <tr><td>9</td><td>9</td><td>4</td><td>22</td><td>22.00</td><td>6.00</td><td>0.05</td><td>2025-05-19 00:14:35.460</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td></tr> <tr><td>10</td><td>10</td><td>4</td><td>57</td><td>15.60</td><td>15.00</td><td>0.05</td><td>2025-05-19 00:14:35.460</td><td>DESKTOP-IAI1KNV\Ezequiel</td><td>1</td></tr> </tbody> </table>	OrdDet_Order_Detail_Id	OrdDet_Order_Id	OrdDet_Product_cd	OrdDet_Product_Id	OrdDet_Unit_Price	OrdDet_Quantity	OrdDet_Discount	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTIVE_FLAG	1	1	11	11	14.00	12.00	0.00	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1	2	2	1	42	9.80	10.00	0.00	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1	3	3	1	72	34.80	5.00	0.00	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1	4	4	2	14	18.60	9.00	0.00	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1	5	5	2	51	42.40	40.00	0.00	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1	6	6	3	41	7.70	10.00	0.00	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1	7	7	3	51	42.40	35.00	0.15	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1	8	8	3	65	16.80	15.00	0.15	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1	9	9	4	22	22.00	6.00	0.05	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1	10	10	4	57	15.60	15.00	0.05	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1
OrdDet_Order_Detail_Id	OrdDet_Order_Id	OrdDet_Product_cd	OrdDet_Product_Id	OrdDet_Unit_Price	OrdDet_Quantity	OrdDet_Discount	AUD_INSERT_DT	AUD_USER_INSERT	AUD_ACTIVE_FLAG																																																																																																						
1	1	11	11	14.00	12.00	0.00	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1																																																																																																						
2	2	1	42	9.80	10.00	0.00	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1																																																																																																						
3	3	1	72	34.80	5.00	0.00	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1																																																																																																						
4	4	2	14	18.60	9.00	0.00	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1																																																																																																						
5	5	2	51	42.40	40.00	0.00	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1																																																																																																						
6	6	3	41	7.70	10.00	0.00	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1																																																																																																						
7	7	3	51	42.40	35.00	0.15	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1																																																																																																						
8	8	3	65	16.80	15.00	0.15	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1																																																																																																						
9	9	4	22	22.00	6.00	0.05	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1																																																																																																						
10	10	4	57	15.60	15.00	0.05	2025-05-19 00:14:35.460	DESKTOP-IAI1KNV\Ezequiel	1																																																																																																						

## 6. Gestión de METADATA & Memoria institucional

La gestión de metadata consiste en la administración estructurada de la información que describe y contextualiza los datos dentro de un sistema, facilitando su comprensión, uso y gobernanza. Esta metadata incluye detalles como la estructura de las tablas, los tipos de datos, las relaciones, las reglas de negocio y las descripciones de cada elemento, lo que permite un manejo eficiente y controlado del entorno de datos. En nuestro caso, hemos creado un repositorio de metadata que documenta las tablas y columnas del Data Warehouse, específicamente la tabla de dimensión temporal [DWH].[LK\_TIEMPO]. Esto incluye registrar la definición de la tabla en la tabla de metadata de tablas [MET].[TABLAS] y describir cada campo en la tabla de metadata de campos [MET].[CAMPOS], con detalles sobre el tipo de dato, longitud, obligatoriedad y propósito de cada columna. Adicionalmente, en el documento asociado se detalla exhaustivamente cada uno de los procesos, los orquestadores utilizados y la gestión del cambio aplicada, contribuyendo así a la memoria institucional. Esta memoria institucional garantiza que el conocimiento acumulado y las prácticas adoptadas queden formalmente registradas, facilitando la continuidad operativa, el aprendizaje organizacional y la trazabilidad para futuros equipos. Este proceso integral es fundamental para asegurar la calidad, trazabilidad y entendimiento común de los datos, apoyando el análisis y la toma de decisiones dentro de la organización.

The screenshot shows the SSMS interface with the following details:

- Object Explorer:** On the left, it shows the database structure. Under the [MET.CAMPOS] schema, there are nodes for Columns, Keys, Constraints, Triggers, Indexes, Statistics, and MET.CAMPOS\_AUDITORIA. Under the [MET.TABLAS] schema, there are nodes for Columns, Keys, Constraints, Triggers, Indexes, Statistics, and MET.TABLAS\_AUDITORIA.
- SQL Query Editor:** In the center, a query window titled "SQLQuery1.sql - DE...IKNV\Izequiel (64)" contains the following T-SQL code:

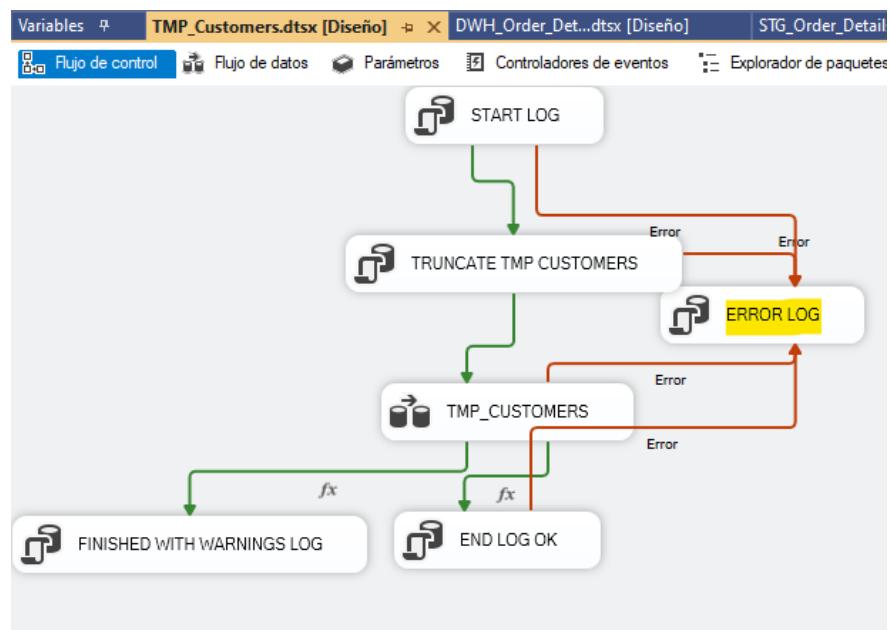
```
select t.esquema, t.tabla, t.DESCRIPCION, c.campo, c.DESCRIPCION from [MET].[TABLAS] t
LEFT JOIN [MET].[CAMPOS] c
on t.tabla = c.tabla
```
- Results Grid:** Below the query window is a results grid titled "Results". It has columns: esquema, tabla, DESCRIPCION, campo, and DESCRIPCION. The data in the grid is as follows:

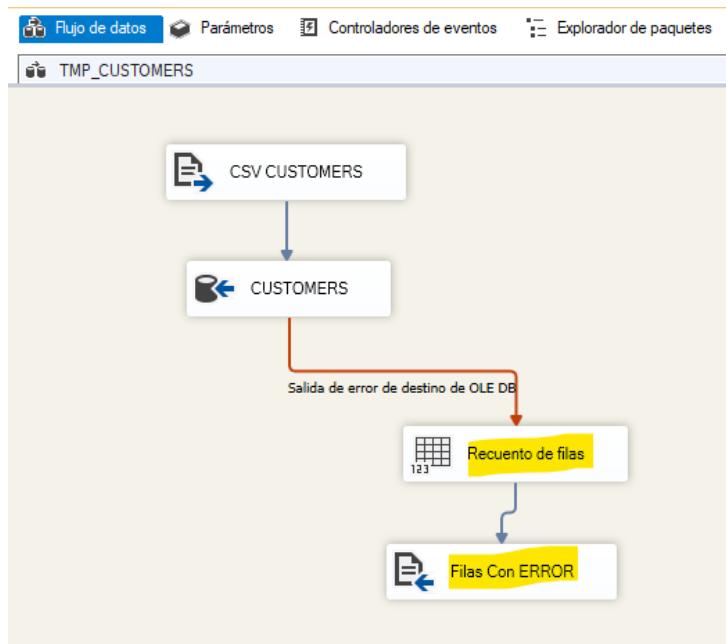
	esquema	tabla	DESCRIPCION	campo	DESCRIPCION
1	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	AUD_ACTIVE_FLAG	Indicador de si el registro está activo (1) o inactivo (0).
2	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	AUD_INSERT_DT	Fecha de inserción del registro en la tabla de hechos.
3	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	AUD_ROWID	Hash calculado a partir de los campos del registro para control de...
4	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	AUD_USER_INSERT	Usuario que insertó el registro.
5	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	id	Identificador único del registro de hecho (clave técnica autonómica).
6	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	Ord_Customer_id	Identificador del cliente que realizó el pedido.
7	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	Ord_Employee_id	Identificador del empleado asociado al pedido.
8	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	OrdDet_Discount	Descuento aplicado sobre el producto.
9	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	OrdDet_Order_Detail_id	Identificador del detalle del pedido.
10	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	OrdDet_Order_id	Identificador del pedido general.
11	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	OrdDet_Product_id	Identificador del producto incluido en el pedido.
12	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	OrdDet_Quantity	Cantidad solicitada del producto.
13	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	OrdDet_Unit_Price	Precio unitario del producto en el pedido.
14	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	Order_Date_id	Identificador de la fecha del pedido (FK a dimensión de fechas).
15	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	Order_Required_Date	Fecha requerida de entrega del pedido (FK a dimensión de fechas).
16	DWH	FT_ORDERS	Tabla de hechos que registra los pedidos realizados.	Order_Shipped_Date	Fecha en la que el pedido fue enviado (FK a dimensión de fechas).
17	DWH	LK_CATEG.	Tabla de tipo lookup que contiene las categorías.	AUD_ACTIVE_FLAG	Indicador de registro activo (1) o inactivo (0).
18	DWH	LK_CATEG.	Tabla de tipo lookup que contiene las categorías.	AUD_INSERT_DT	Fecha en la que se insertó el registro en la tabla.
19	DWH	LK_CATEG.	Tabla de tipo lookup que contiene las categorías.	AUD_DOMAIN	Dominio del resultado para control de combinación y trazabilidad.

## 7. DQM Gestión de Logs

La gestión de logs en el sistema es un componente esencial del Data Quality Management (DQM), ya que permite registrar de manera automática y estructurada el inicio y fin de cada proceso ejecutado dentro del Data Warehouse. A través de procedimientos almacenados específicos, se captura información crítica como el nombre del job, las marcas temporales de inicio y finalización, y el estado del proceso al concluir. Este control exhaustivo no solo facilita el monitoreo y la trazabilidad, sino que también se integra como un mecanismo clave para evaluar la calidad operativa de los procesos ETL/ELT. La persistencia de estos registros permite analizar la performance, detectar y corregir errores a tiempo, y garantizar la confiabilidad y consistencia del flujo de datos. En consecuencia, la gestión de logs dentro del marco del DQM contribuye a mantener la integridad, transparencia y mejora continua en la administración y calidad de los procesos del sistema.

En cada uno de los procesos, se hace una gestión de errores, y almacenamiento de métricas de la corrida;





```

select * from [LOG].[AUDIT_JOBS];
select * from [LOG].[AUDIT_PROCESS_DATE];
  
```

Results

AUDJOB_Job_Id	AUDJOB_Job_Name	AUDPD_INSERT_DT	AUDPD_USER_INSERT	AUDPD_ACTIVE_FLAG
1	TMP_Shippers	2025-05-01 21:24:42.827	DESKTOP-IAI1KNV\Ezequiel	1
2	TMP_Regions	2025-05-02 17:31:10.123	DESKTOP-IAI1KNV\Ezequiel	1
3	TMP_Territories	2025-05-02 17:34:17.500	DESKTOP-IAI1KNV\Ezequiel	1
1002	TMP_Categories	2025-05-03 00:34:46.760	DESKTOP-IAI1KNV\Ezequiel	1
2002	TMP_Customers	2025-05-04 20:47:53.530	DESKTOP-IAI1KNV\Ezequiel	1
2003	TMP_Employee_Territories	2025-05-04 21:02:58.050	DESKTOP-IAI1KNV\Ezequiel	1
2004	TMP_Employee	2025-05-04 21:17:37.467	DESKTOP-IAI1KNV\Ezequiel	1
2005	TMP_Order_Details	2025-05-04 21:32:47.713	DESKTOP-IAI1KNV\Ezequiel	1
2006	TMP_Orders	2025-05-04 21:44:19.443	DESKTOP-IAI1KNV\Ezequiel	1
2007	TMP_Products	2025-05-04 22:01:56.890	DESKTOP-IAI1KNV\Ezequiel	1

AUDPD_Id	AUDPD_JobId	AUDPD_Start_Date	AUDPD_End_Data	AUDPD_Status_ID	AUDPD_Observations
1002	2	2025-05-02 17:31:37.697	2025-05-02 17:31:38.240	3	Fin automático
1003	3	2025-05-02 17:46:19.323	2025-05-02 17:46:19.860	3	Fin automático
2002	2	2025-05-03 00:51:23.480	2025-05-03 00:51:24.183	3	Fin automático
2003	1002	2025-05-03 00:52:34.350	2025-05-03 00:52:34.880	3	Fin automático
3002	2002	2025-05-04 20:52:29.693	2025-05-04 20:52:30.273	3	Fin automático
3003	2003	2025-05-04 21:03:20.590	2025-05-04 21:03:21.073	3	Fin automático
3004	2004	2025-05-04 21:17:56.530	2025-05-04 21:17:57.033	3	Fin automático
3005	2004	2025-05-04 21:23:47.600	2025-05-04 21:23:48.080	3	Fin automático
3006	2004	2025-05-04 21:27:29.400	2025-05-04 21:27:29.873	3	Fin automático
3007	2004	2025-05-04 21:29:02.547	2025-05-04 21:29:03.123	3	Fin automático

START LOG	USE [TP_DWH_MCD_2025] GO  ***** Object: StoredProcedure [LOG].[DWH_Start_Log] Script Date: 20/5/2025 23:16:04 *****
-----------	--

	<pre> SET ANSI_NULLS ON GO  SET QUOTED_IDENTIFIER ON GO  CREATE PROCEDURE [LOG].[DWH_Start_Log]     @JobName VARCHAR(50) AS BEGIN     SET NOCOUNT ON;      DECLARE @JobId INT;     DECLARE @StatusId INT;      -- Obtener ID del Job activo     SELECT @JobId = AUDJOB_Job_Id     FROM [LOG].[AUDIT_JOBS]     WHERE AUDJOB_Job_Name = @JobName         AND AUDPD_ACTIVE_FLAG = 1;      IF @JobId IS NULL     BEGIN         RAISERROR('No se encontró un Job activo con el nombre proporcionado.', 16, 1);         RETURN;     END      -- Obtener ID del estado 'RUNNING' activo     SELECT @StatusId = AUDSP_Status_Id     FROM [LOG].[AUDIT_STATUS_PROCESS]     WHERE AUDPD_Status = 'RUNNING'         AND AUDPD_ACTIVE_FLAG = 1;      IF @StatusId IS NULL     BEGIN         RAISERROR('No se encontró un estado activo con nombre RUNNING.', 16, 1);         RETURN;     END      -- Insertar registro en tabla de auditoría de ejecución     INSERT INTO [LOG].[AUDIT_PROCESS_DATE] (         AUDPD_JobId,         AUDPD_Start_Date,         AUDPD_End_Data,         AUDPD_Status_ID,         AUDPD_Observations     )     VALUES (         @JobId,         GETDATE(),         NULL,         @StatusId,         'Inicio automático'     ); END; GO </pre>
END LOG	<pre> USE [TP_DWH_MCD_2025] GO ***** Object: StoredProcedure [LOG].[DWH_Start_Log] Script Date: 20/5/2025 23:13:10 *****/ SET ANSI_NULLS ON GO </pre>

```

SET QUOTED_IDENTIFIER ON
GO
ALTER PROCEDURE [LOG].[DWH_Start_Log]
    @JobName VARCHAR(50)
AS
BEGIN
    SET NOCOUNT ON;

    DECLARE @JobId INT;
    DECLARE @StatusId INT;

    -- Obtener ID del Job activo
    SELECT @JobId = AUDJOB_Job_Id
    FROM [LOG].[AUDIT_JOBS]
    WHERE AUDJOB_Job_Name = @JobName
        AND AUDPD_ACTIVE_FLAG = 1;

    IF @JobId IS NULL
        BEGIN
            RAISERROR('No se encontró un Job activo con el nombre proporcionado.', 16, 1);
            RETURN;
        END

    -- Obtener ID del estado 'RUNNING' activo
    SELECT @StatusId = AUDSP_Status_Id
    FROM [LOG].[AUDIT_STATUS_PROCESS]
    WHERE AUDPD_Status = 'RUNNING'
        AND AUDPD_ACTIVE_FLAG = 1;

    IF @StatusId IS NULL
        BEGIN
            RAISERROR('No se encontró un estado activo con nombre RUNNING.', 16, 1);
            RETURN;
        END

    -- Insertar registro en tabla de auditoría de ejecución
    INSERT INTO [LOG].[AUDIT_PROCESS_DATE] (
        AUDPD_JobId,
        AUDPD_Start_Date,
        AUDPD_END_Data,
        AUDPD_Status_ID,
        AUDPD_Observations
    )
    VALUES (
        @JobId,
        GETDATE(),

```

	NULL, @StatusId, 'Inicio automático' ); END;
--	--

## 8. Visualización de datos

Se trabajó sobre un dataset estructurado con una tabla de hechos principal denominada "DP\_FT\_ORDERS", que contiene los registros de órdenes de productos, incluyendo información sobre fechas, empleados, clientes, productos, cantidades, precios, descuentos y fechas de despacho. A partir de esta tabla, se construyeron varias dimensiones derivadas, con el fin de facilitar el análisis por cliente, producto, empleado y tiempo.

### Conexiones entre tablas

Se modeló un esquema tipo estrella con las siguientes relaciones:

Fact Table: DP\_FT\_ORDERS

Contiene los campos: OrdDet\_Order\_id (pedido), Ord\_Customer\_id, Ord\_Employee\_id, OrdDet\_Product\_id, Order\_Date, Order\_Required\_Date, Order\_Shipped\_Date, OrdDet\_Unit\_Price, OrdDet\_Quantity, OrdDet\_Discount.

Dimensiones derivadas: Dim\_Cliente: creada a partir de Ord\_Customer\_id, Dim\_Producto: desde OrdDet\_Product\_id, Dim\_Emppleado: desde Ord\_Employee\_id, Dim\_Fecha: a partir de la conversión del campo Order\_Date\_id en fechas reales.

Relaciones configuradas: Uno a muchos entre cada dimensión y la tabla de hechos, sobre las claves correspondientes.



## Tablero 1: Resumen de Ventas

Se plantea como objetivo del negocio medir el rendimiento comercial general del negocio, detectando los productos, clientes y empleados más relevantes. Permite hacer seguimiento de los ingresos totales y volumen de ventas en términos agregados.

Se proponen los siguientes indicadores (KPIs):

1. Total Ingresos. tiene como objetivo representar el total de facturación real percibida por ventas.

```
Total Ingresos = SUMX( 'DP_FT_ORDERS',  
    'DP_FT_ORDERS'[OrdDet_Unit_Price] * 'DP_FT_ORDERS'[OrdDet_Quantity] *  
    (1 - 'DP_FT_ORDERS'[OrdDet_Discount]))
```

2. Total Productos Vendidos: tiene como objetivo cuantificar el volumen vendido, sin importar el valor.

```
Total Productos Vendidos =  
    SUM('DP_FT_ORDERS'[OrdDet_Quantity])
```

3. Total Pedidos: tiene como objetivo determinar el número total de operaciones de compra.

```
Total Pedidos = DISTINCTCOUNT  
    ('DP_FT_ORDERS'[OrdDet_Order_id])
```

4. Ticket Promedio por Pedido: tiene como objetivo analizar el valor promedio de cada pedido como métrica de gasto por transacción.

```
Total Pedidos = DISTINCTCOUNT  
    ('DP_FT_ORDERS'[OrdDet_Order_id])
```

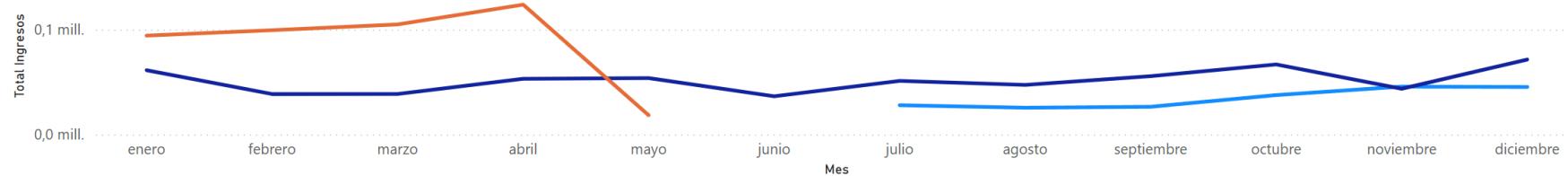
# Tablero de Rendimiento General de Ventas

AñoMes  
 □ 1907-06  
 □ 1996-07  
 □ 1998-08



Total Ingresos

Anio 1996 1997 1998



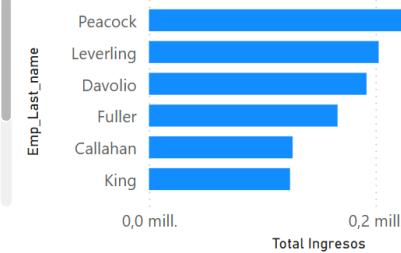
Top 10 Productos Vendidos



TOP 10 Clientes por Ingresos



Top Ingresos por Empleado



## Tablero 2: Análisis de Descuento y Rentabilidad

Se plantea como objetivo del negocio evaluar el impacto de los descuentos en la rentabilidad y detectar patrones de descuento entre productos y empleados para optimizar la estrategia de precios.

Se proponen los siguientes indicadores (KPIs):

1. Porcentaje Pedidos con Descuento: tiene como objetivo evaluar la proporción de pedidos que implicaron descuentos, detectando su alcance.

```
Pedidos con Descuento =
```

```
CALCULATE(COUNTROWS('DP_FT_ORDERS'), 'DP_FT_ORDERS'[OrdDet_Discount] > 0)
```

```
Porcentaje Pedidos con Descuento =
```

```
DIVIDE([Pedidos con Descuento], [Total Pedidos])
```

2. Margen Estimado (asumiendo costo como 70% del precio): tiene como objetivo simular el margen bruto esperable por producto vendido, tras aplicar descuentos. Se realiza una simulación ya que no se cuenta con el costo por producto para calcular un margen real.

```
Margen Estimado =
```

```
SUMX( 'DP_FT_ORDERS', ('DP_FT_ORDERS'[OrdDet_Unit_Price] * 0.3) * 'DP_FT_ORDERS'[OrdDet_Quantity])
```

# Tablero de Descuentos y Rentabilidad

AñoMes  
 1907-06  
 1996-07  
 1996-08

% Pedidos con Descuento

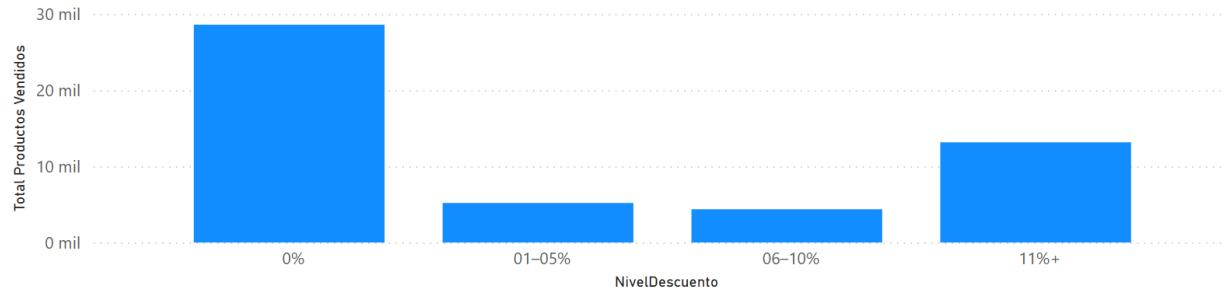
**0,18**

Margen Estimado

**\$406 mil**

Emp_Last_name	Alice Mutton	Aniseed Syrup	Boston Crab Meat	CÃ©te de Blaye	Camembert Pierrot	Carnarvon Tigers	Chai	Chang	Chart
Buchanan	0,08		0,00	0,25	0,15		0,00	0,18	
Callahan	0,13	0,00	0,05		0,03	0,18	0,00	0,04	
Davolio	0,05	0,00	0,10		0,03	0,07	0,01	0,23	0,15
Dodsworth	0,05	0,00	0,00		0,03	0,05	0,05	0,15	0,00
Fuller	0,04		0,03	0,04	0,05	0,15	0,03	0,14	
King	0,04	0,00	0,08	0,20	0,08	0,00	0,08	0,23	
Leverling	0,02	0,00	0,03	0,00	0,08	0,14	0,09	0,18	
Peacock	0,08	0,05	0,05		0,05	0,03	0,09	0,07	
Suyama		0,10	0,10		0,03		0,05	0,00	
<b>Total</b>	<b>0,06</b>	<b>0,02</b>	<b>0,05</b>	<b>0,05</b>	<b>0,06</b>	<b>0,08</b>	<b>0,08</b>	<b>0,10</b>	

Total Productos Vendidos por NivelDescuento



### Tablero 3: Logística y Cumplimiento de Fechas

Se plantea como objetivo del negocio controlar la eficiencia operativa de entrega, identificando cumplimiento de plazos y eficiencia de logística por empleado y período.

Se proponen los siguientes indicadores (KPIs):

1. Porcentaje Entrega a Tiempo: tiene como objetivo evaluar el cumplimiento del servicio de logística de despacho.

```
Pedidos en Tiempo =
```

```
CALCULATE( COUNTROWS('DP_FT_ORDERS'), 'DP_FT_ORDERS'[Order_Shipped_Date] <= 'DP_FT_ORDERS'[Order_Required_Date])
```

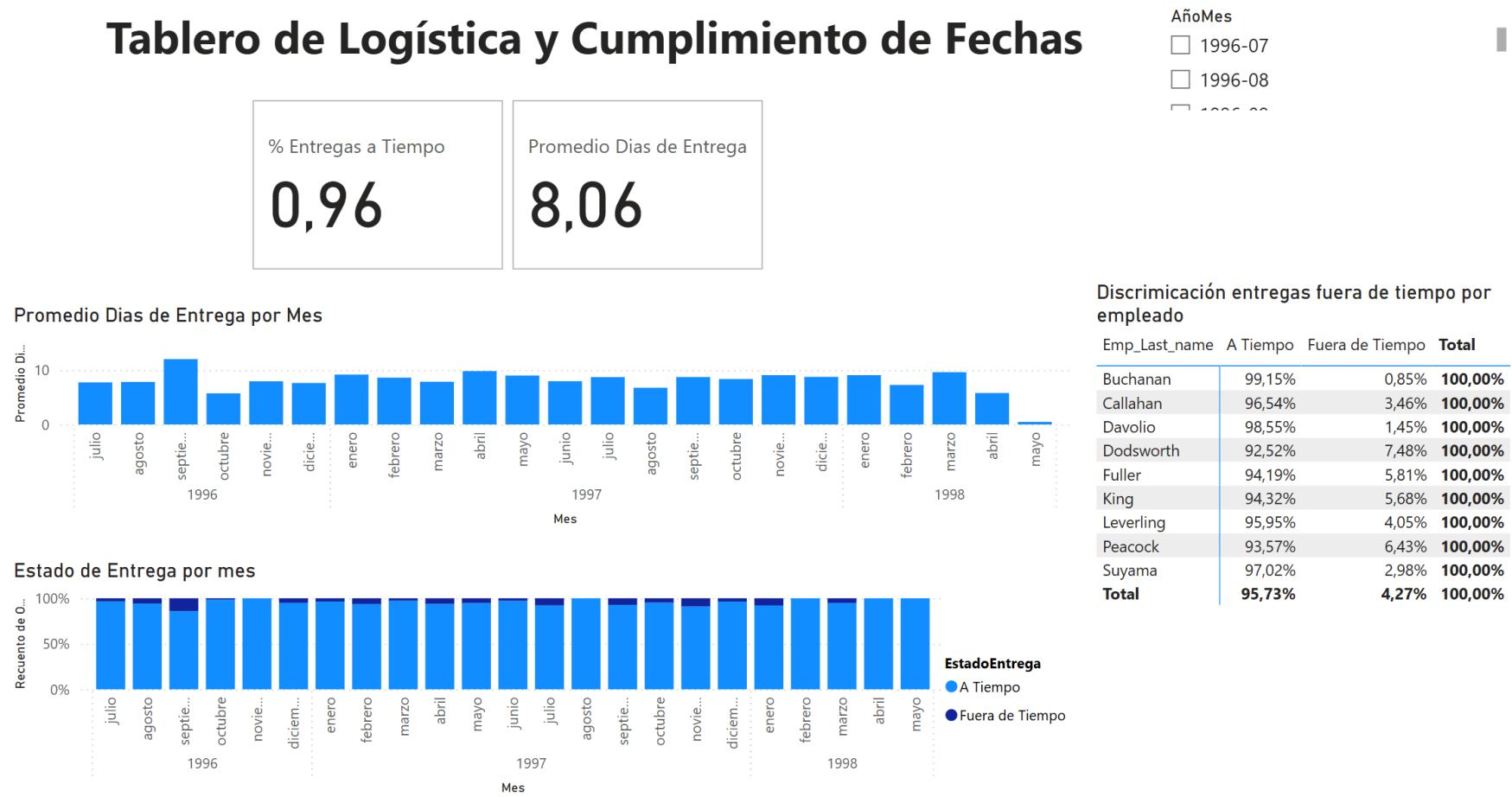
```
Porcentaje Entrega a Tiempo = DIVIDE([Pedidos en Tiempo], [Total Pedidos])
```

2. Promedio de Días de Entrega: tiene como objetivo controlar eficiencia del despacho en días calendario.

```
Dias_Entrega = MAX(DATEDIFF('DP_FT_ORDERS'[Order_Date], 'DP_FT_ORDERS'[Order_Shipped_Date], DAY), 0)
```

```
Promedio Dias de Entrega = AVERAGE('DP_FT_ORDERS'[Dias_Entrega])
```

# Tablero de Logística y Cumplimiento de Fechas



## Conclusión general visulazación de datos.

La integración de KPIs comerciales, de rentabilidad y logística en Power BI ha permitido obtener una visión 360° del negocio, facilitando la toma de decisiones basadas en datos. Gracias al uso de un modelo de datos estructurado en forma de estrella y a la definición precisa de medidas DAX, se logró generar tableros interactivos que permiten analizar información desde distintas perspectivas: clientes, productos, empleados y tiempo. El tablero de ventas brinda una visión general del rendimiento comercial y del aporte de cada actor clave. El de descuentos y rentabilidad permite optimizar la estrategia de precios e identificar oportunidades de mejora en la rentabilidad de productos. Por su parte, el tablero de logística permite monitorear el cumplimiento de tiempos de entrega y eficiencia operativa por empleado y por período. En conjunto, los tableros desarrollados ofrecen información accionable que puede ser utilizada para fidelizar clientes, premiar al personal de mejor desempeño, optimizar recursos y aumentar la rentabilidad del negocio.