

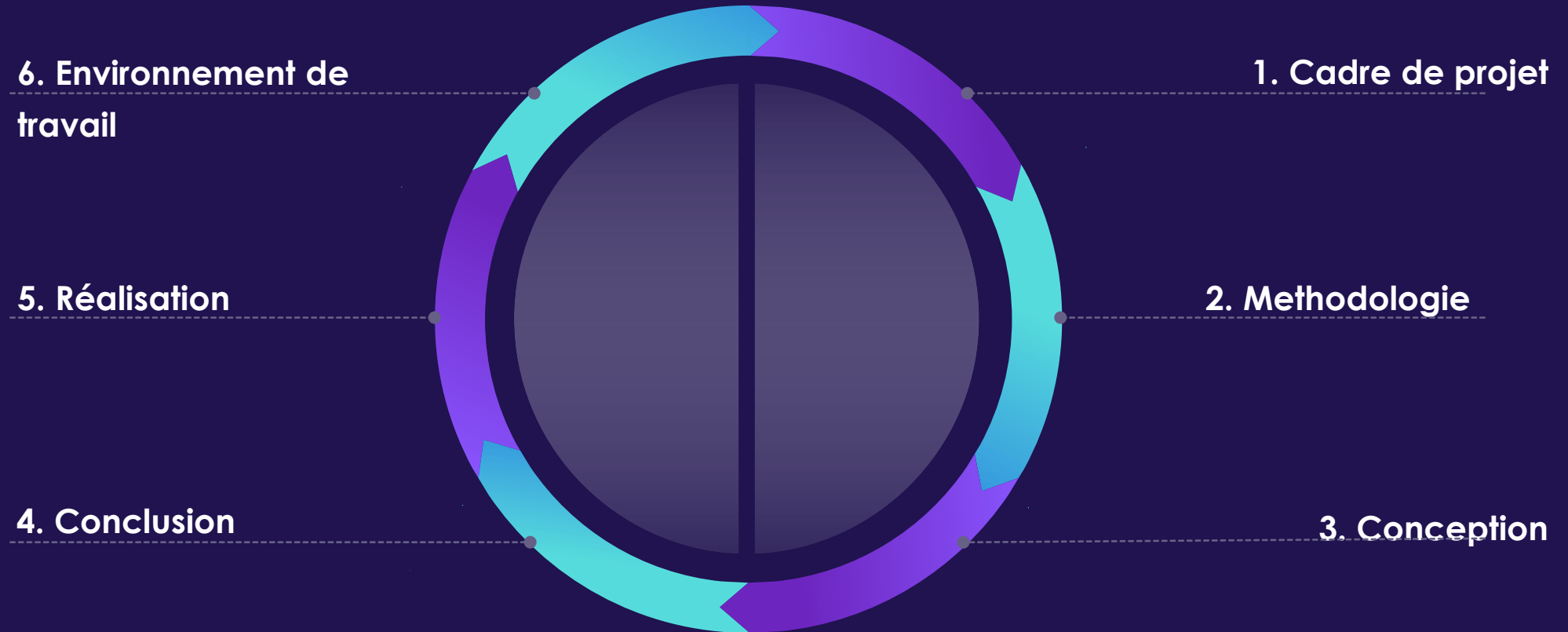


Mise en place d'une solution BI pour les vente et retour des articles sportif

Elaboré par
Souha Ben Hadj Kacem

Encadré par :
Mr. Ahmed Ben
Taleb

PLAN

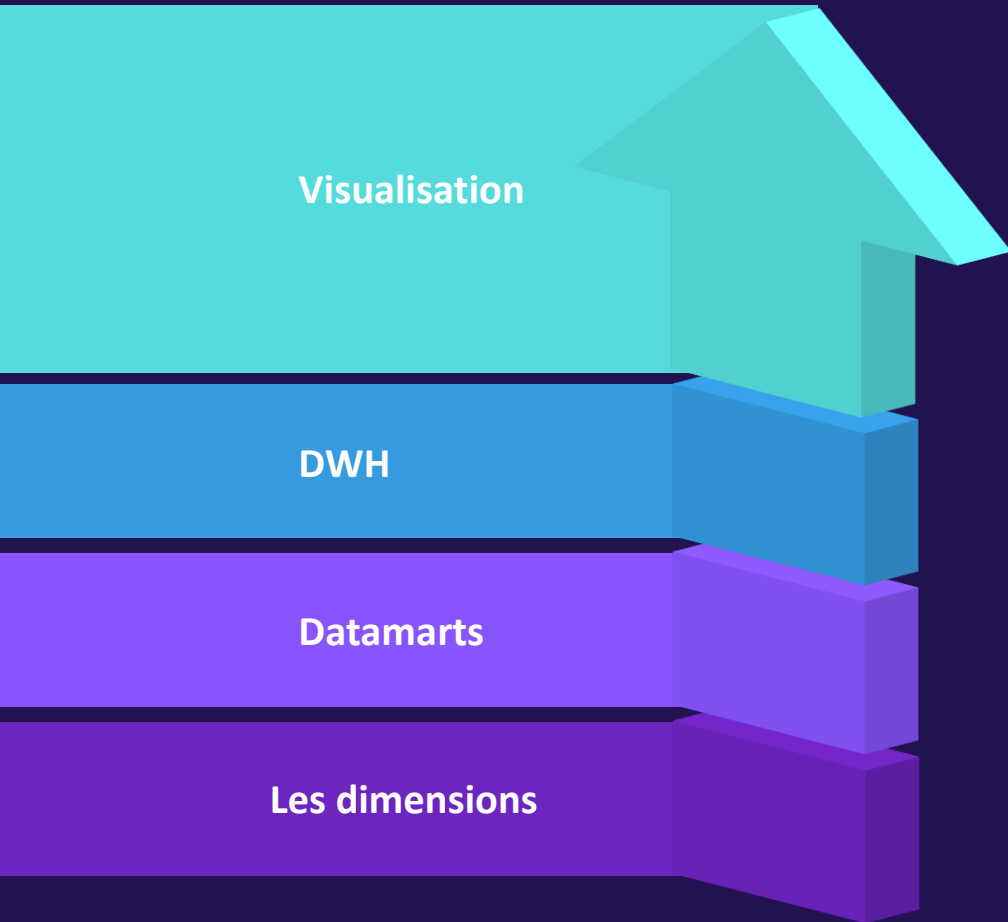


Cadre de projet

L'objectif de ce projet est d'implémenter une solution d'intégration de données pour analyser les ventes / retour des articles sportif

- Comprendre le processus d'affaire de vente et Retour des articles sportif
- Définir les indicateurs de performance
- Intégrer les données avec ELT
- Générer les tableaux de bords

L'approche Ascendante (bottom up)

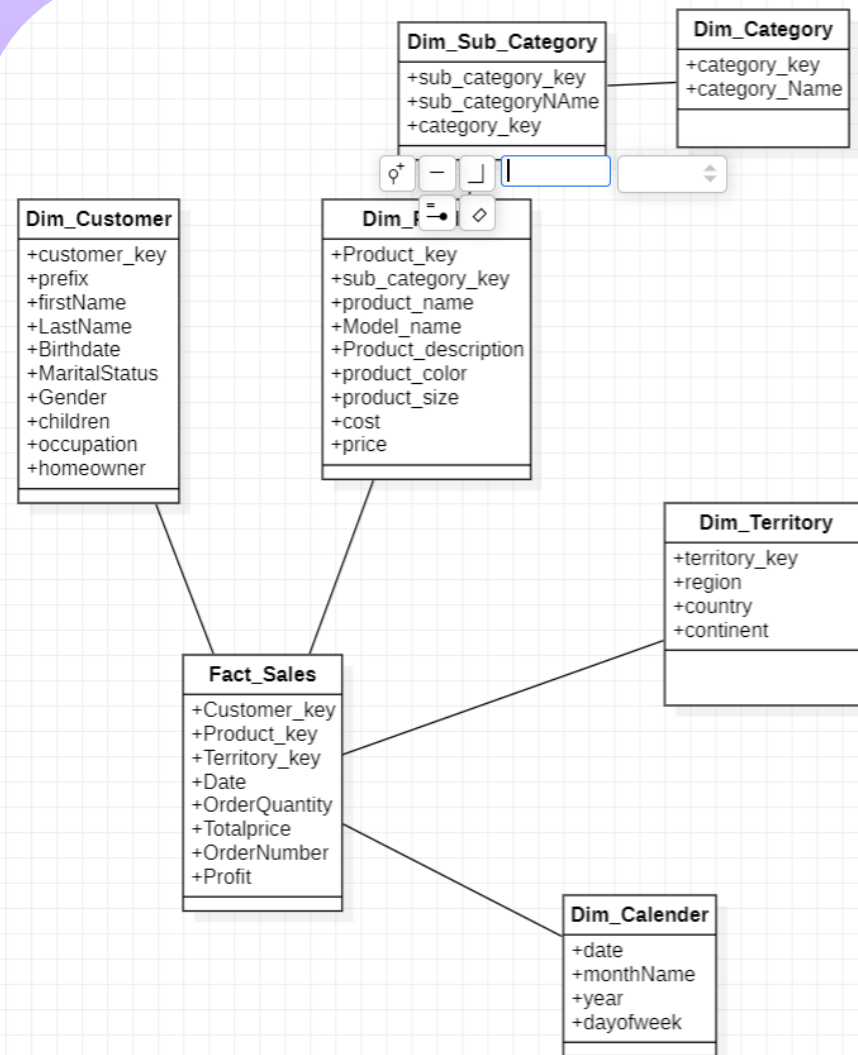


Dans cette approche, On part des éléments de base pour aller vers l'ensemble. Elle est initiée par Ralph Kimball

CONCEPTION

Datamart Sales

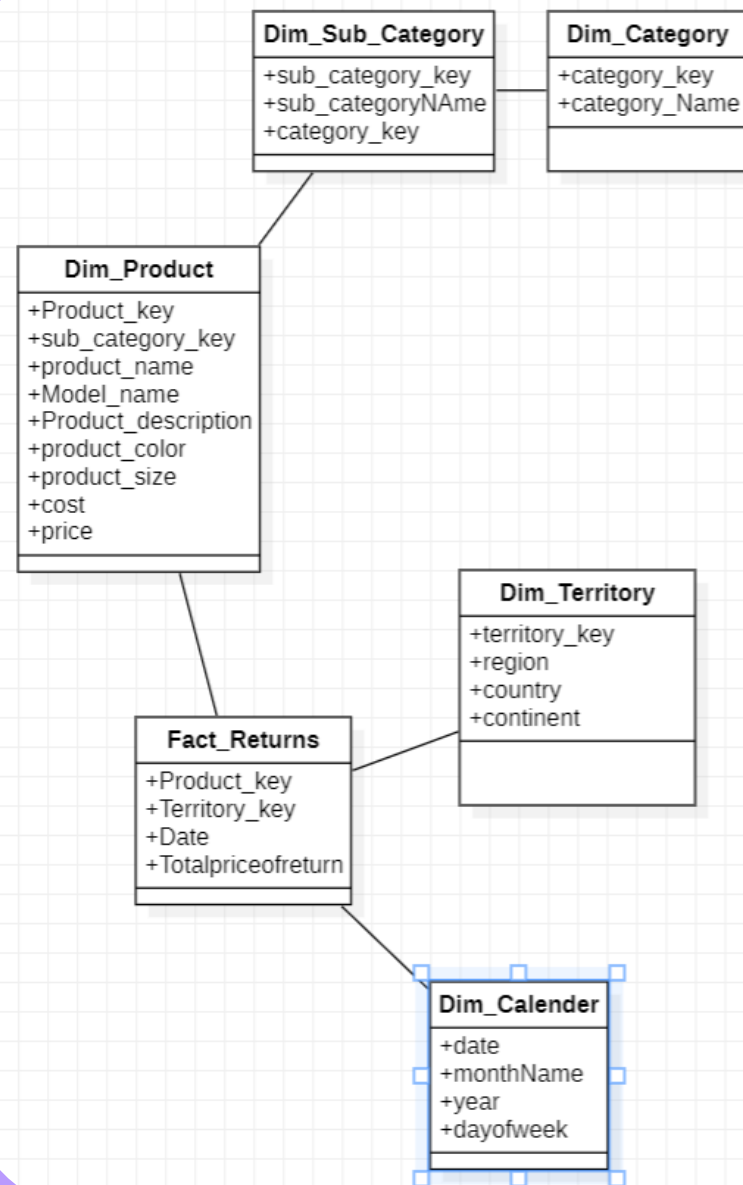
en Flocon



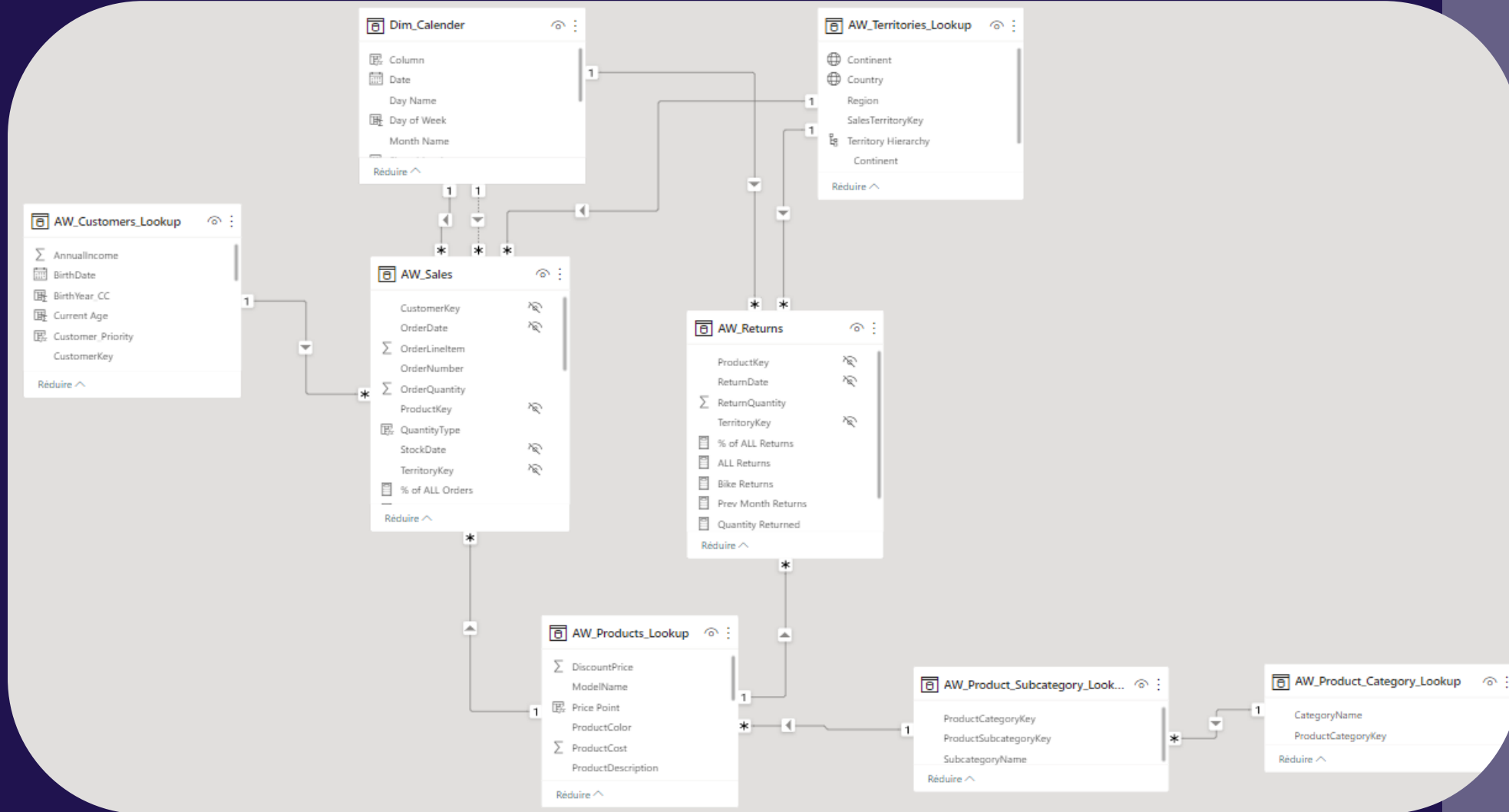
CONCEPTION

Datamart Returns

en Flocon



DWH



en Constellation

Dataset source Adventure Works

	A	B	C
1	Date		
2	1/1/2015		
3	1/2/2015		
4	1/3/2015		
5	1/4/2015		
6	1/5/2015		
7	1/6/2015		
8	1/7/2015		
9	1/8/2015		
10	1/9/2015		
11	1/10/2015		
12	1/11/2015		
13	1/12/2015		
14	1/13/2015		
15	1/14/2015		

CustomerKey	Prefix	FirstName	LastName	BirthDate	MaritalStatus	Gender	EmailAddress	AnnualIncome	TotalChildren	EducationLevel	Occupation	HomeOwner
11000	MR.	JON	YANG	4/8/1966	M	M	jon24@adver	\$90,000	2	Bachelors	Professional	Y
11001	MR.	EUGENE	HUANG	5/14/1965	S	M	eugene10@a	\$60,000	3	Bachelors	Professional	N
11002	MR.	RUBEN	TORRES	8/12/1965	M	M	ruben35@adh	\$60,000	3	Bachelors	Professional	Y
11003	MS.	CHRISTY	ZHU	2/15/1968	S	F	christy12@ac	\$70,000	0	Bachelors	Professional	N
11004	MRS.	ELIZABETH	JOHNSON	8/8/1968	S	F	elizabeth5@e	\$80,000	5	Bachelors	Professional	Y
11005	MR.	JULIO	RUIZ	8/5/1965	S	M	julio1@adver	\$70,000	0	Bachelors	Professional	Y
11007	MR.	MARCO	MEHTA	5/9/1964	M	M	marco14@ad	\$60,000	3	Bachelors	Professional	Y
11008	MRS.	ROBIN	VERHOFF	7/7/1964	S	F	rob4@advent	\$60,000	4	Bachelors	Professional	Y
11009	MR.	SHANNON	CARLSON	4/1/1964	S	M	shannon38@	\$70,000	0	Bachelors	Professional	N
11010	MS.	JACQUELYN	SUAREZ	2/6/1964	S	F	jacquelyn20@	\$70,000	0	Bachelors	Professional	N
11011	MR.	CURTIS	LU	11/4/1963	M	M	curtis9@adve	\$60,000	4	Bachelors	Professional	Y
11012	MRS.	LAUREN	WALKER	1/18/1968	M	F	lauren41@ad	\$100,000	2	Bachelors	Management	Y
11013	MR.	IAN	JENKINS	8/6/1968	M	M	ian47@adver	\$100,000	2	Bachelors	Management	Y
11014	MRS.	SYDNEY	BENNETT	5/9/1968	S	F	sydney23@ar	\$100,000	3	Bachelors	Management	N
11015	MS.	CHLOE	YOUNG	2/27/1979	S	F	chloe23@adv	\$30,000	0	Partial Colleg	Skilled Manu	N
11016	MR.	WYATT	HILL	4/28/1979	M	M	wyatt32@adv	\$30,000	0	Partial Colleg	Skilled Manu	Y
11017	MRS.	SHANNON	WANG	6/26/1944	S	F	shannon1@a	\$20,000	4	High School	Skilled Manu	Y
11018	MR.	CLARENCE	RAI	10/9/1944	S	M	clarence32@	\$30,000	2	Partial Colleg	Clerical	Y
11019	MR.	LUKE	LAL	3/7/1978	S	M	luke18@adve	\$40,000	0	High School	Skilled Manu	N

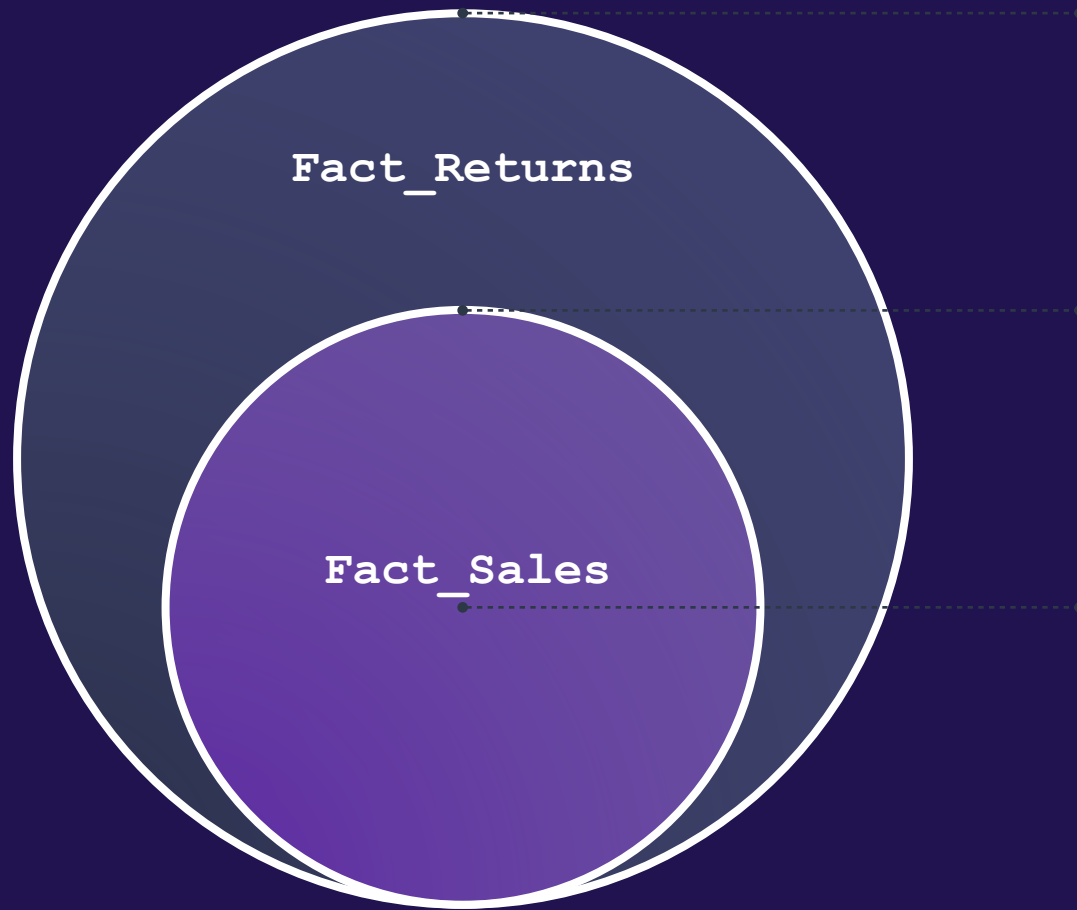
	A	B	C
1	SalesTerritoryKey	Region	Country;Continent
2	1;Northwest	United States	North America
3	2;Northeast	United States	North America
4	3;Central	United States	North America
5	4;Southwest	United States	North America
6	5;Southeast	United States	North America
7	6;Canada	Canada	North America
8	7;France	France	Europe
9	8;Germany	Germany	Europe
10	9;Australia	Australia	Pacific
11	10;United Kingdom	United Kingdom	Europe

	A	B	C
1	ProductCategory	CategoryName	
2	1	Bikes	
3	2	Components	
4	3	Clothing	
5	4	Accessories	
6			

	A	B	C	D
1	ProductSubcategoryKey	SubcategoryName	ProductCategoryKey	
2	1	Mountain Bikes	1	
3	2	Road Bikes	1	
4	3	Touring Bikes	1	
5	4	Handlebars	2	
6	5	Bottom Brackets	2	
7	6	Brakes	2	
8	7	Chains	2	
9	8	Cranksets	2	
10	9	Derailleurs	2	
11	10	Forks	2	
12	11	Headsets	2	
13	12	Mountain Frames	2	
14	13	Pedals	2	
15	14	Road Frames	2	
16	15	Saddles	2	
17	16	Touring Frames	2	
18	17	Wheels	2	

	A	B	C	D	E	F	G	H	I	J	K
1	ProductKey	ProductSubcategoryKey	ProductSKU	ProductName	ModelName	ProductDescription	ProductColor	ProductSize	ProductStyle	ProductCost	ProductPrice
2	214	31	HL-U509-R	Sport-100 Hel	Sport-100	Universal fit, \ Red		0	0	13.0863	34.99
3	215	31	HL-U509	Sport-100 Hel	Sport-100	Universal fit, \ Black		0	0	12.0278	33.6442
4	218	23	SO-B909-M	Mountain Biki	Mountain Biki	Combination \ White	M	U		3.3963	9.5
5	219	23	SO-B909-L	Mountain Biki	Mountain Biki	Combination \ White	L	U		3.3963	9.5
6	220	31	HL-U509-B	Sport-100 Hel	Sport-100	Universal fit, \ Blue		0	0	12.0278	33.6442
7	223	19	CA-1098	AWC Logo Ca	Cycling Cap	Traditional sty	Multi	0	U	5.7052	8.6442
8	226	21	LJ-0192-S	Long-Sleeve L	Long-Sleeve L	Unisex long-sl	Multi	S	U	31.7244	48.0673
9	229	21	LJ-0192-M	Long-Sleeve L	Long-Sleeve L	Unisex long-sl	Multi	M	U	31.7244	48.0673
10	232	21	LJ-0192-L	Long-Sleeve L	Long-Sleeve L	Unisex long-sl	Multi	L	U	31.7244	48.0673
11	235	21	LJ-0192-X	Long-Sleeve L	Long-Sleeve L	Unisex long-sl	Multi	XL	U	31.7244	48.0673
12	238	14	FR-R92R-62	HL Road Fram	HL Road Fram	Our lightest ai	Red	62	U	747.9682	1263.4598
13	241	14	FR-R92R-44	HL Road Fram	HL Road Fram	Our lightest ai	Red	44	U	747.9682	1263.4598
14	244	14	FR-R92R-48	HL Road Fram	HL Road Fram	Our lightest ai	Red	48	U	747.9682	1263.4598
15	247	14	FR-R92R-52	HL Road Fram	HL Road Fram	Our lightest ai	Red	52	U	747.9682	1263.4598
16	250	14	FR-R92R-56	HL Road Fram	HL Road Fram	Our lightest ai	Red	56	U	747.9682	1263.4598
17	253	14	FR-R38B-58	LL Road Fram	LL Road Fram	The LL Frame	Black	58	U	176.1997	297.6346
18	256	14	FR-R38B-60	LL Road Fram	LL Road Fram	The LL Frame	Black	60	U	176.1997	297.6346

Key Performance Indicators:

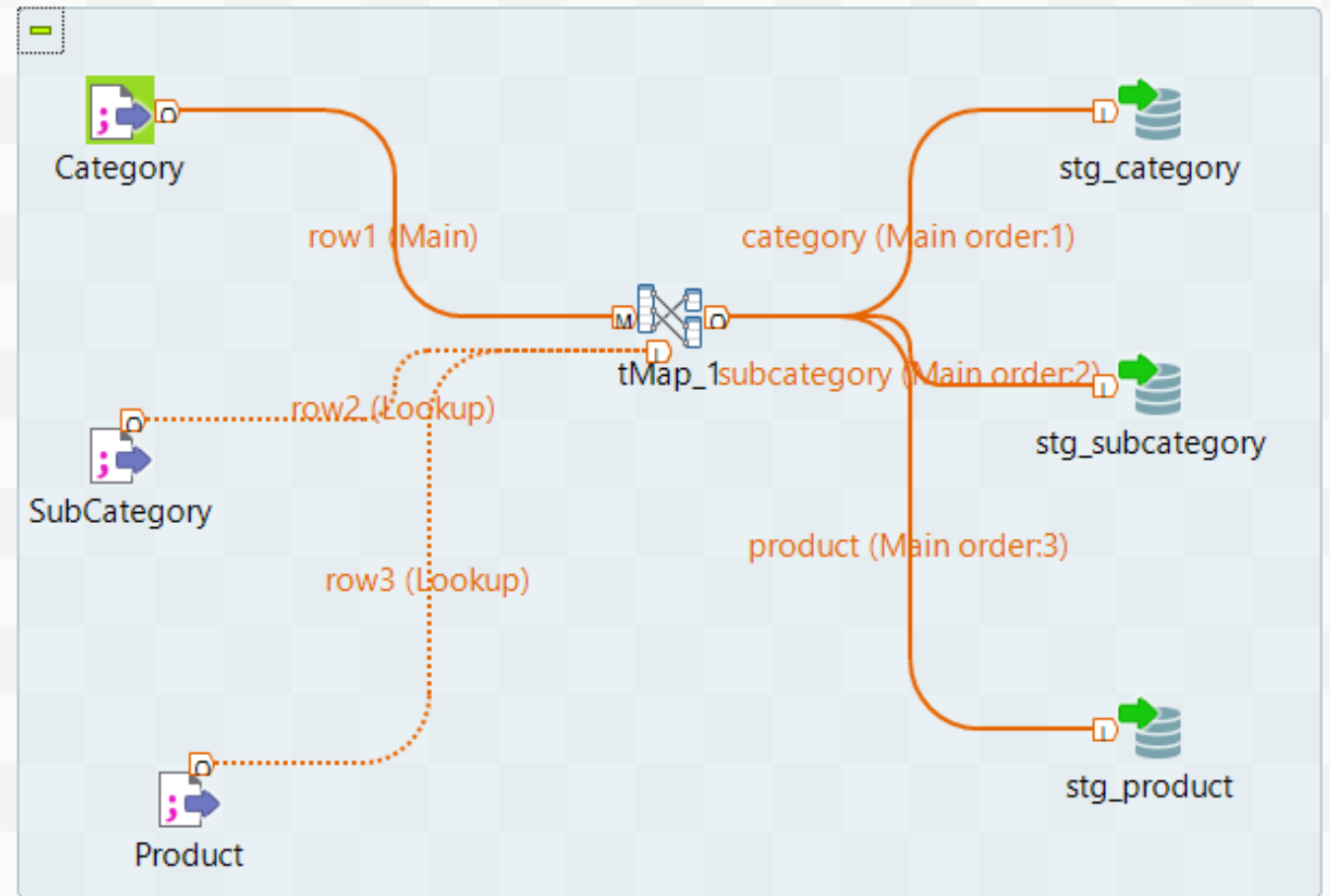


- Total des retours
- Cout des retours (nb retours * prix)
- Total des ordre
- Revenue (ordre * prix)
- Profit (prit vente - cout)

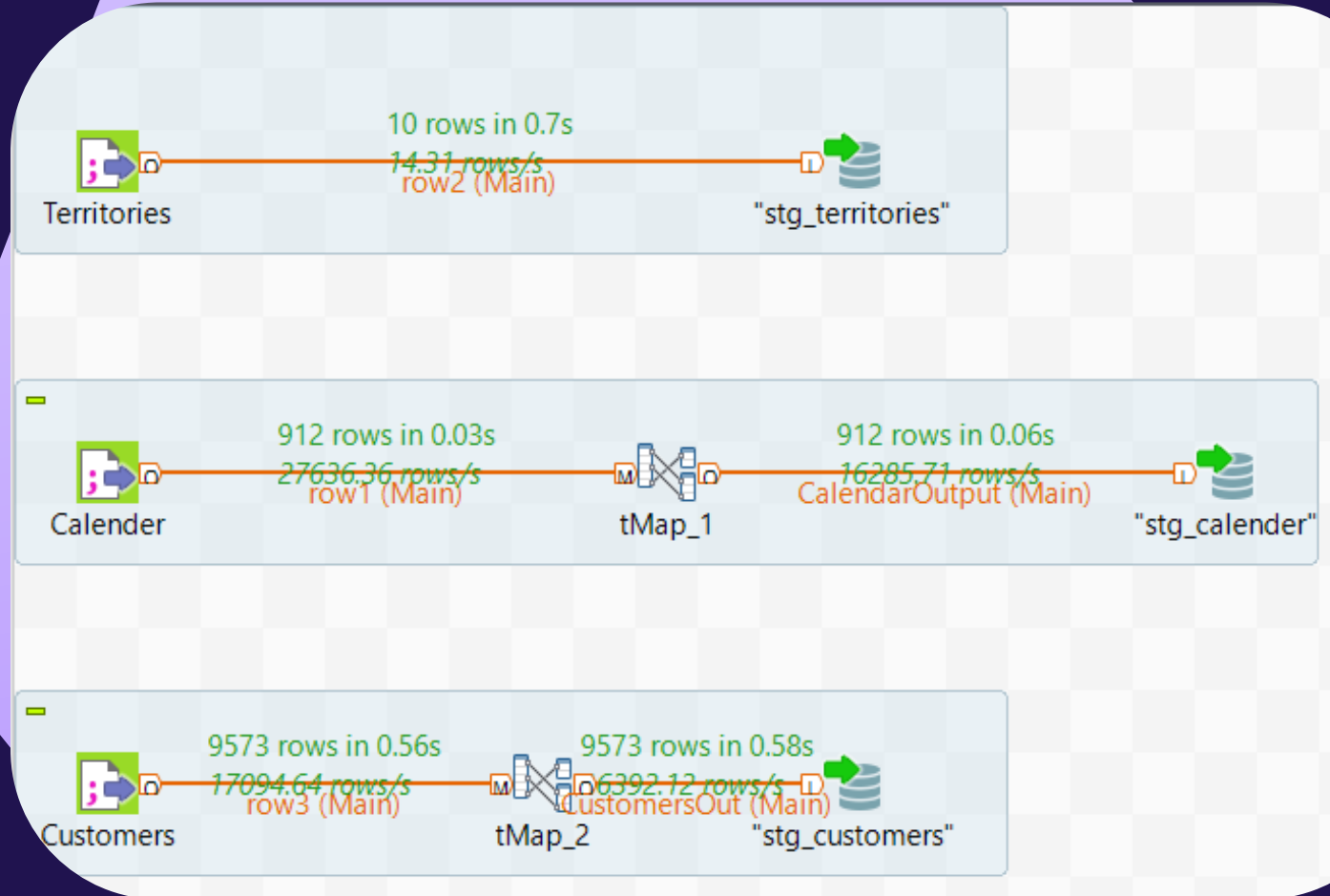
Environnement de travail



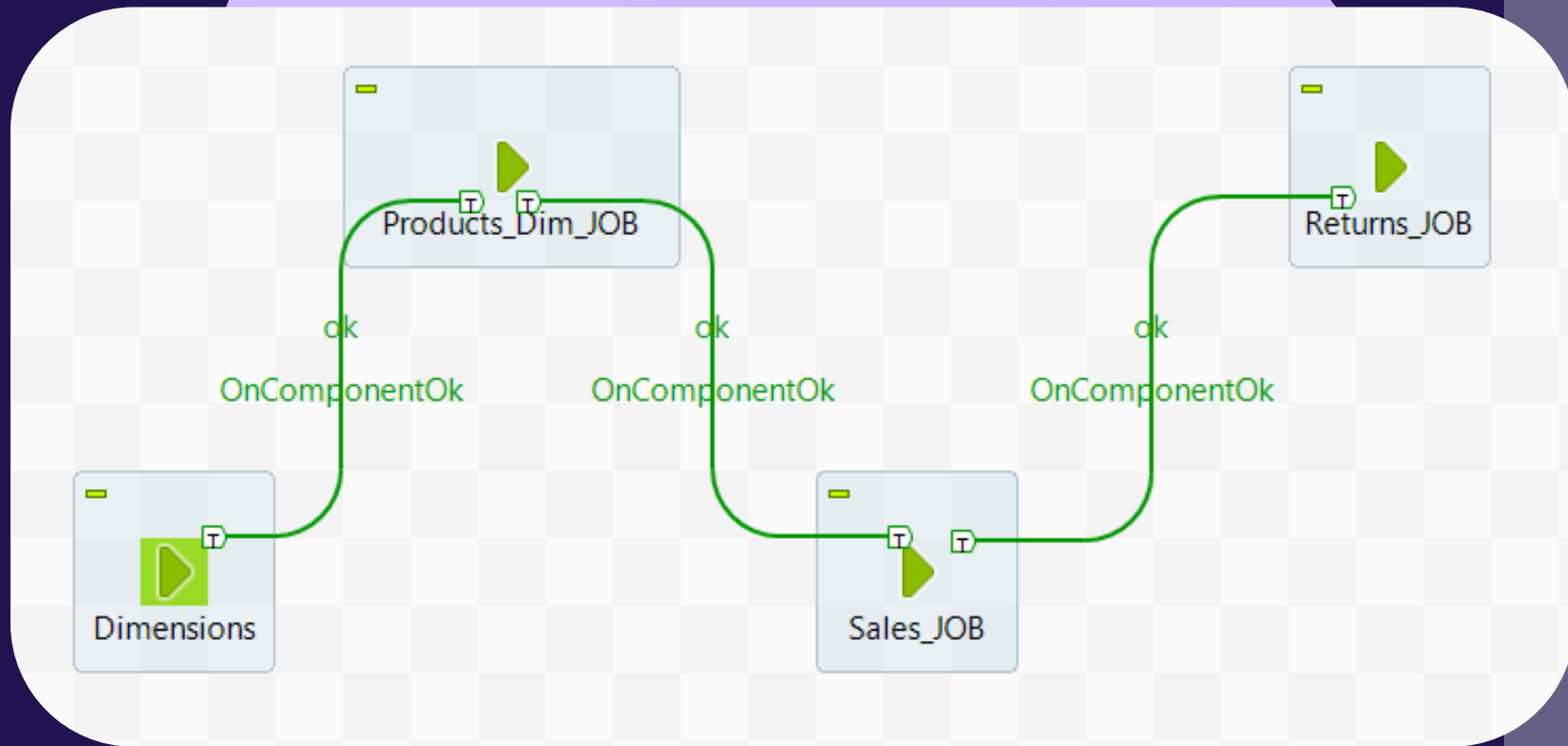
Extraction des données 2



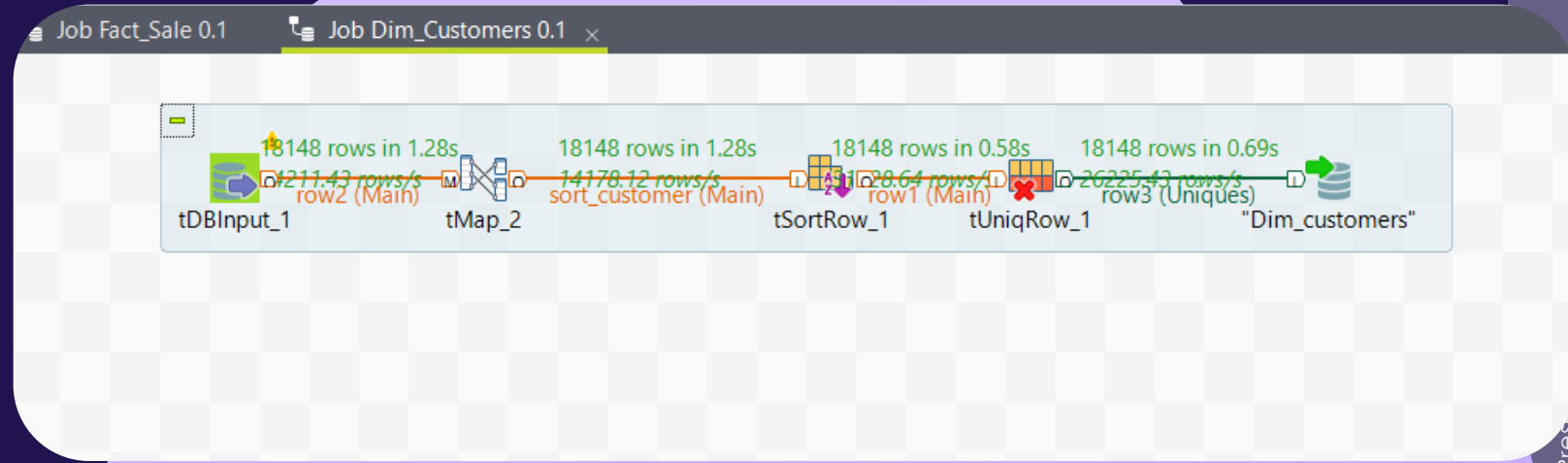
Extraction des données



Load



Transformation : Dim_Customer



row2

Column
CustomerKey
Prefix
FirstName
LastName
BirthDate
MaritalStatus
Gender
AnnualIncome
TotalChildren
EducationLevel
Occupation
HomeOwner

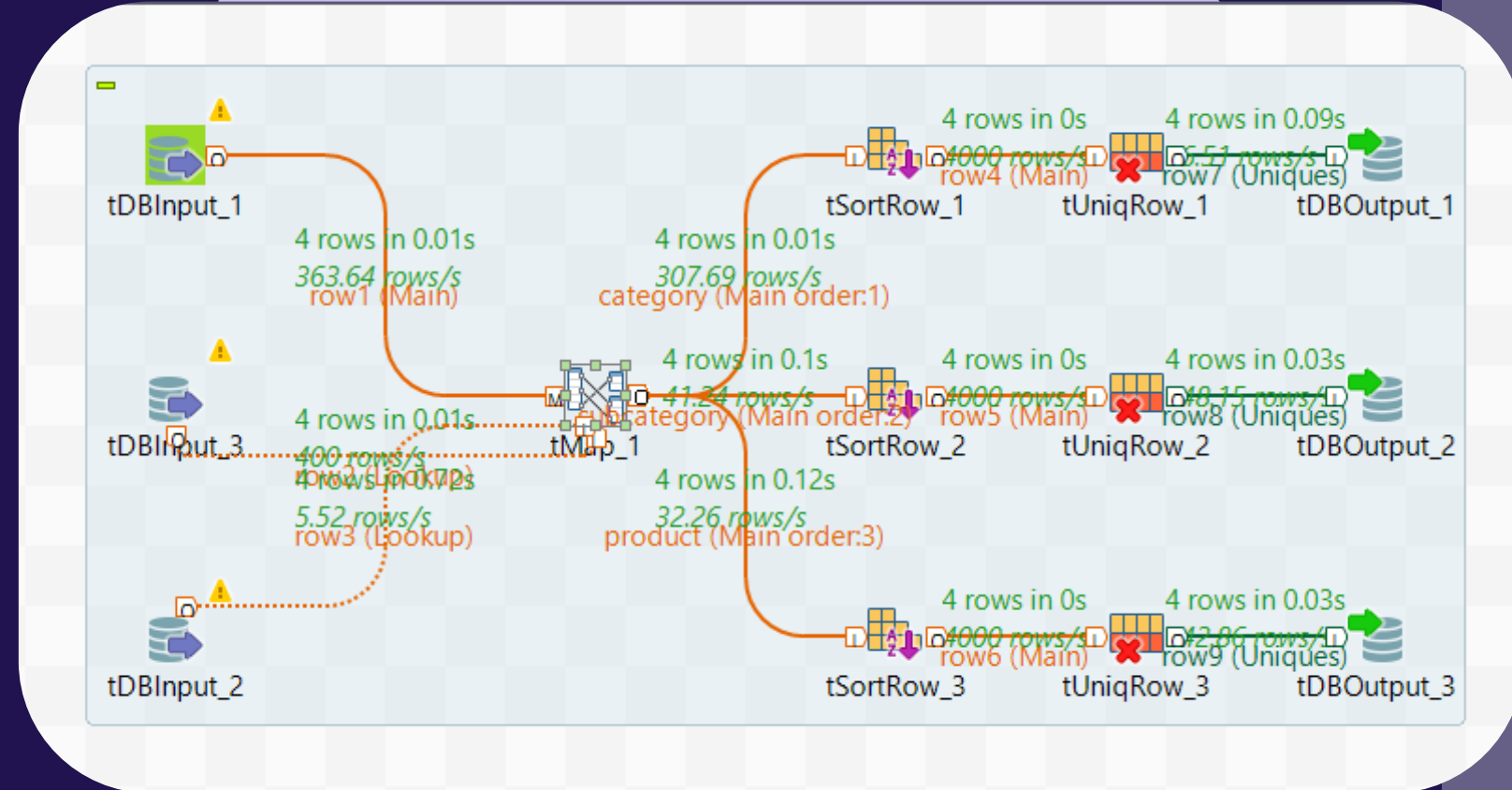
Find :

Var	Expression	Type	Variable
	(row2.Prefix+" "+row2.FirstName+" "+r...	String	<input type="checkbox"/> FullNameX
	CapitalizeEachWord.capitalizeOnlyFirst...	String	<input type="checkbox"/> FullName
	TalendDate.getPartOfDate("YEAR",Tale...	int	<input type="checkbox"/> CurrentAgeX

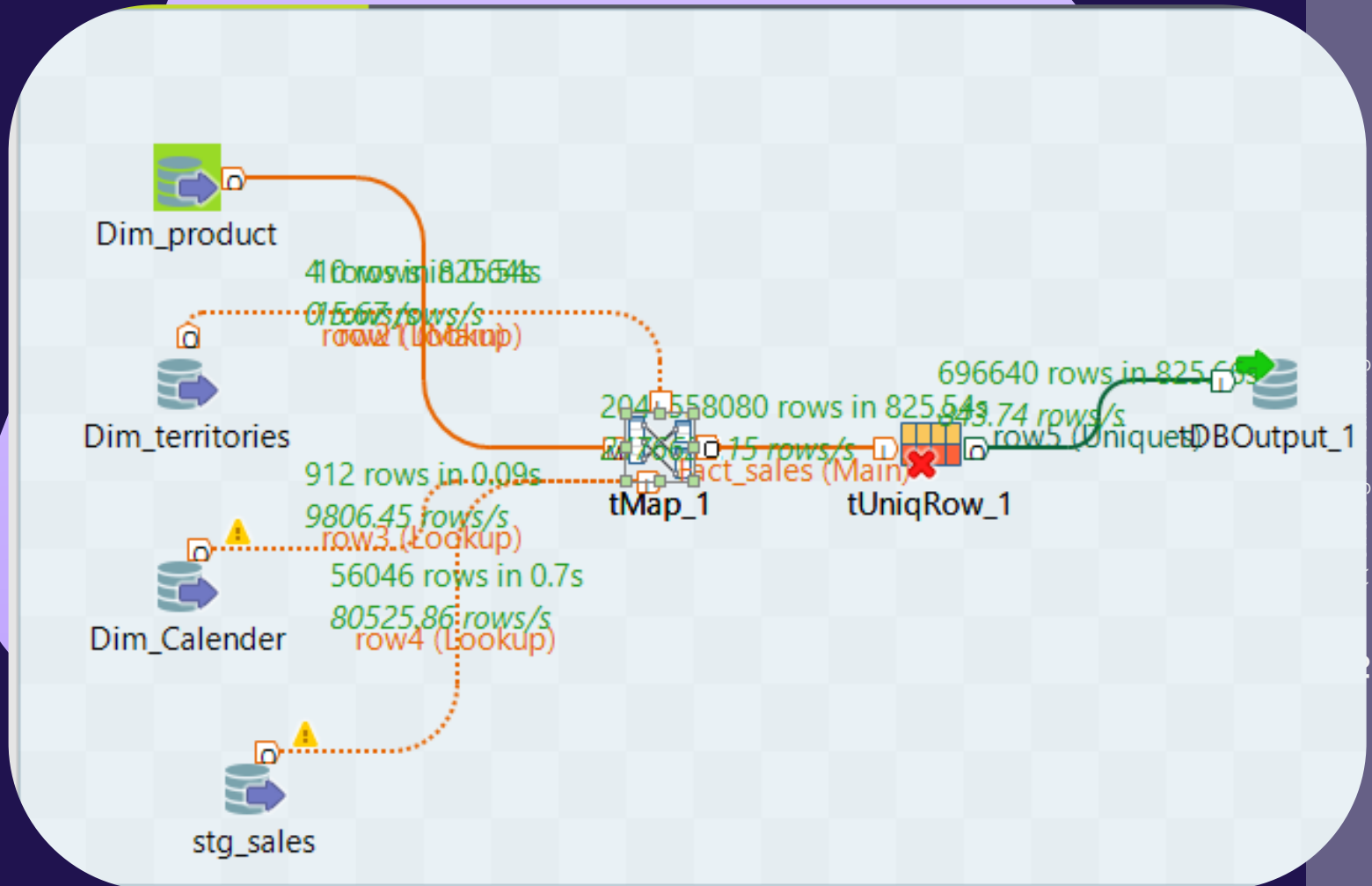
sort_customer

Expression	Column
row2.CustomerKey	CustomerKey
row2.Prefix	Prefix
row2.FirstName	FirstName
row2.LastName	LastName
row2.BirthDate	BirthDate
row2.MaritalStatus	MaritalStatus
row2.Gender	Gender
row2.AnnualIncome	AnnualIncome
row2.TotalChildren	TotalChildren
row2.EducationLevel	EducationLevel
row2.Occupation	Occupation
row2.HomeOwner	HomeOwner
Var.FullName	FullName
TalendDate.getPartOfDate("YEAR",row2.BirthDate)	BirthYear
Var.CurrentAgeX	CurrentAge
row2.TotalChildren>0?"Yes":"No"	Parent

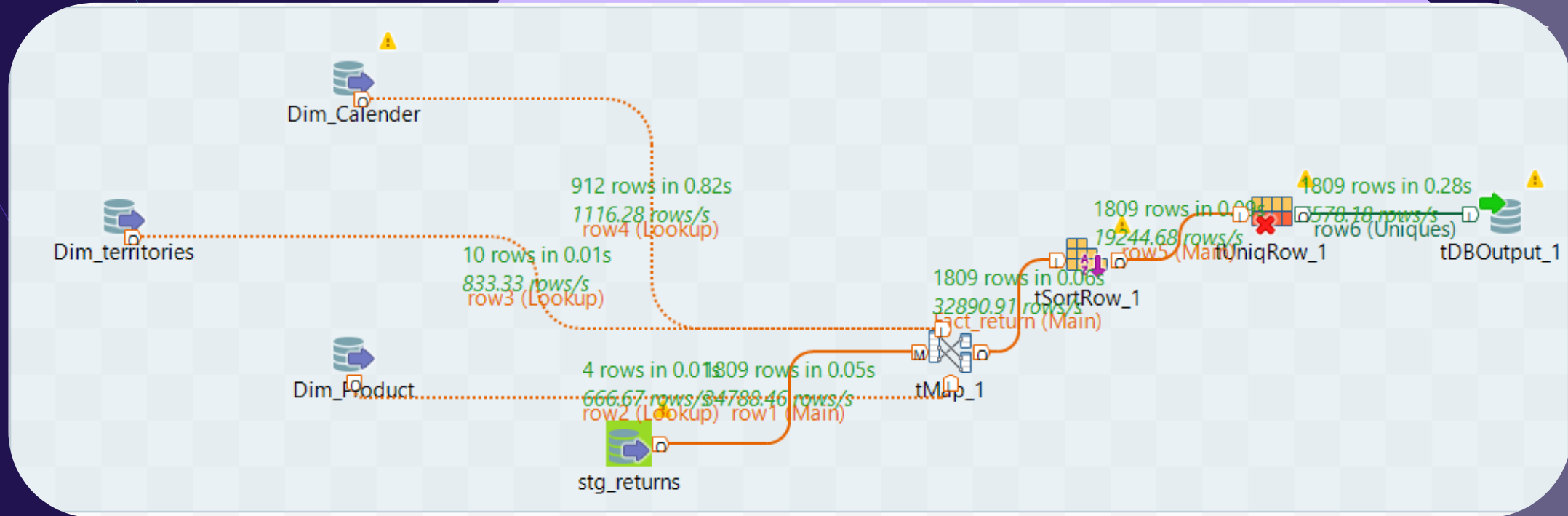
Transformation: Dim_Product



Transformation: Fact_Sales



Transformation: Fact_Returns



DWH

Current server: MySQL

Recent Favorites

New

- bikesales
- cycle
 - New
 - dim_calender
 - dim_category
 - dim_customers
 - dim_product
 - dim_subcategory
 - dim_territories
 - fact_returns
 - fact_sales
 - stg_calender
 - stg_category
 - stg_customers
 - stg_product
 - stg_returns
 - stg_sales
 - stg_subcategory
 - stg_territories
 - dwh

Filters

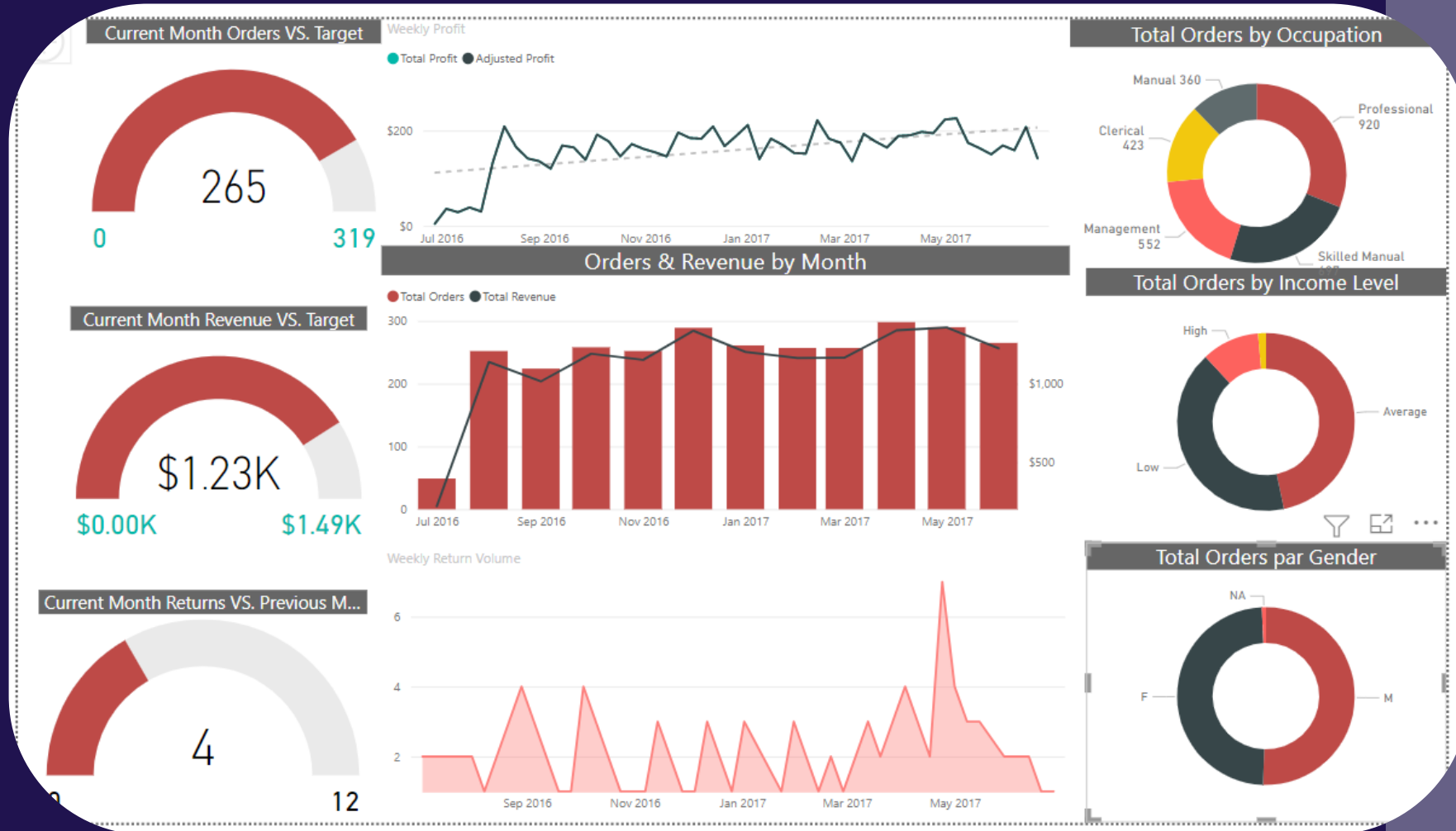
Containing the word:

Table	Action	Rows	Type	Collation	Size	Overhead
<input type="checkbox"/> dim_calender	★ Browse Structure Search Insert Empty Drop	912	MyISAM	latin1_swedish_ci	66.9 KiB	-
<input type="checkbox"/> dim_category	★ Browse Structure Search Insert Empty Drop	4	MyISAM	latin1_swedish_ci	2.1 KiB	-
<input type="checkbox"/> dim_customers	★ Browse Structure Search Insert Empty Drop	18,148	MyISAM	latin1_swedish_ci	2.0 MiB	-
<input type="checkbox"/> dim_product	★ Browse Structure Search Insert Empty Drop	4	MyISAM	latin1_swedish_ci	2.5 KiB	-
<input type="checkbox"/> dim_subcategory	★ Browse Structure Search Insert Empty Drop	4	MyISAM	latin1_swedish_ci	2.1 KiB	-
<input type="checkbox"/> dim_territories	★ Browse Structure Search Insert Empty Drop	10	MyISAM	latin1_swedish_ci	2.4 KiB	-
<input type="checkbox"/> fact_returns	★ Browse Structure Search Insert Empty Drop	1,809	MyISAM	latin1_swedish_ci	36.3 KiB	-
<input type="checkbox"/> fact_sales	★ Browse Structure Search Insert Empty Drop	696,640	MyISAM	latin1_swedish_ci	23.9 MiB	-
<input type="checkbox"/> stg_calender	★ Browse Structure Search Insert Empty Drop	912	MyISAM	latin1_swedish_ci	17.2 KiB	-
<input type="checkbox"/> stg_category	★ Browse Structure Search Insert Empty Drop	4	MyISAM	latin1_swedish_ci	2.1 KiB	-
<input type="checkbox"/> stg_customers	★ Browse Structure Search Insert Empty Drop	9,573	MyISAM	latin1_swedish_ci	1.1 MiB	-
<input type="checkbox"/> stg_product	★ Browse Structure Search Insert Empty Drop	4	MyISAM	latin1_swedish_ci	2.5 KiB	-
<input type="checkbox"/> stg_returns	★ Browse Structure Search Insert Empty Drop	1,809	MyISAM	latin1_swedish_ci	29.3 KiB	-
<input type="checkbox"/> stg_sales	★ Browse Structure Search Insert Empty Drop	56,046	MyISAM	latin1_swedish_ci	2.1 MiB	-
<input type="checkbox"/> stg_subcategory	★ Browse Structure Search Insert Empty Drop	4	MyISAM	latin1_swedish_ci	2.1 KiB	-
<input type="checkbox"/> stg_territories	★ Browse Structure Search Insert Empty Drop	11	MyISAM	latin1_swedish_ci	2.5 KiB	-

Reporting

Dans ce rapport on visualise les mesures suivantes :

- Le top des produits par revenue
- Les ordres par pays
- étude comparative des ordres et de revenue ainsi les retour par mois et par objectif

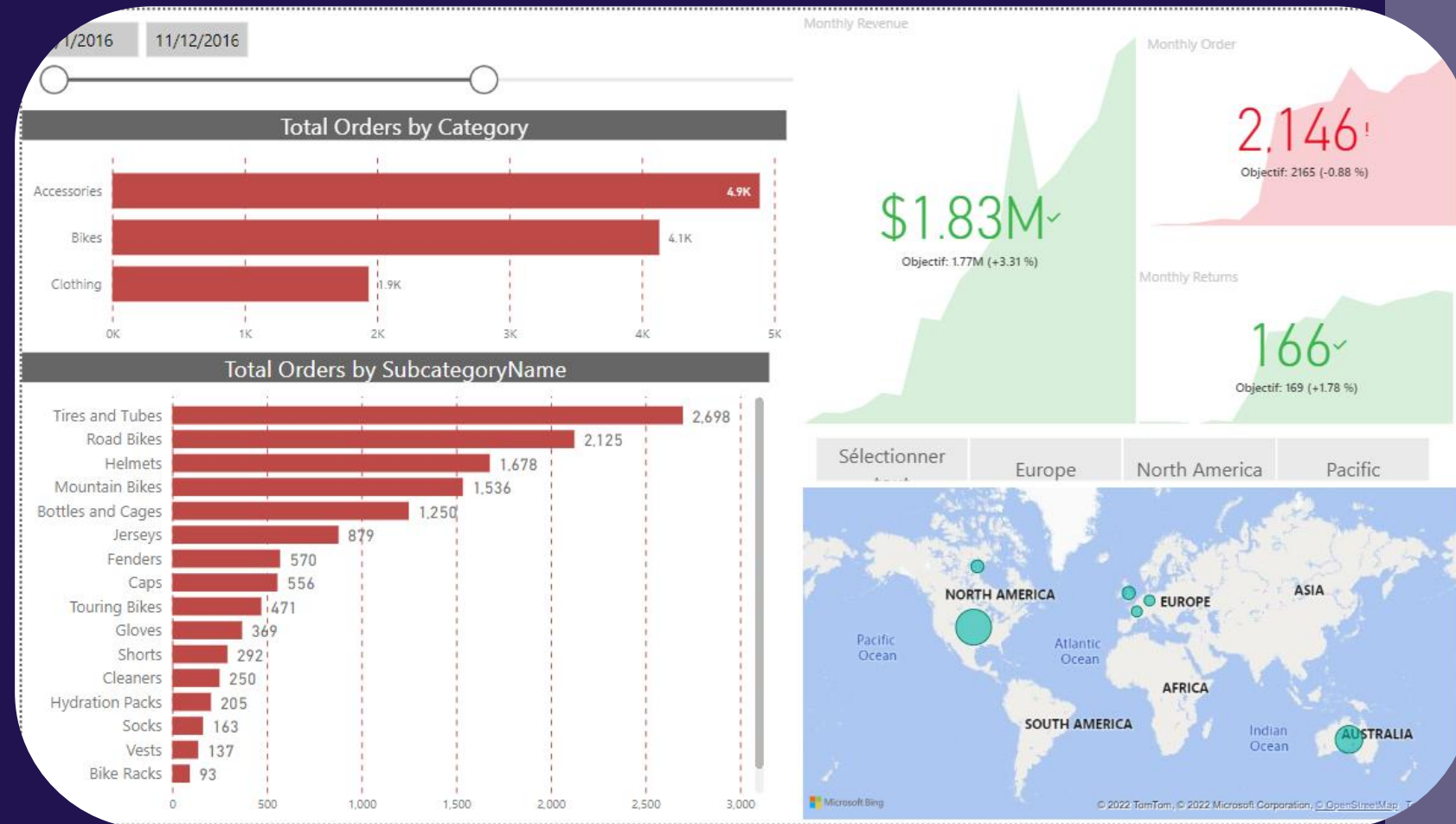


Dashboard 1

Reporting

Dans cette figure on a effectué une analyse sur les ordre par les client

- Total orders par category
- Total des ordres par sub category
- Total des ordres
- Le total de chiffre d'affaire
- Total des retours
- Repartition des ventes par continent



Dashboard 3



Conclusion

L'implémentation de cette solution BI en utilisant un environnement logiciel différent ainsi le concept de l'ELT m'a permis de se développer dans le cadre conceptuel et aussi dans le cadre technique d'intégration et visualisation des données