

DW/BI Design and Implementation

A Case Study of King Power (Duty Free Shopping)

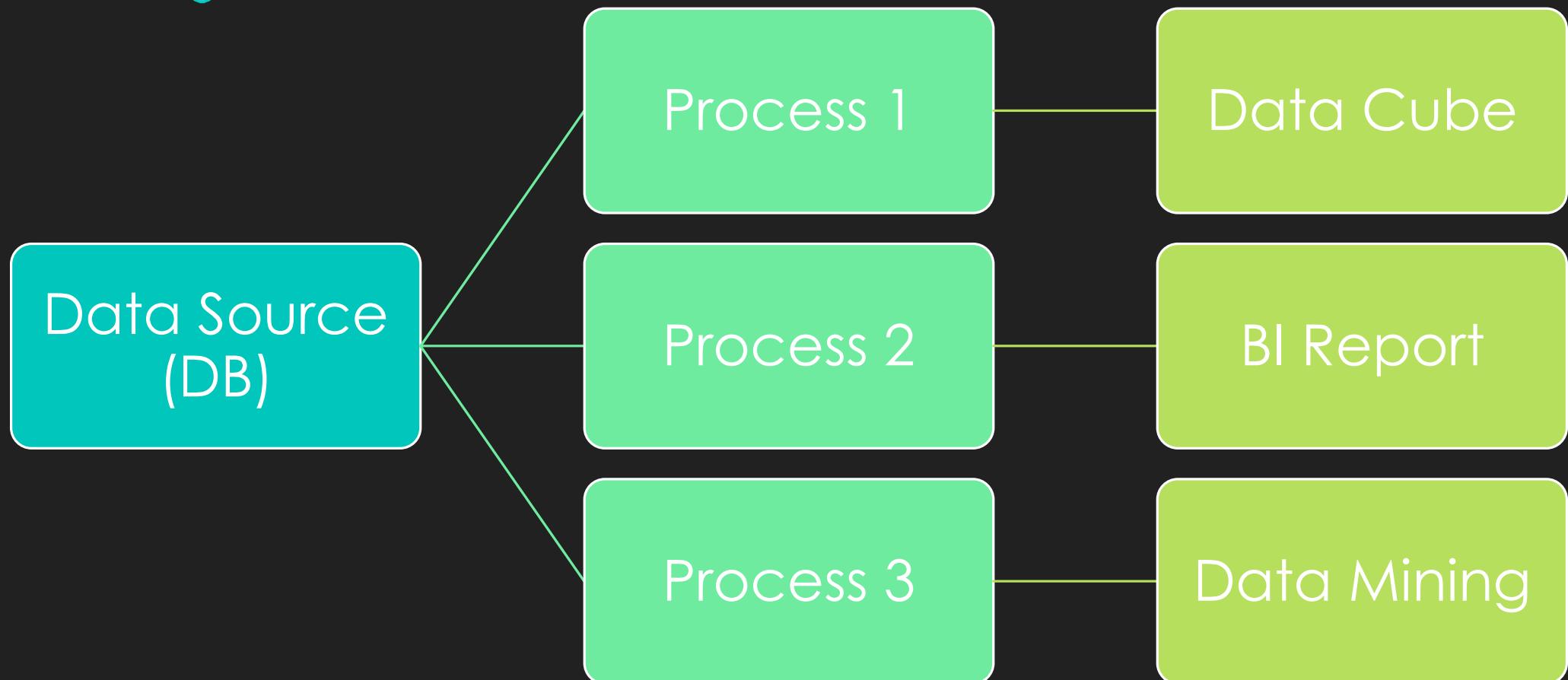
Objective:

- Study the business process at King Power
- Design data warehouse (Implement in SQL Server)
- Develop ETL process and Cube (SQL Server Data Tools)
- Implement BI report (using Tableau)

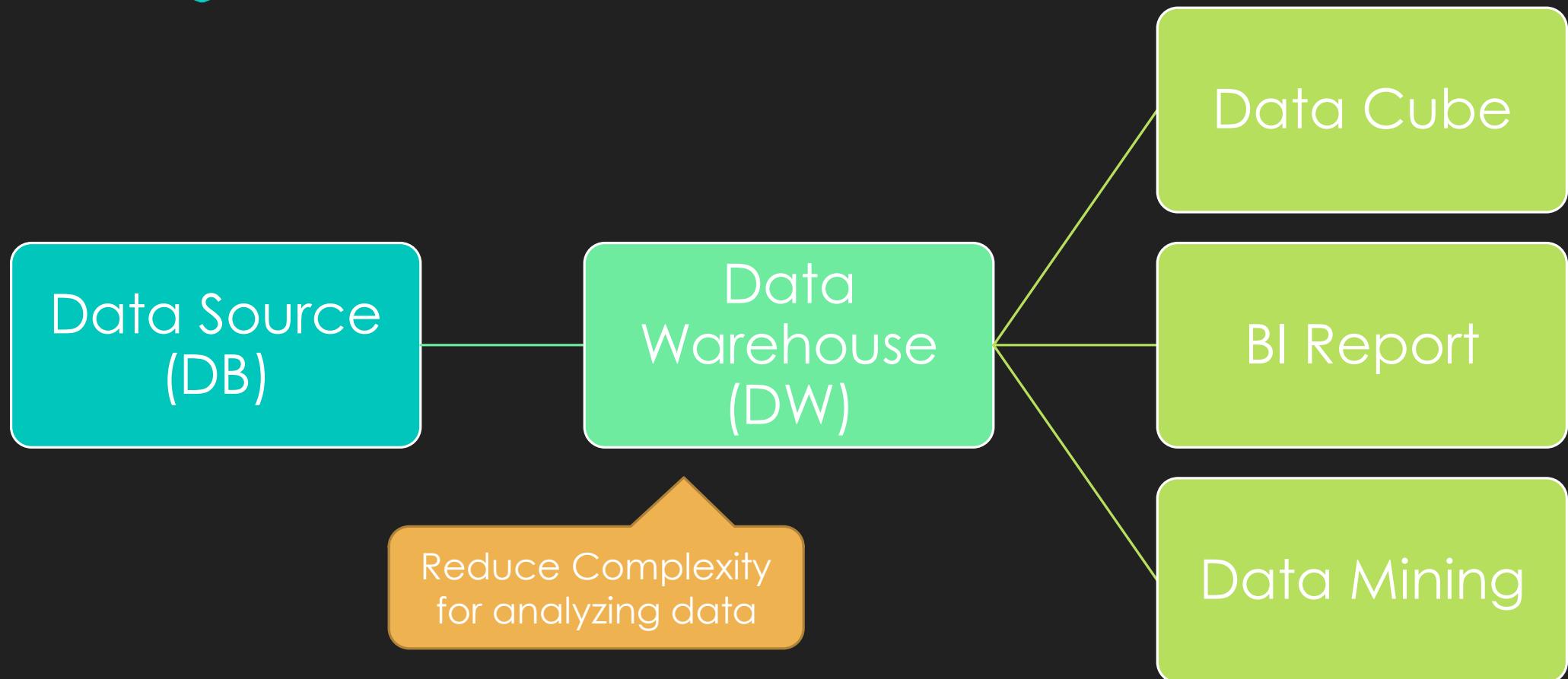


Why Data Warehouse?

System Architecture (before DW):



System Architecture (after DW):



Data Warehouse

Design and ETL Process

Designing Data Warehouse (Sales Order):

- 4 step design
 - Business Process - Sales Analysis & Campaign Management
 - Grain - Each Order
 - Dimension - Customer_Dim, Sales_Dim, Territory_Dim, Date_Dim, Time_Dim
 - Measure - Subtotal, TaxAmount, Freight, TotalDue

Designing Data Warehouse (Sales Order):

SaleOrder_Fact	
CustomerKey	
SalesKey	
TerritoryKey	
OrderDate	
OrderTime	
SalesOrderID	
Subtotal	
TaxAmt	
Freight	
TotalDue	

SaleOrder_Fact_Aggregated	
SalesKey	
TerritoryKey	
MonthKey	
SubTotal	
TaxAmt	
Freight	
TotalDue	

- Special Technique used: Degenerate Dimension, Aggregated Fact Table

Designing Data Warehouse (Sales Detail):

- 4 step design
 - Business Process - Sales Analysis & Campaign Management
 - Grain - Each Item per order
 - Dimension - Customer_Dim, Sales_Dim, Territory_Dim, Product_Dim, SpecialOffer_Dim, Date_Dim, Time_Dim
 - Measure - OrderQuantity, UnitPrice, UnitPriceDiscount, LineTotal, StandardCost, Profit

Designing Data Warehouse (Sales Detail):

SaleOrderDetail_Fact	
CustomerKey	
SalesKey	
TerritoryKey	
ProductKey	
SpecialOfferKey	
OrderDate	
OrderTime	
SalesOrderDetailID	
OrderQty	
UnitPrice	
UnitPriceDiscount	
LineTotal	
StandardCost	
Profit	

SaleOrderDetail_Fact_Aggregated	
TerritoryKey	
ProductKey	
MonthKey	
OrderQty	
UnitPrice	
UnitPriceDiscount	
LineTotal	
StandardCost	
Profit	

- Special Technique used: Degenerate Dimension, Aggregated Fact Table

Designing Data Warehouse (Purchasing):

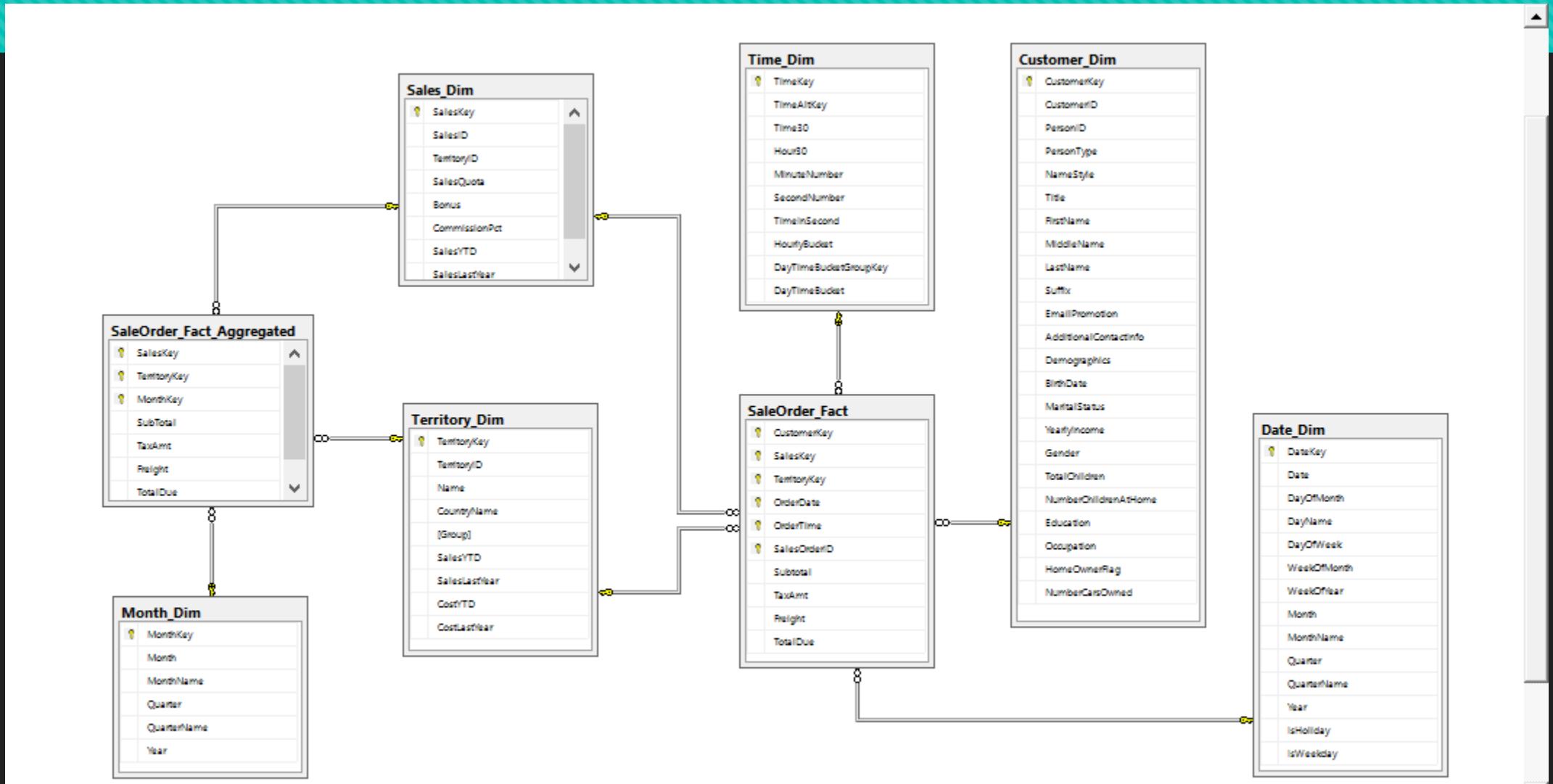
- 4 step design
 - Business Process - Sales Analysis & Campaign Management
 - Grain - Each Item per purchase order
 - Dimension - Employee_Dim, Vendor_Dim, Product_Dim, Date_Dim, Time_Dim
 - Measure - OrderQuantity, UnitPrice, LineTotal, ReceivedQuantity, RejectedQuantity, StockedQuantity

Designing Data Warehouse (Purchasing):

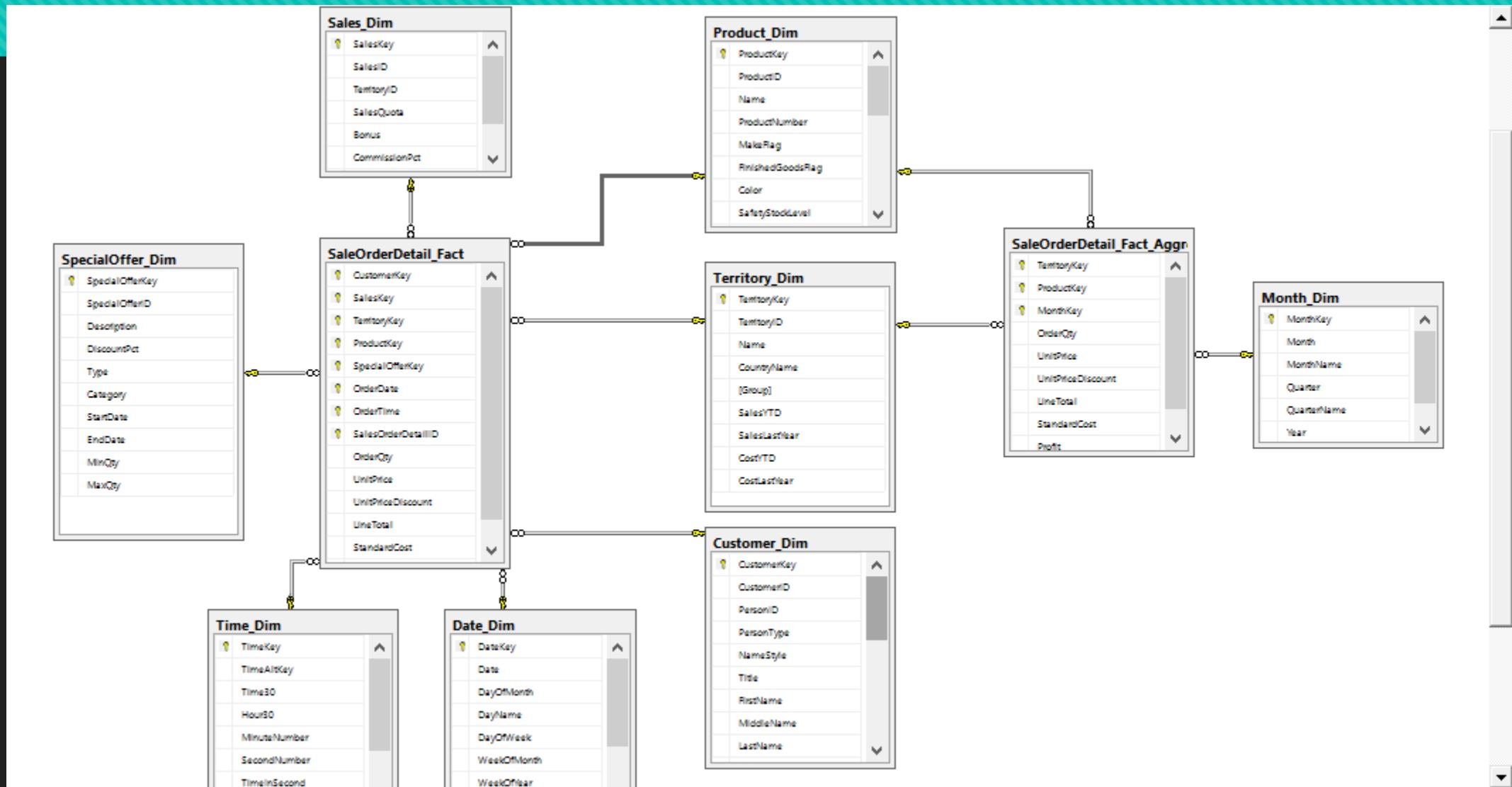
PurchaseOrderDetail_Fact	
	EmployeeKey
	VendorKey
	ProductKey
	OrderDate
	OrderTime
	PurchaseID
	OrderQty
	UnitPrice
	LineTotal
	ReceivedQty
	RejectedQty
	StockedQty

- Special Technique used: Degenerate Dimension

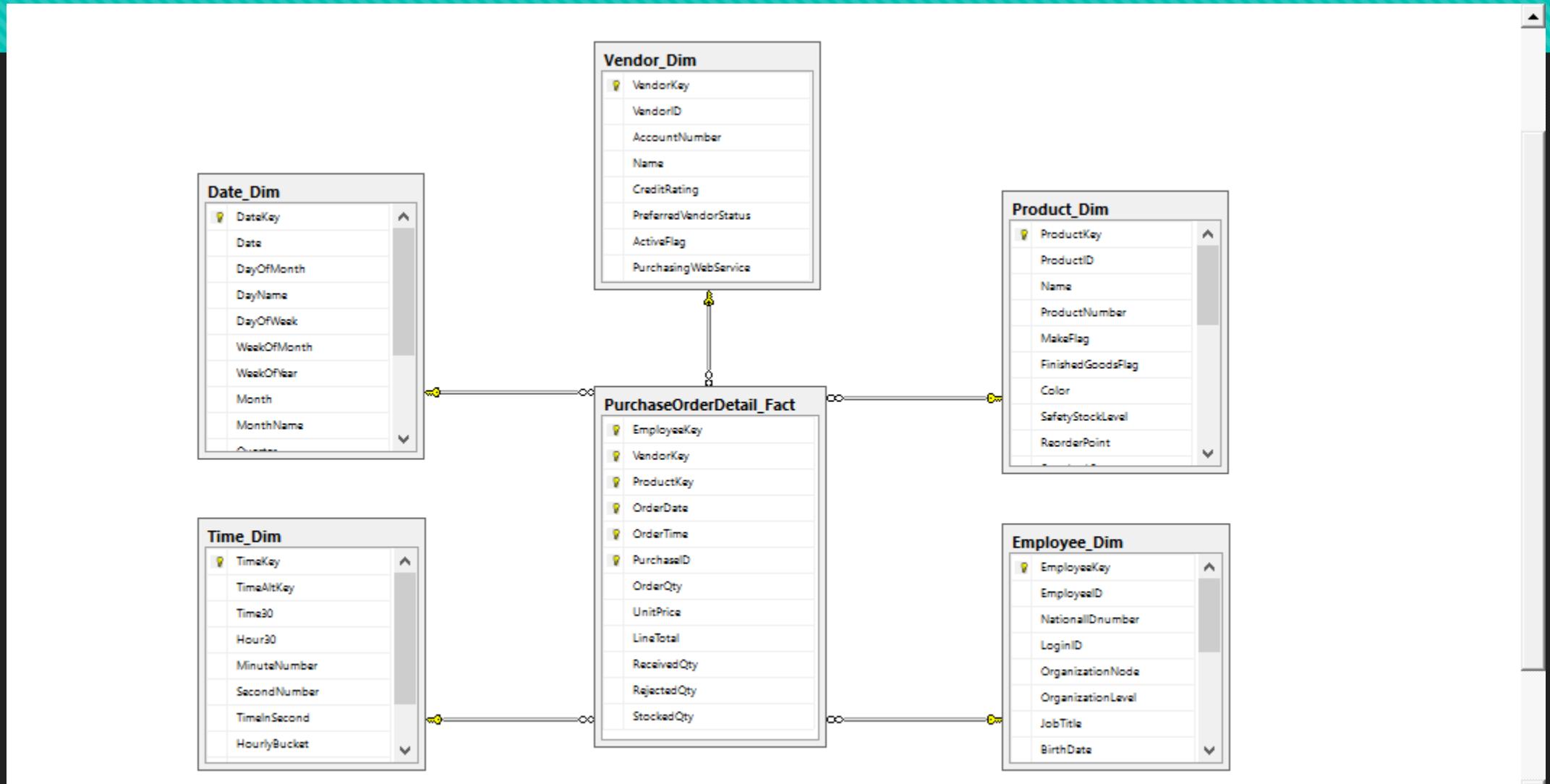
Data Warehouse (Sales Process):



Data Warehouse (Sales Process + Details):



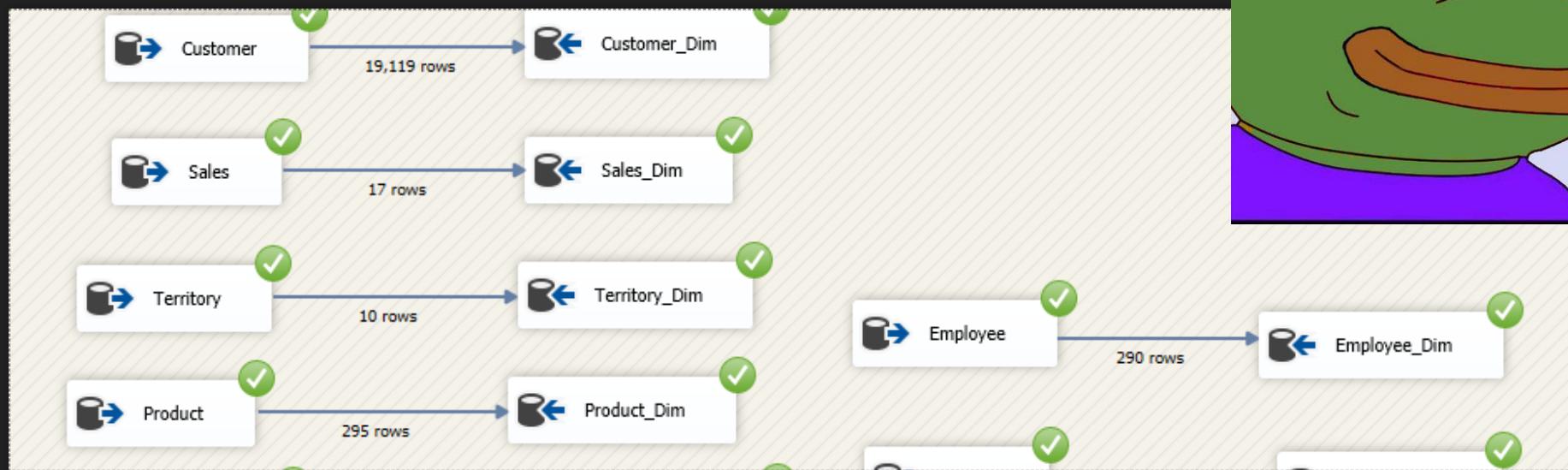
Data Warehouse (Purchasing Process):



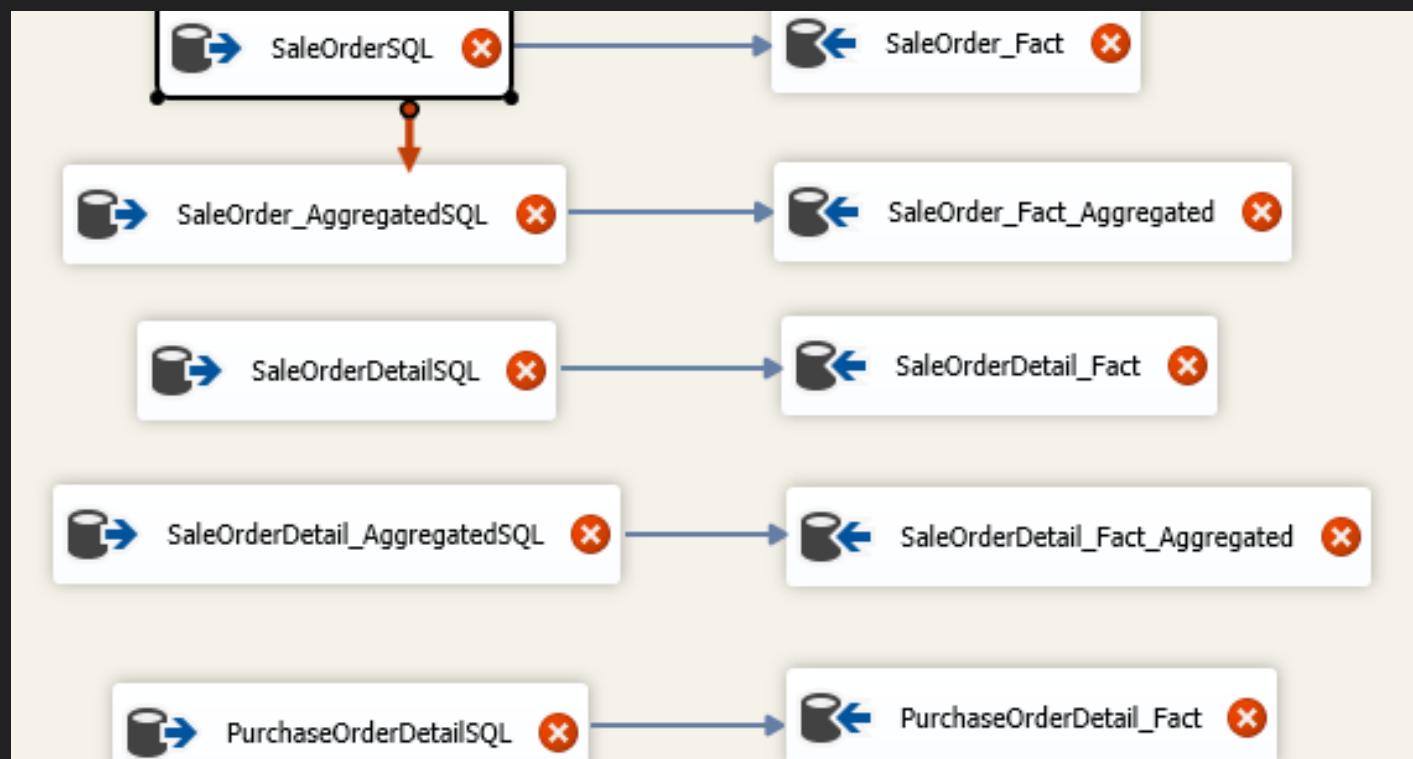
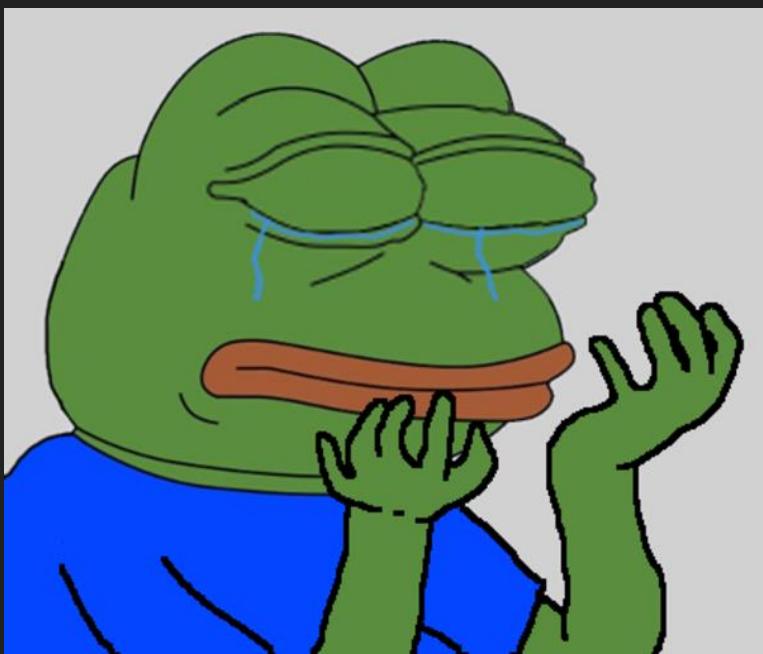
Data Warehouse (Bus Matrix):

Dim \ Fact	Month	Date	Time	Customer	Product	Sales	SP. Offer	Territory	Employee	Vendor
Sales Order		X	X	X		X		X		
Sales Order Detail		X	X	X	X	X	X	X		
Sales Order Aggr.	X					X		X		
Sales Order Detail Aggr.	X				X			X		
Purchasing Detail		X	X		X				X	X

ETL Process:



ETL Process:



DW Technique:

- Date/Time Dimensions were built in advance.
- Date Dimension applied Smart Key.
- Degenerated Dimension for Sales Facts.
- Inserted more Kingpower's Products !?
- Added Flight Dimension from Openflight !?

Date/Time Dimensions :

	DateKey	Date	DayOfMonth	DayName	DayOfWeek	WeekOfMonth	WeekOfYear	Month	MonthName	Quarter	QuarterName	Year	IsHoliday	IsWeekday
1	20110101	2011-01-01	1	Saturday	7	NULL	1	1	January	1	First	2011	NULL	0
2	20110102	2011-01-02	2	Sunday	1	NULL	2	1	January	1	First	2011	NULL	0
3	20110103	2011-01-03	3	Monday	2	NULL	2	1	January	1	First	2011	NULL	1
4	20110104	2011-01-04	4	Tuesday	3	NULL	2	1	January	1	First	2011	NULL	1
5	20110105	2011-01-05	5	Wednesday	4	NULL	2	1	January	1	First	2011	NULL	1
6	20110106	2011-01-06	6	Thursday	5	NULL	2	1	January	1	First	2011	NULL	1
7	20110107	2011-01-07	7	Friday	6	NULL	2	1	January	1	First	2011	NULL	1
8	20110108	2011-01-08	8	Saturday	7	NULL	2	1	January	1	First	2011	NULL	0
9	20110109	2011-01-09	9	Sunday	1	NULL	3	1	January	1	First	2011	NULL	0
10	20110110	2011-01-10	10	Monday	2	NULL	3	1	January	1	First	2011	NULL	1
11	20110111	2011-01-11	11	Tuesday	3	NULL	3	1	January	1	First	2011	NULL	1
12	20110112	2011-01-12	12	Wednesday	4	NULL	3	1	January	1	First	2011	NULL	1

Date/Time Dimensions :

	TimeKey	TimeAltKey	Time30	Hour30	MinuteNumber	SecondNumber	TimeInSecond	HourlyBucket	DayTimeBucketGroupKey	DayTimeBucket
1	0	0	00:00:00	0	0	0	0	00:00-00:59	0	Late Night (00:00 AM To 02:59 AM)
2	1	1	00:00:01	0	0	1	1	00:00-00:59	0	Late Night (00:00 AM To 02:59 AM)
3	2	2	00:00:02	0	0	2	2	00:00-00:59	0	Late Night (00:00 AM To 02:59 AM)
4	3	3	00:00:03	0	0	3	3	00:00-00:59	0	Late Night (00:00 AM To 02:59 AM)
5	4	4	00:00:04	0	0	4	4	00:00-00:59	0	Late Night (00:00 AM To 02:59 AM)
6	5	5	00:00:05	0	0	5	5	00:00-00:59	0	Late Night (00:00 AM To 02:59 AM)
7	6	6	00:00:06	0	0	6	6	00:00-00:59	0	Late Night (00:00 AM To 02:59 AM)
8	7	7	00:00:07	0	0	7	7	00:00-00:59	0	Late Night (00:00 AM To 02:59 AM)
9	8	8	00:00:08	0	0	8	8	00:00-00:59	0	Late Night (00:00 AM To 02:59 AM)
10	9	9	00:00:09	0	0	9	9	00:00-00:59	0	Late Night (00:00 AM To 02:59 AM)
11	10	10	00:00:10	0	0	10	10	00:00-00:59	0	Late Night (00:00 AM To 02:59 AM)
12	11	11	00:00:11	0	0	11	11	00:00-00:59	0	Late Night (00:00 AM To 02:59 AM)

Degenerated Dimension :

	CustomerKey	SalesKey	TerritoryKey	OrderDate	OrderTime	SalesOrderID	Channel	Subtotal	TaxAmt	Freight	TotalDue
1	2	9	6	20120929	29941	1023230	Online	895.00	62.65	26.85	984.50
2	2	9	10	20140429	51025	1027615	Airport	375.00	26.25	11.25	412.50
3	2	12	4	20110804	45038	1019906	Online	4705.00	329.35	141.15	5175.50
4	2	13	10	20140913	50804	1008451	Mall	2250.00	157.50	67.50	2475.00
5	2	17	5	20130227	26287	1002050	Airport	9570.00	669.90	287.10	10527.00
6	3	1	7	20120507	81245	1010477	Online	730.00	51.10	21.90	803.00
7	3	5	3	20110711	23373	1004437	Mall	7800.00	546.00	234.00	8580.00
8	3	7	6	20150911	26488	1025326	Online	10730.00	751.10	321.90	11803.00
9	3	12	5	20151231	28825	1017577	Airport	399.00	27.93	11.97	438.90
10	5	11	8	20110908	84856	1012950	Online	160.00	11.20	4.80	176.00
11	5	15	8	20120322	69252	1002378	Airport	8135.00	569.45	244.05	8948.50
12	5	16	5	20130513	21729	1011302	Mall	35255.00	2467.85	1057.65	38780.50

Inserted more Kingpower's Products :

The screenshot shows the King Power King of Duty Free website. The header includes the King Power logo and a search bar. Below the header, there are navigation links for SHOPPING MALL, SPECIAL OFFERS, and ALL CATEGORY. The main content area is titled 'Beauty' and shows a breadcrumb trail: Home > SHOPPING MALL > Beauty. It displays a grid of three products: 'Mauboussin Rose Pour Elle EDP 100 ml' (4,000 THB), 'Mauboussin Pour Elle EDP 100 ml' (4,000 THB), and 'Aliz Paulin Advance Brightening and Lightening Concentrate Emulsion 30 ml' (2,550 THB). A sidebar on the right lists categories like BEAUTY, LUXURY, and more.

```
<div class="product_info">
<div class="product_name">

    <a aria-hidden="true" tabindex="-1"
        id="WC_CatalogEntryDBThumbnailDisplayJSPF_180677_link_9b"
        href="http://www.kingpoweronline.com/ProductDisplay?urlRequest=Hello%20Kitty%20Sports%20Towel%2030%20inch%20x60%20inch%20-%20Print"
    >Hello Kitty Sports Towel 30 inch x60 inch - Print</a>
</div>
<div class="product_price" id="product_price_180677">700 THB</div>

private static void printProducts() throws IOException, ClassNotFoundException {
    PrintWriter writer = new PrintWriter("Kingpower_Product_List.sql", "UTF-8");
    String header = "INSERT INTO [Kingpower_warehouse].[dbo].[Product_Dim]
    String queryString = "";

    String url = "jdbc:sqlserver://DOCTORKARN\\MSSQLSERVER2014;databaseName=;
    Class.forName("com.microsoft.sqlserver.jdbc.SQLServerDriver");
    Connection conn = DriverManager.getConnection(url);
    System.out.println("SQL Server Connected...");
```

Added Flight Dimension from Openflight :

	FlightKey	AirlineName	SrcAirportName	SrcAirportCity	SrcAirportCountry	DstAirportName	DstAirportCity	DstAirportCountry
131	16301	Thai Airways International	Suvamabhumi Intl	Bangkok	Thailand	Yangon Intl	Yangon	Burma
132	16302	Thai Airways International	Suvamabhumi Intl	Bangkok	Thailand	Brunei Intl	Bandar Seri Begawan	Brunei
133	16303	Thai Airways International	Suvamabhumi Intl	Bangkok	Thailand	Soekarno Hatta Intl	Jakarta	Indonesia
134	16304	Thai Airways International	Suvamabhumi Intl	Bangkok	Thailand	Kuala Lumpur Intl	Kuala Lumpur	Malaysia
135	16305	Thai Airways International	Suvamabhumi Intl	Bangkok	Thailand	Penang Intl	Penang	Malaysia
136	16306	Thai Airways International	Suvamabhumi Intl	Bangkok	Thailand	Changi Intl	Singapore	Singapore
137	16307	Thai Airways International	Suvamabhumi Intl	Bangkok	Thailand	Brisbane Intl	Brisbane	Australia
138	16308	Thai AirAsia	Hat Yai Intl	Hat Yai	Thailand	Chiang Mai Intl	Chiang Mai	Thailand
139	16309	Thai AirAsia	Trang	Trang	Thailand	Don Muang Intl	Bangkok	Thailand
140	16310	Thai AirAsia	Udon Thani	Udon Thani	Thailand	Don Muang Intl	Bangkok	Thailand
141	16311	Thai AirAsia	Udon Thani	Udon Thani	Thailand	Phuket Intl	Phuket	Thailand
142	16331	Thai AirAsia	Chiang Mai Intl	Chiang Mai	Thailand	Hong Kong Intl	Hong Kong	Hong Kong

DW Technique:

- Date/Time Dimensions were built in advance.
- Date Dimension applied Smart Key.
- Degenerated Dimension for Sales Facts.
- Inserted more Kingpower's Products !?
- Added Flight Dimension from Openflight !?

Business Intelligence Report & Cube

Cube:

Sales Order Detail KP.cube [Design]*

Cube Structure Dimension Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Measures

- Sales Order Detail KP
- [Sales Order Detail Fact KP]

Dimensions

- Sales Order Detail KP
 - Sales Order Detail Fact KP
 - Sales Dim
 - Territory Dim
 - Special Offer Dim
 - Product Dim
 - Customer Dim
 - Date Dim
 - Time Dim

Data Source View

```
graph TD; SOF(SalesOrderDetail_Fact_KP) <--> Time_Dim; SOF <--> Date_Dim; SOF <--> Customer_Dim; SOF <--> Sales_Dim; SOF <--> Product_Dim; SOF <--> Territory_Dim; SOF <--> SpecialOffer_Dim;
```

Solution Explorer

- Kingpower_Cube
 - Data Sources
 - Kingpower Warehouse.ds
 - Data Source Views
 - Kingpower Warehouse.dsv
 - Cubes
 - Sales Order KP.cube
 - Sales Order Detail KP.cube
 - Dimensions
 - Customer Dim.dim
 - Date Dim.dim
 - Flight Dim.dim
 - Product Dim.dim
 - Sales Dim.dim

Search Solution Explorer (Ctrl+Shift+F)

Properties

Kingpower Warehouse DataSourceView

SchemaRestriction

Data

Data Source Kingpower Wareho

Cube:

Sales Order Detail KP.cube [Design]*

Cube Structure Dimension Calculations KPIs Actions Partitions Aggregations Perspectives Translations Browser

Edit as Text Import... |

Sales Order Detail KP Metadata

Measure Group: <All>

- + Reorder Point
- + Safety Stock Level
- + Sell End Date
- + Sell Start Date
- + Size
- + Standard Cost
- + Style
- + Weight
- + Hierarchy

Sales Dim

Calculated Members

Dimension	Hierarchy	Operator	Filter Expression	Part
<Select dimension>				

Year	Quarter Name	Month Name	Product Category N...	Line Total
2011	First	February	Aromatherapy	757080
2011	First	February	Beauty	1020594
2011	First	February	Electronics	3450965
2011	First	February	Fashion	1779885
2011	First	February	Mom, Kids & Toys	182696
2011	First	January	Aromatherapy	835775
2011	First	January	Beauty	1085901
2011	First	January	Electronics	4084995
2011	First	January	Fashion	1942775
2011	First	January	Mom, Kids & Toys	225526
2011	First	March	Aromatherapy	791275
2011	First	March	Beauty	1155436

Solution Explorer

Search Solution Explorer (Ctrl+;)

- Kingpower_Cube
 - Data Sources
 - Kingpower Warehouse.ds
 - Data Source Views
 - Kingpower Warehouse.dsv
 - Cubes
 - Sales Order KP.cube
 - Sales Order Detail KP.cube
 - Dimensions
 - Customer Dim.dim
 - Date Dim.dim
 - Flight Dim.dim
 - Product Dim.dim
 - Sales Dim.dim

Solution Explorer Class View

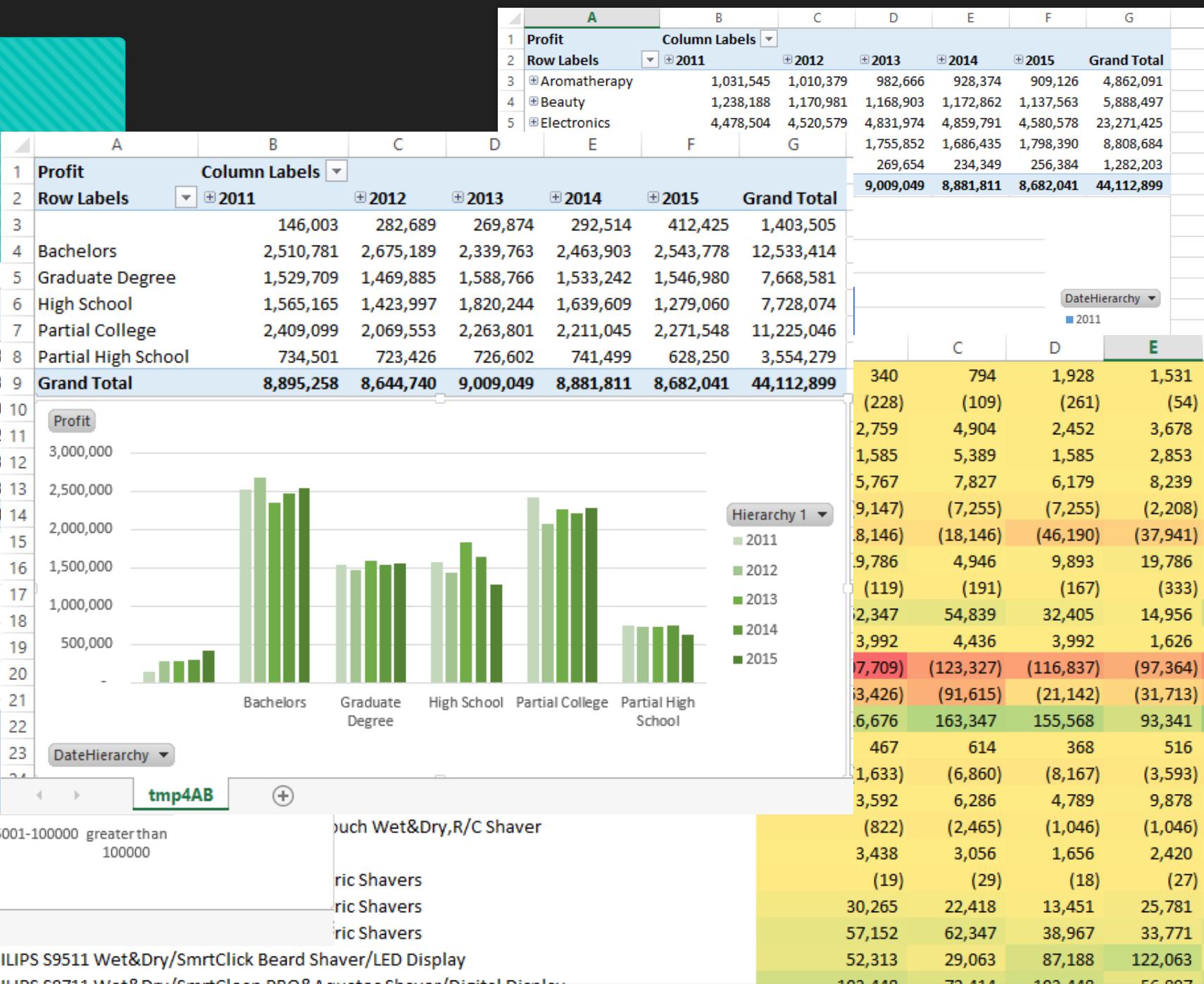
Properties

Sales Order Detail KP Cube

Source	Kingpower Wareho
Visible	True

Cube:

	A	B	C	D
1	Profit	Column Labels		
2	Row Labels	2011	2012	2013
3		146,003	282,689	269,8
4	0-25000	1,409,217	1,260,429	1,484,3
5	25001-50000	2,625,130	2,640,385	2,492,9
6	50001-75000	2,447,403	2,381,766	2,472,2
7	75001-100000	1,370,362	1,268,763	1,464,3
8	greater than 100000	897,142	810,707	825,3
9	Grand Total	8,895,258	8,644,740	9,009,0
10	Profit			
11		15	16	17
12		16	17	18
13		17	18	19
14		18	19	20
15		19	20	21
16		20	21	22
17		21	22	23
18		22	23	
19		23		
20				
21				
22				
23	Hierarchy			



Report (Tableau):

2 Main purposes of the analysis

- Growth in Revenue
- Growth in Customer Membership

Report (Tableau):

Sales
Report

Products
Report

Ch./Time
Report

Customers
Report

SALES REPORT

Year of Date
All

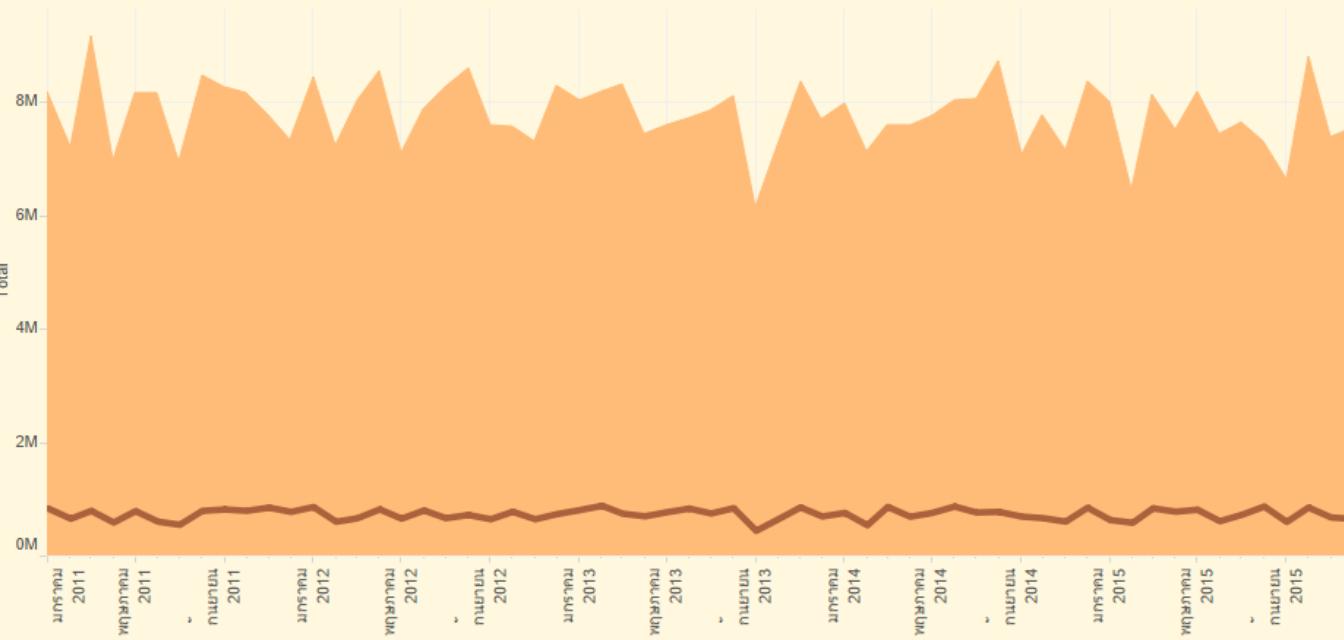
% Difference in LineTotal
-2.350% 591%

Measure Names
Profit Sales

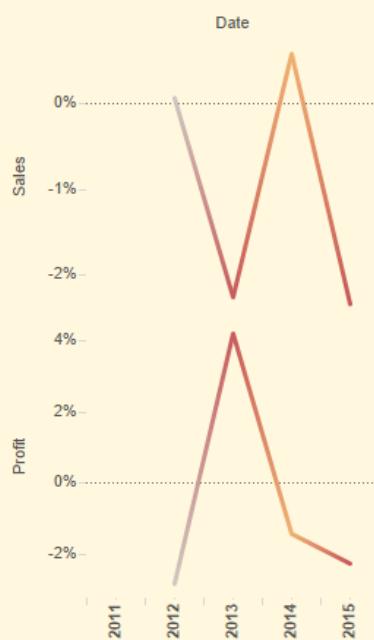
ANUALLY STATUS



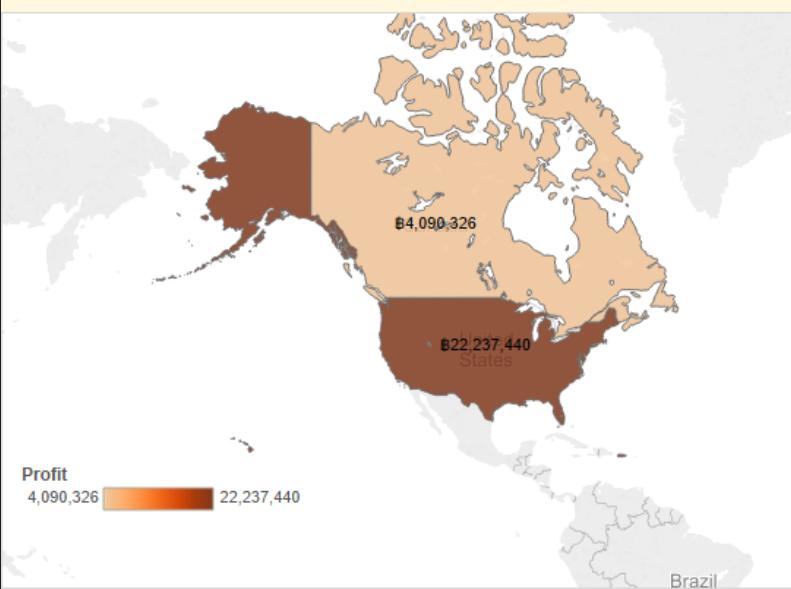
MONTHLY STATUS



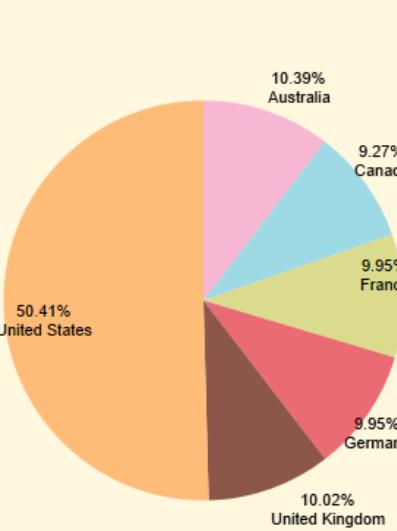
GROWTH



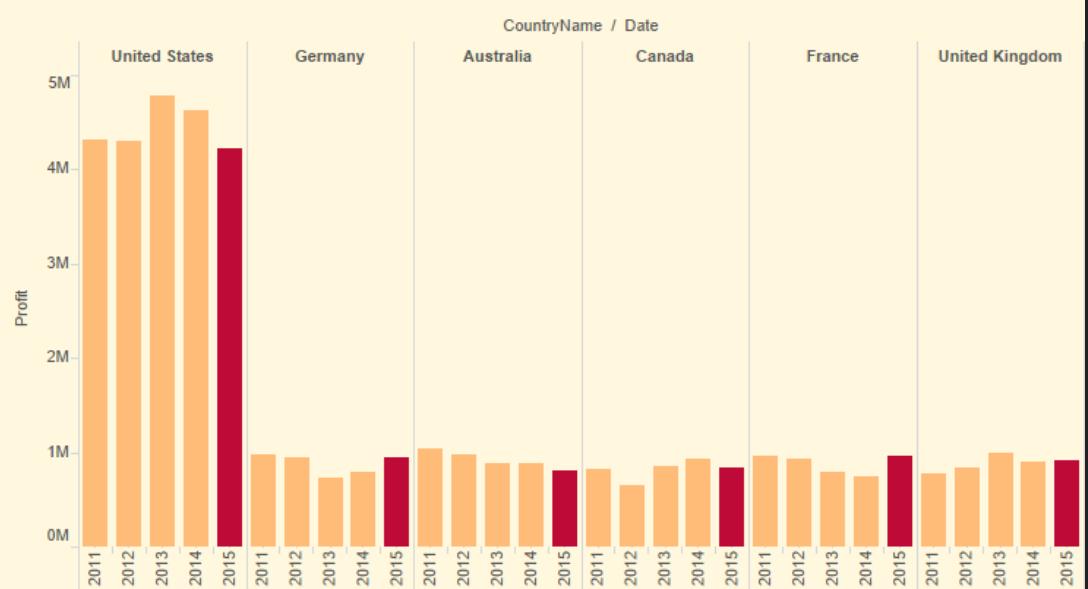
PROFIT BY COUNTRY



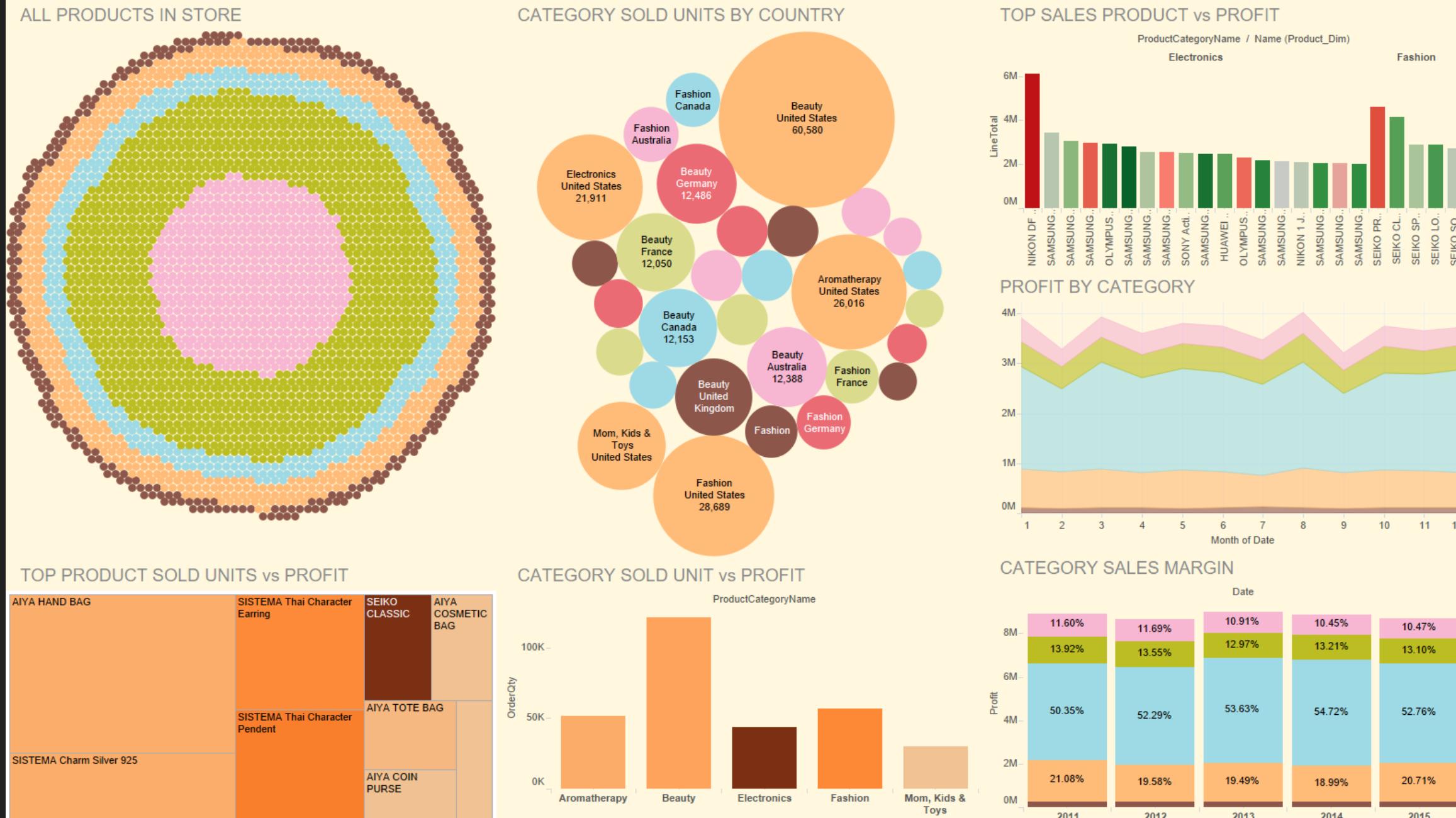
PROFIT MARGIN



2011-2015 PROFIT BY COUNTRY



PRODUCTS REPORT



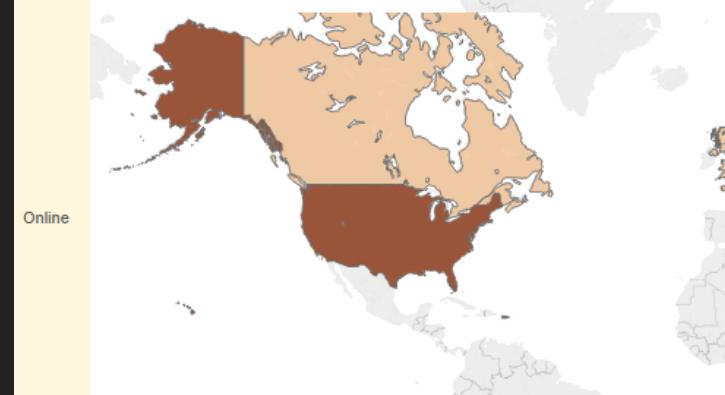
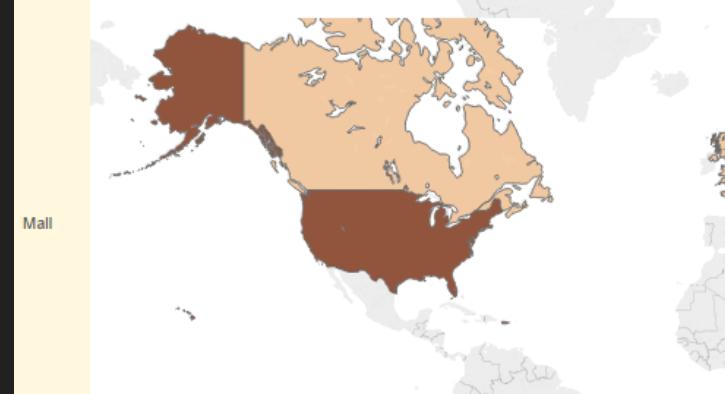
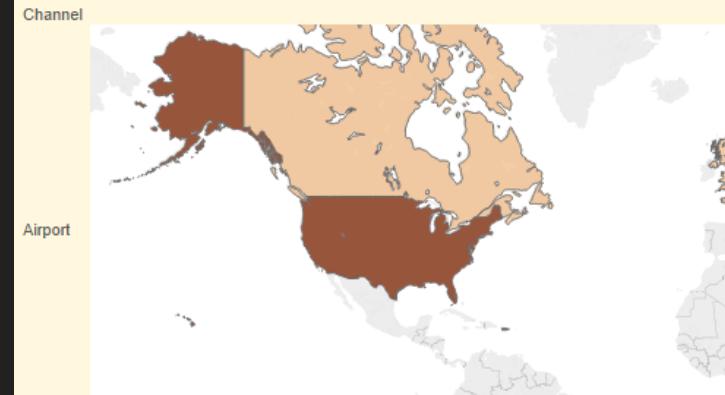
CHANNELS, TIMING REPORT

Year of Da All

Measure Name

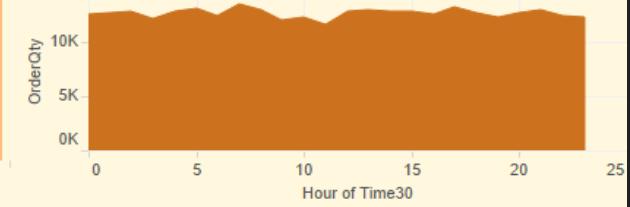
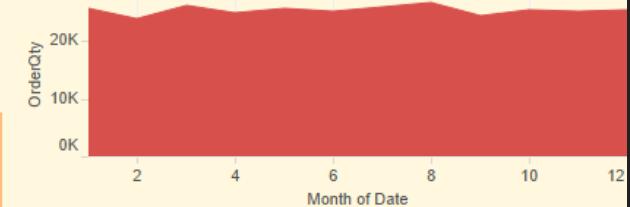
- Profit
- Sales

- Australia
- Canada
- France



A horizontal bar chart comparing passenger volumes for three travel channels (Mall, Airport, Online) across five countries (Australia, Canada, France, Germany, United States). The Y-axis lists the countries, and the X-axis shows passenger counts from 0K to 4K. The bars are color-coded by country: Australia (pink), Canada (blue), France (green), Germany (red), and United States (orange).

Country	Channel	Passenger Volume (approx.)
Australia	Mall	1.0K
	Airport	1.0K
	Online	1.0K
Canada	Mall	1.2K
	Airport	1.2K
	Online	1.2K
France	Mall	1.0K
	Airport	1.0K
	Online	1.0K
Germany	Mall	1.0K
	Airport	1.0K
	Online	1.0K
United Kingdom	Mall	1.0K
	Airport	1.0K
	Online	1.0K
United States	Mall	3.5K
	Airport	3.5K
	Online	3.5K



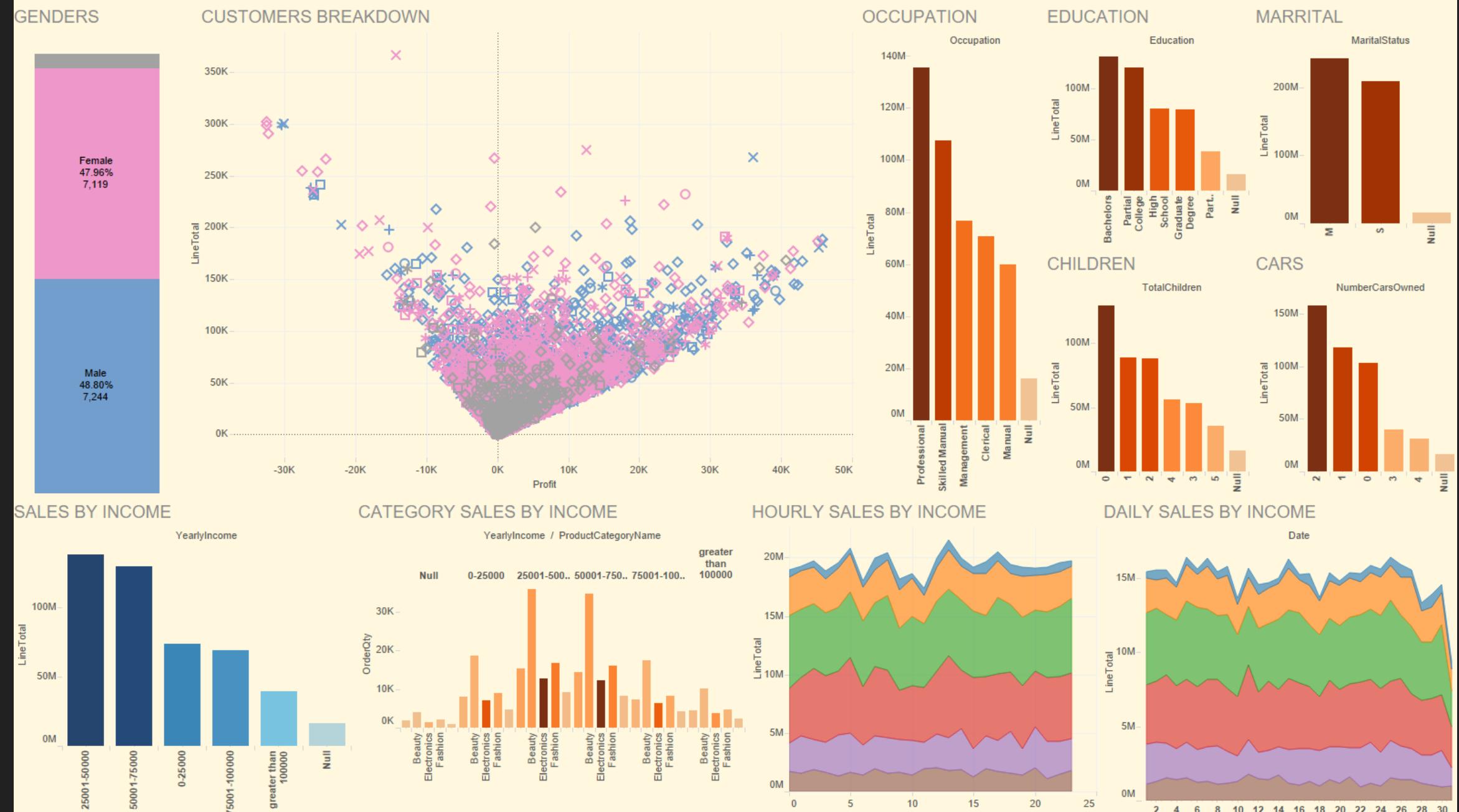
SALES BY MONTH X DAY

Day o.	Date										
	นวัตกรรม										
1	961	870	747	708	784	934	1,011	745	647	712	805
2	857	882	862	801	746	780	715	818	870	763	881
3	828	767	767	852	741	916	754	1,088	775	994	870
4	958	826	647	1,016	691	892	787	812	558	881	806
5	888	964	885	773	933	907	854	1,059	824	785	660
6	858	954	861	793	770	837	833	776	890	714	831
7	926	895	861	856	935	876	621	699	784	937	932
8	876	785	647	710	970	816	1,015	986	852	913	696
9	689	688	1,060	865	909	852	862	930	984	856	756
10	807	811	693	767	905	844	747	754	902	639	885
11	797	999	1,071	794	849	740	898	706	725	914	744
12	767	743	953	1,020	898	776	796	689	835	625	724
13	760	850	834	869	746	639	806	742	712	945	1,096
14	884	749	785	908	722	915	915	831	777	631	843
15	849	956	1,025	1,037	833	790	903	901	775	889	758
16	1,020	811	823	763	822	792	649	741	1,061	803	833
17	814	695	722	885	944	718	936	718	751	769	829
18	707	825	808	927	751	636	692	939	732	858	857
19	876	788	882	859	729	872	983	746	837	737	960
20	784	750	963	821	1,046	719	532	771	837	875	643
21	865	1,001	783	917	918	743	927	923	826	912	839
22	942	782	797	763	820	864	790	949	855	881	760
23	735	1,054	842	766	783	907	766	903	963	824	960
24	862	862	697	840	750	934	948	1,050	1,019	967	833
25	813	777	909	685	806	721	969	1,173	858	698	886
26	743	996	892	849	798	1,009	782	1,037	598	703	931
27	705	812	833	635	909	709	825	973	783	814	964
28	910	819	814	592	638	865	742	710	756	760	829
29	742	105	926	781	676	934	864	809	795	797	768
30	714		861	1,041	830	1,094	999	764	659	714	934
31	694		924		945		987	805		939	

SALES BY WEEKDAY X HOUR

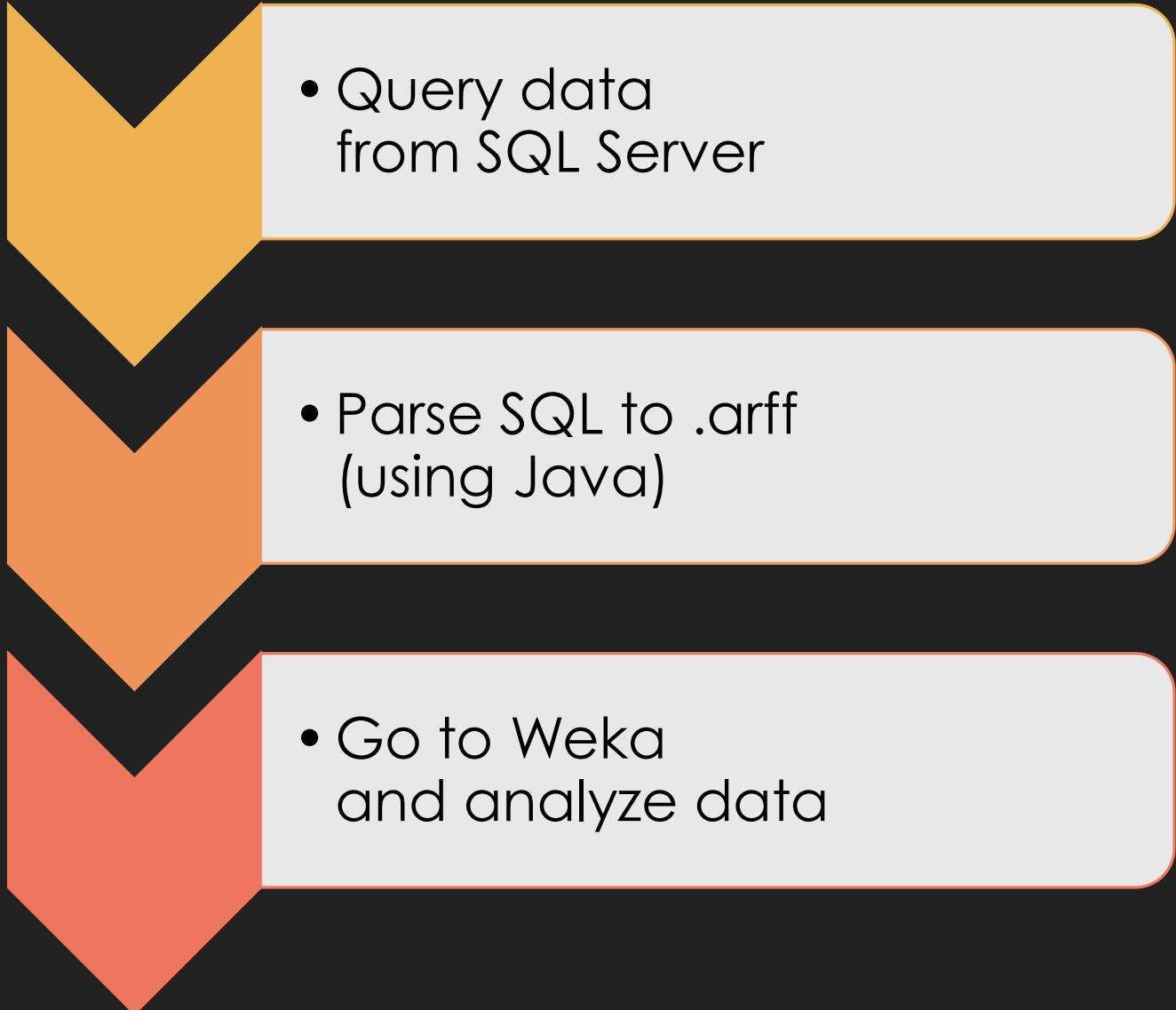
ค่ำ	Hour ..	Date						
		วันเสาร์	วันอาทิตย์	วันจันทร์	วันอังคาร	วันพุธ	วันพฤหัสบดี	วันศุกร์
60	0	1,743	1,897	1,966	1,601	1,826	1,843	1,727
41	1	1,833	1,888	2,070	1,509	1,569	1,985	1,771
97	2	1,792	1,762	2,047	1,891	2,009	1,830	1,500
761	3	1,751	1,803	1,456	1,799	1,786	1,743	1,830
55	4	1,913	2,007	1,646	1,985	1,874	1,708	1,712
45	5	1,970	1,896	1,996	1,918	1,750	1,540	2,019
001	6	1,583	2,010	1,983	1,671	1,543	1,976	1,614
50	7	1,984	1,696	1,979	1,886	2,201	1,910	1,844
79	8	2,053	1,702	1,789	2,143	1,738	1,824	1,742
89	9	1,957	1,532	1,887	1,784	1,585	1,700	1,508
98	10	1,761	1,625	1,806	1,966	1,664	1,568	1,879
515	11	1,616	1,945	1,638	1,478	1,679	1,573	1,672
351	12	1,821	1,777	1,958	1,794	1,679	1,891	1,968
99	13	1,872	1,956	1,905	1,709	1,952	1,675	1,917
561	14	1,816	1,763	1,777	1,891	1,737	1,903	1,927
90	15	1,998	1,722	1,779	1,846	1,646	1,759	2,051
65	16	1,716	1,355	1,888	1,782	1,885	1,766	2,196
05	17	1,687	1,879	1,905	2,072	2,108	1,603	1,965
708	18	1,697	1,822	1,747	1,934	2,012	1,865	1,660
78	19	1,793	1,763	1,628	1,860	1,986	1,662	1,600
69	20	1,599	1,667	1,964	1,822	1,852	1,961	1,828
337	21	1,871	1,759	1,901	1,938	1,978	1,848	1,694
54	22	1,703	1,937	1,723	1,835	1,772	1,776	1,610
52	23	1,873	1,561	1,612	1,764	1,686	1,907	1,893

CUSTOMERS REPORT



**Advance Topic:
Data Mining**

How to data mining?

- 
- Query data from SQL Server
 - Parse SQL to .arff (using Java)
 - Go to Weka and analyze data

How to data mining?

9589	S055797,	587	
9590	S055798,	606;	477;
9591	S055799,	573;	217
9592	S055800,	376;	214
9593	S055801,	376;	529;
9594	S055802,	600	
9595	S055803,	573;	214
9596	S055804,	564;	225
9597	S055805,	606;	479;
9598	S055806,	386	
9599	S055807,	382;	479;
9600	S055808,	386	
9601	S055809,	390;	225;
9602	S055810,	605;	538;
9603	S055811,	561;	217;
9604	S055812,	567;	479;
9605	S055813,	353	
9606	S055814,	577;	217;
9607	S055815,	477;	479
9608	S055816,	535;	528
9609	S055817,	529;	539;
9610	S055818,	477	
9611	S055819,	477;	478;
			214;

Basket Analysis (Association):

```
Classify Cluster Associate Select attributes Visualize

pertius -K 10 -F 0.0 -N 1.0 -L 4 -G 0 -c 0 -I 0 -P 0

Associator output
==== Run information ====
Scheme:      weka.associations.Apriori -N 10 -T 0 -C 0.9 -D 0.05 -U 1.0 -M 0.01 -S -1.0 -c
Relation:    supermarket
Instances:   27660
Attributes:  158
[list of attributes omitted]
==== Associator model (full training set) ====

Apriori
=====
Minimum support: 0.01 (277 instances)
Minimum metric <confidence>: 0.9
Number of cycles performed: 20

Generated sets of large itemsets:

Size of set of large itemsets L(1): 52
Size of set of large itemsets L(2): 31
Size of set of large itemsets L(3): 1

Best rules found:
1. 477=t 485=t 327 ==> 478=t 327    conf: (1)
```

Basket Analysis (Association):

Water Bottle
& Cage ?

	ProductAlternateKey	ProductSubcategoryKey	WeightUnitMeasureCode	SizeUnitM...	EnglishProductName	SpanishProductName	^
474	SH-W890-S	22	NULL	NULL	Women's Mountain Shorts, S		
475	SH-W890-M	22	NULL	NULL	Women's Mountain Shorts, M		
476	SH-W890-L	22	NULL	NULL	Women's Mountain Shorts, L		
477	WB-H098	28	NULL	NULL	Water Bottle - 30 oz.		
478	BC-M005	28	NULL	NULL	Mountain Bottle Cage	Portabotellas de mon...	
479	BC-R205	28	NULL	NULL	Road Bottle Cage	Portabotellas de carr...	
480	PK-7098	37	NULL	NULL	Patch Kit/8 Patches		
481	SO-R809-M	23	NULL	NULL	Racing Socks, M	Calcetines para carr...	
482	SO-R809-L	23	NULL	NULL	Racing Socks, L	Calcetines para carr...	
483	RA-H123	26	NULL	NULL	Hitch Rack - 4-Bike		

Basket Analysis (Association):

Campaign

amazon Try Prime

All water bottle and cage

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