



DR. REDDY'S LABORATORIES

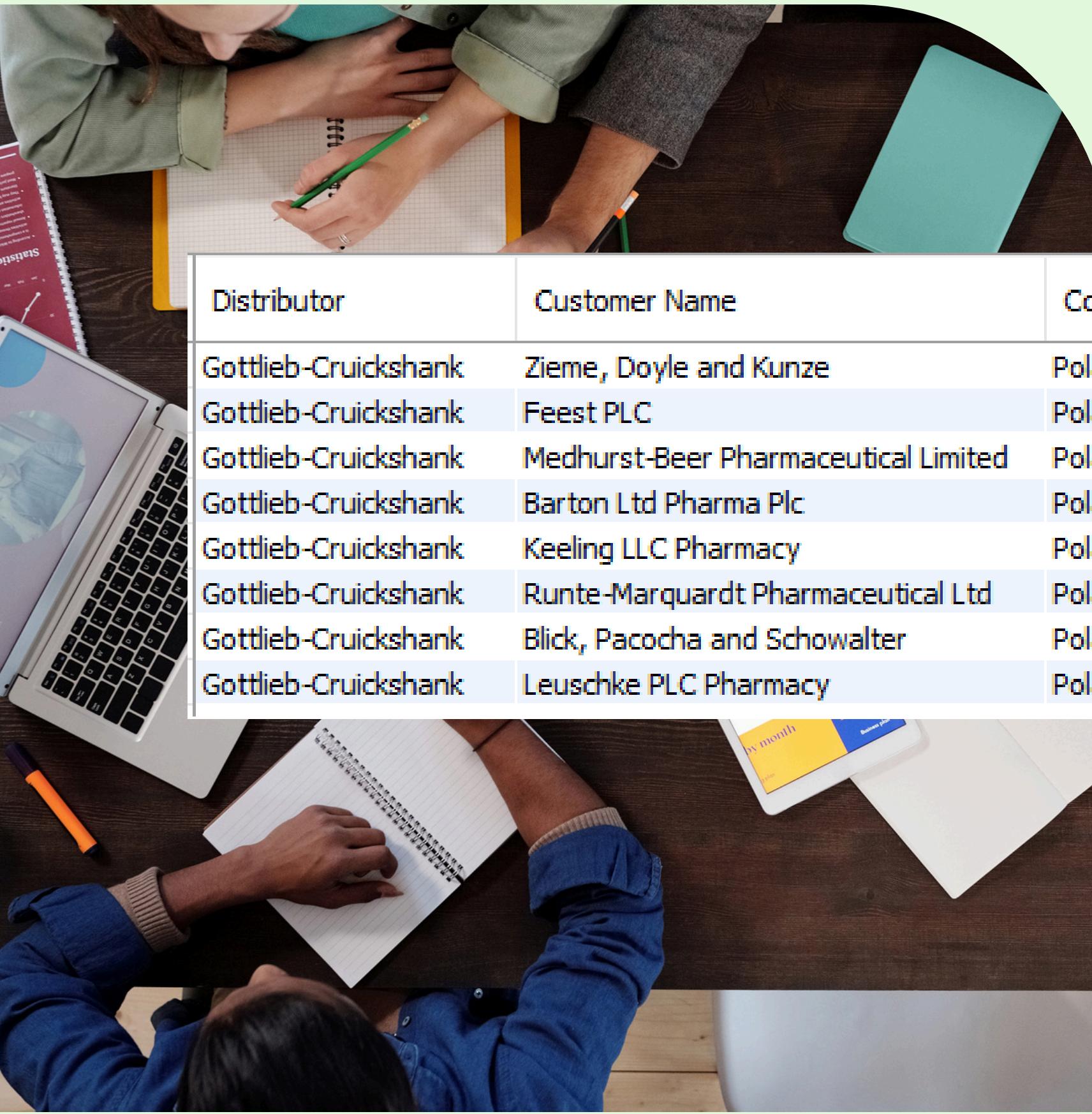
PHARMA DATA ASSESSMENT
(Using SQL)

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OBJECTIVE

The dataset explores the Dr. Reddy Laboratories Pharma dataset and aims to drive relevant insights for the company . The data analyst has used SQL for extracting, manipulating and interpreting data to aid decision making.

All Records in Dataset



Distributor	Customer Name	Country	Latitude	Longitude	Channel	Sub-channel	Product Name
Gottlieb-Cruickshank	Zieme, Doyle and Kunze	Poland	51.2333	22.5667	Hospital	Private	Topipizole
Gottlieb-Cruickshank	Feest PLC	Poland	53.4167	18.4333	Pharmacy	Retail	Choriotrisin
Gottlieb-Cruickshank	Medhurst-Beer Pharmaceutical Limited	Poland	50.0833	18.5	Pharmacy	Institution	Acantaine
Gottlieb-Cruickshank	Barton Ltd Pharma Plc	Poland	50.3333	19.0833	Hospital	Private	Liolette Refiruvax
Gottlieb-Cruickshank	Keeling LLC Pharmacy	Poland	53.78	20.4942	Pharmacy	Retail	Oxymotroban Fexoformin
Gottlieb-Cruickshank	Runte-Marquardt Pharmaceutical Ltd	Poland	54.0333	22.5	Hospital	Private	Pazofenac
Gottlieb-Cruickshank	Blick, Pacocha and Schowalter	Poland	52.7958	18.2611	Pharmacy	Retail	Symbitrim
Gottlieb-Cruickshank	Leuschke PLC Pharmacy	Poland	52.8817	20.6106	Pharmacy	Retail	Morphizolid Tianalin

18 Columns

Number of Countries in the dataset

SQL Query

```
SELECT COUNT(DISTINCT Country) AS Total_countries  
FROM pharma_data.`dr. reddy`;
```

Output

	Total_countries
▶	2



Names of Customers on the Retail channel

SQL Query

```
SELECT distinct Customer_Name  
FROM pharma_data.`dr. reddy`  
WHERE Sub_channel = "Retail";
```

Output

	Customer_Name
▶	Feest PLC
	Keeling LLC Pharmacy
	Blick, Pacocha and Schowalter
	Leuschke PLC Pharmacy
	McClure, Zemlak and Dibbert Pharma Plc
	Lindgren-Simonis Pharm
	Will and Sons Pharma Plc
	Jakubowski Inc Pharmaceutical Limited
	Nader-Gaylord Pharmaceutical Ltd
	Emard-O'Connell Pharmacy



Total Quantity sold for the Antibiotics Product class

SQL Query

```
SELECT Product_Class, SUM(Quantity) as Total_Quantity_sold  
FROM pharma_data.`dr. reddy`  
WHERE Product_Class = "Antibiotics"  
GROUP BY Product_Class;
```

Output

	Product_Class	Total_Quantity_sold
▶	Antibiotics	4154322

Distinct months present in the dataset

SQL Query

```
SELECT DISTINCT Month  
FROM pharma_data.^dr. reddy^;
```

Output

Month
January
February
March
April
May
June
July
August
September

Total sales for each year

SQL Query

```
SELECT Year, SUM(Sales)AS Total_Sales  
FROM pharma_data.`dr. reddy`  
GROUP BY Year  
ORDER BY Year ;
```

Output

	Year	Total_Sales
▶	2017	2701480741
	2018	3506897354
	2019	2930937133
	2020	2659672415

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Customer with the highest sales value

SQL Query

```
SELECT Customer_Name , Sales  
FROM pharma_data.`dr. reddy`  
ORDER BY Sales DESC LIMIT 1 ;
```

Output

	Customer_Name	Sales
▶	Mraz-Kutch Pharma Plc	74205600



Names of all employees who are Sales Representatives & managed by James Goodwill

SQL Query

```
SELECT DISTINCT Name_of_Sales_Rep  
FROM pharma_data.^dr. reddy^  
WHERE Manager = "James Goodwill" ;
```

Output

	Name_of_Sales_Rep
▶	Thompson Crawford
	Erica Jones
	Alan Ray

Average price of products in each sub-channel

SQL Query

```
SELECT Sub_channel, AVG(Price) AS Average_Product_Price  
FROM pharma_data.`dr. reddy`  
GROUP BY Sub_channel ;
```

Output

	Sub_channel	Average_Product_Price
▶	Private	410.7184
	Retail	412.8070
	Institution	411.9544
	Government	413.1494

Total sales for each product class for each month,
order the results by year, month & product class

SQL Query

```
SELECT Product_Class , Year, Month, SUM(Sales)AS Total_Sales  
FROM pharma_data.`dr. reddy`  
GROUP BY Product_Class, Year, Month  
ORDER BY Year, Month, Product_Class ;
```

Output

	Product_Class	Year	Month	Total_Sales
▶	Analgesics	2017	April	32223716
	Antibiotics	2017	April	40029226
	Antimalarial	2017	April	17789675
	Antipiretics	2017	April	22868812
	Antiseptics	2017	April	42712211



Top 3 sales reps with the highest sales in 2019

SQL Query

```
SELECT Name_of_Sales_Rep, SUM(Sales) AS Total_Sales  
FROM pharma_data.`dr. reddy`  
WHERE Year = 2019  
GROUP BY Name_of_Sales_Rep  
ORDER BY Total_Sales DESC LIMIT 3 ;
```

Output

	Name_of_Sales_Rep	Total_Sales
▶	Jimmy Grey	310551051
	Sheila Stones	266924378
	Daniel Gates	245363929



Monthly total sales for each sub-channel & Average monthly sales for each sub-channel over the years

SQL Query

```
SELECT Sub_channel , Month, Year, sum(Sales) as Total_Sales ,  
round(avg(Sales),2) as Average_Sales  
FROM pharma_data.`dr. reddy`  
group by Sub_channel, Month , Year;
```

Output

	Sub_channel	Month	Year	Total_Sales	Average_Sales
▶	Private	January	2018	75149489	38050.37
	Retail	January	2018	55946390	29869.94
	Institution	January	2018	52542055	29451.82
	Government	January	2018	70292318	39870.86
	Private	February	2018	74352372	35389.04

Total sales, average price & total quantity sold for each product class

SQL Query

```
SELECT Product_Class, sum(Sales) as Total_Sales ,  
avg(Price) as Average_Price, sum(Quantity) as Total_quantity  
FROM pharma_data.`dr. reddy`  
GROUP BY Product_Class;
```

Output

	Product_Class	Total_Sales	Average_Price	Total_quantity
▶	Mood Stabilizers	2058909623	400.4934	5169781
	Antibiotics	1750277237	419.6711	4154322
	Analgesics	2371515114	432.5711	5553145
	Antiseptics	2237524744	412.3967	5499914
	Antipiretics	1883305591	469.0477	4052545
	Antimalarial	1497455334	337.6672	4249075

Top 5 customers with the highest sales for each year

SQL Query

```
WITH RankedCustomers AS (
    SELECT Customer_Name, Year, SUM(Sales) AS Total_Sales,
           RANK() OVER (PARTITION BY Year ORDER BY SUM(Sales) DESC) AS r
    FROM pharma_data.`dr. reddy`
    GROUP BY Customer_Name, Year )
SELECT Customer_Name, Year, Total_Sales
FROM RankedCustomers
WHERE r <= 5;
```

Output

	Customer_Name	Year	Total_Sales
▶	Wiegand, Jast and Yost Pharmaceutical Ltd	2017	20947974
	Raynor-Graham	2017	20691892
	Fadel-West Pharmaceutical Ltd	2017	19381932
	Kuphal, Herzog and Purdy	2017	16707639
	Leannon-West Pharmaceutical Limited	2017	16639689

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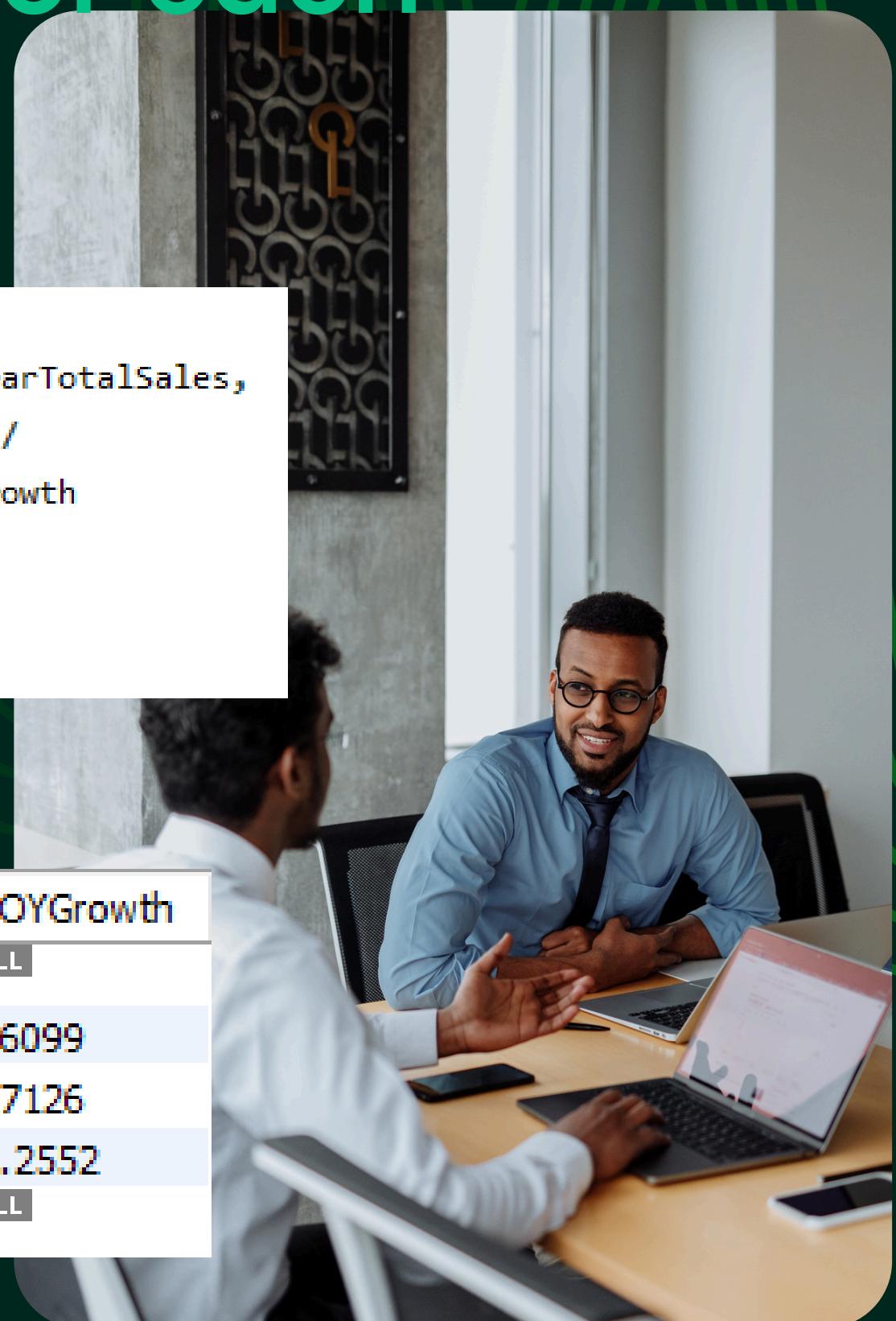
Year-over-year growth in sales for each country

SQL Query

```
SELECT Country , Year, sum(Sales) as Total_sales,  
lag(sum(Sales)) over (partition by country order by Year) as PreviousYearTotalSales,  
((sum(Sales)-lag(sum(Sales)) over (partition by country order by Year))/  
lag(sum(Sales)) over (partition by country order by Year))*100 as YOYGrowth  
FROM pharma_data.`dr. reddy`  
group by Country, Year  
order by Country, Year;
```

Output

	Country	Year	Total_sales	PreviousYearTotalSales	YOYGrowth
▶	Germany	2017	2701480741	NULL	NULL
	Germany	2018	2826017552	2701480741	4.6099
	Germany	2019	2930937133	2826017552	3.7126
	Germany	2020	2659672415	2930937133	-9.2552
	Poland	2018	680879802	NULL	NULL



Months with the lowest sales for each year

SQL Query

```
WITH RANKEDMONTHS AS (
    SELECT Month, Year, SUM(Sales) AS Total_sales,
    RANK() OVER (PARTITION BY Year ORDER BY SUM(Sales)) AS R
    FROM pharma_data.`dr. reddy`
    GROUP BY Month, Year )
SELECT Month, Year, Total_sales
FROM RANKEDMONTHS
WHERE R = 1 ;
```

Output

	Month	Year	Total_sales
▶	January	2017	151872184
	December	2018	214882167
	January	2019	97664076
	April	2020	135409908

Total sales for each sub-channel in each country

SQL Query

```
SELECT Country, Sub_channel, SUM(Sales) AS Total_sales  
FROM pharma_data.`dr. reddy`  
GROUP BY Country,Sub_channel  
ORDER BY Country, Sub_channel ;
```

	Country	Sub_channel	Total_sales
▶	Germany	Government	2920913381
	Germany	Institution	2719605148
	Germany	Private	2315301982
	Germany	Retail	3162287330
	Poland	Government	137326867



THANK YOU