

Project Documentation - KPI Cockpit for D2C E-commerce

Executive Summary

This project delivers a real-time executive dashboard for a Direct-to-Consumer (D2C) e-commerce business. The goal is to centralize key performance indicators (KPIs) across sales, customers, marketing, and logistics - enabling fast decision-making, deviation alerts, and actionable cohort insights.

Project Objectives

- Integrate fragmented data into a unified executive view
- Visualize KPIs by channel, category, and customer segment
- Detect critical deviations and trigger automated alerts
- Suggest quick actions based on RFM segmentation
- Automate data refresh and report distribution

Data Sources

- Primary dataset: Brazilian E-commerce Public Dataset (Olist)
- Real tables: Orders, Customers, Products, Logistics, Reviews
- Simulated tables: Campaigns, Enriched catalog with margin % by category

Data Modeling

- Star schema with fact tables (sales, campaigns) and dimensions (customers, products, calendar, channel)
- Supporting tables: logistics, reviews
- Tool used: Power BI

KPIs Calculated

Sales: Revenue, Margin, AOV, Repeat Rate
Customers: RFM segmentation, Cohorts, Churn
Marketing: CPA, ROAS, Conversion Rate
Logistics: Avg. Delivery Time, Return Rate
Sentiment: Avg. Review Score

Dashboard Structure

Page 1: Executive Panel (Global KPIs, Alerts, Suggested actions)
Page 2: Channel View (Revenue, CPA, ROAS, Conversion)
Page 3: Category View (Margin, Top/low performers)
Page 4: Customer Cohorts (RFM, Repeat, Retention)
Page 5: Logistics (Delivery performance, Delays, Carriers)

Automation

- Daily refresh via Power BI Service
- Power Automate flow to export daily PDF report
- Alerts for low margin, high CPA, declining repeat rate

Services Applied

- Interactive Dashboards
- Sales & Customer Analysis
- Web Scraping & Data Collection
- Data Cleaning & Structuring
- Data Analytics Consulting
- Sentiment Analysis
- Report Automation
- Market Analysis & Benchmarking

Expected Outcomes

- Real-time business visibility
- Lower CPA, improved ROAS
- Identification of at-risk cohorts
- Proactive actions
- Time savings through automation

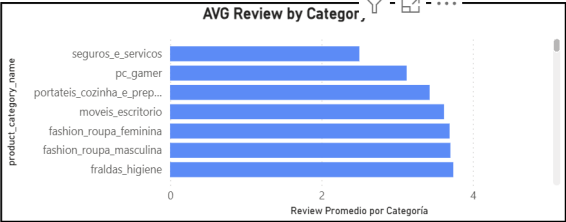
Deliverables

- Interactive Power BI dashboard
- Automated Power Automate flow
- KPI dictionary and metric definitions
- Technical documentation
- Daily PDF report sent to management

Product name

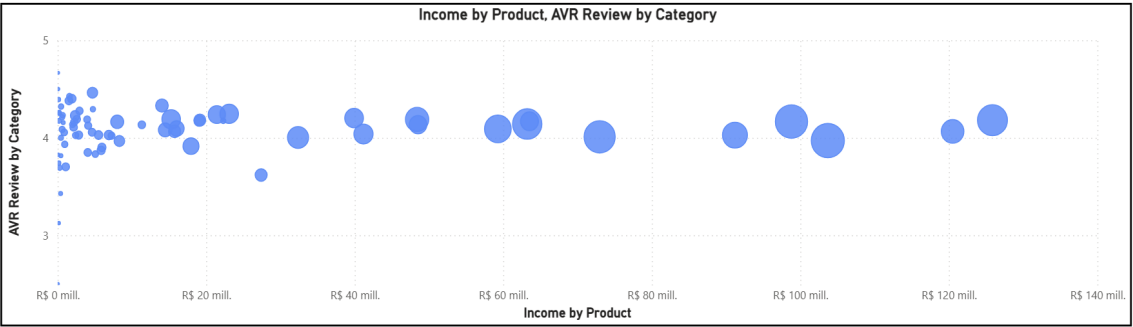
Todas

Reviews by product and category



Income by Product & review score

product_category_name	Ingresos por Producto	Review Promedio por Categoría
agro_industria_e_comercio	R\$ 17.953.528	3,91
alimentos	R\$ 7.253.047	4,02
alimentos_bebidas	R\$ 2.939.341	4,28
artigos_de_festas	R\$ 1.517.948	4,38
articulos_de_festas	R\$ 2.420.264	4,03
articulos_de_festas	R\$ 181.401	4,17
articulos_de_festas	R\$ 448.518	4,00
Total	R\$ 1.359.164.370	4,11



Total Income

R\$ 1.600.887.212

Income By Product

R\$ 1.359.164.370

Average Order Value

16.098,86

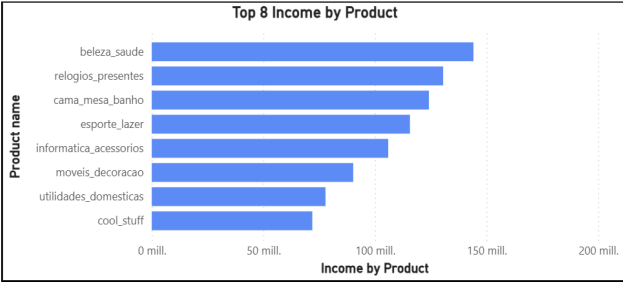
Average Review

4,09

Out of Service Level Agreement

7,87 %

KPI Overview – Global E-commerce Performance



Year

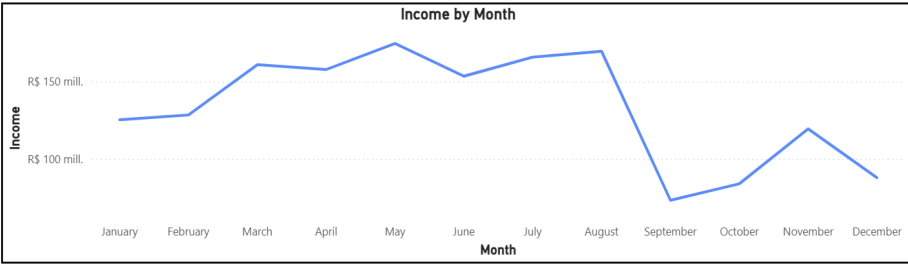
201620172018

Month

Todas

Product Name

Todas



Sales and Customer Analysis

Customer
Lifetime Value
16.099,03

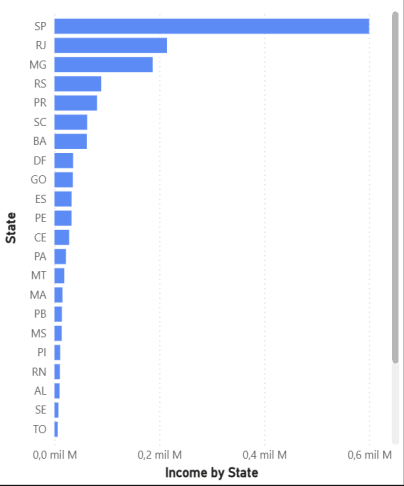
New Client
99441

Recurrent
client
0

Income & ARV review

product_id	product_category_name	Ingresos por Categoría (con flete)	Review Promedio por Producto
25c38557cf793876c5abdd5931f922db	bebes	4031195	2,68
6cdd53843498f92890544667809f1595	beleza_saude	5909399	4,32
bb50f2e236e5eea0100680137654686c	beleza_saude	6760610	4,21
99a4788cb24856965c36a24e339b6058	cama_mesa_banho	5107160	3,91
f1c7f353075ce59d8a6f3cf58f419c9c	cama_mesa_banho	3331676	4,37
5f504b3a1c75b73d6151be81eb05bdc9	cool_stuff	4172581	4,56
368c6c730842d78016ad823897a372db	ferramentas_jardim	2798440	4,12
389d119b48cf3043d311335e499d9c6b	ferramentas_jardim	2868268	4,18
422879e10f46682990de24d770e7f83d	ferramentas_jardim	3420126	4,14
3dd2a17168ec895c781a9191c1e95ad7	informatica_acessorios	4821222	4,30
d1c427060a0f73f6b889a5c7c61f2ac4	informatica_acessorios	6097603	4,23
aca2eb7d00ea1a7b8ebd4e68314663af	moveis_decoracao	4482076	4,10
588531f8ec37e7d5ff5b7b22ea048f8	pcs	2908021	4,33
d6160fb7873f184099d9bc95e30376af	pcs	5032618	4,57
53b36df67ebb7c41585e8d54d6772e08	relorios_presentes	3995793	4,23
7a10781637204d8d10485c71a6108a2e	relorios_presentes	3279074	4,07
a62e25e09e05e6faf31d90c6ec1aa3d1	relorios_presentes	2799830	4,15
d285360f29ac7fd97640bf0baef03de0	relorios_presentes	3360757	3,73
e0d64dcfaa3b6db5c54ca298ae101d05	relorios_presentes	3534409	3,78
f819f0c84a64f02d3a5606ca95edd272	relorios_presentes	3044969	4,09
Total		81755827	

Incombe by State



AVR time of delivery

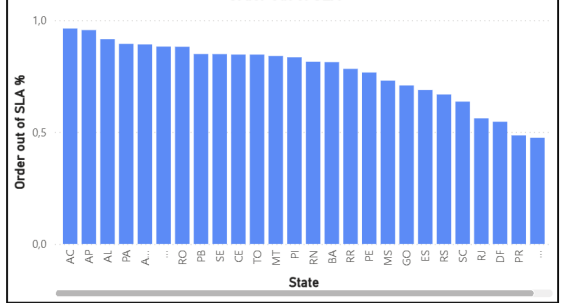


Logistics & Operations

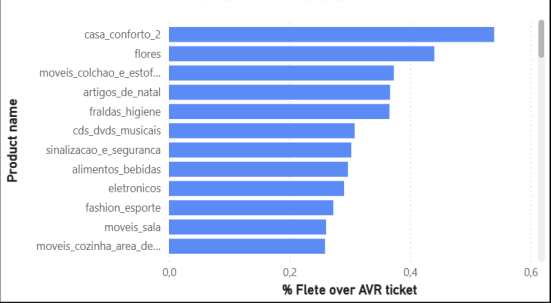
Total Flete
R\$225.190.954

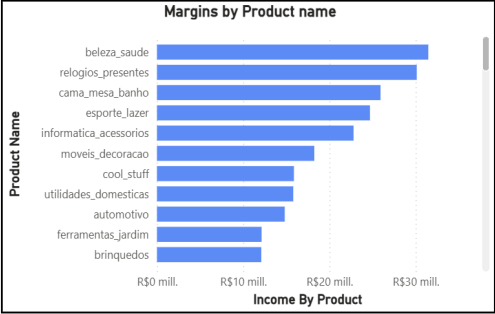
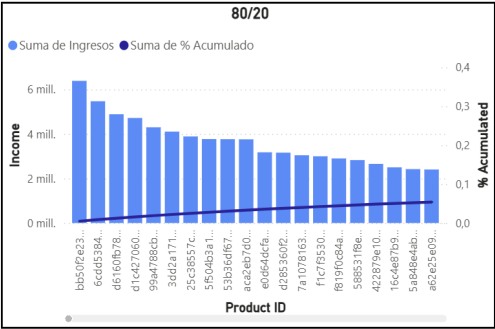
Flete / Income
14,07 %

Order out of SLA



% Flete over AVR Ticket





Margins by products and 80/20

Product name			
Todas			
Margins and reviews			
product_category_name	Ingresos por Producto	Margen Estimado 1	Review Promedio por Categoría
cds_dvds_musicais	R\$ 73.000	R\$18.250	4,67
fashion_roupa_infanto_juvenil	R\$ 56.985	R\$14.246	4,50
livros_interesse_geral	R\$ 4.685.688	R\$1.171.422	4,46
construcao_ferramentas_ferram entas	R\$ 1.590.395	R\$397.599	4,43
livros_tecnicos	R\$ 1.909.606	R\$477.402	4,40
flores	R\$ 111.004	R\$27.751	4,39
alimentos_bebidas	R\$ 1.517.948	R\$379.487	4,38
malas_acessorios	R\$ 14.042.998	R\$3.510.750	4,33
livros_importados	R\$ 463.985	R\$115.996	4,32
portateis_casa_forno_e_cafe	R\$ 4.744.571	R\$1.186.143	4,29
alimentos	R\$ 2.939.341	R\$734.835	4,28
fashion_esporte	R\$ 211.951	R\$52.988	4,26
la_cuisine	R\$ 205.499	R\$51.375	4,25
papelaria	R\$ 23.094.323	R\$5.773.581	4,25
pet_shop	R\$ 21.431.541	R\$5.357.885	4,24
cine_foto	R\$ 693.346	R\$173.337	4,23
fashion_calcados	R\$ 2.356.277	R\$589.069	4,23
musica	R\$ 603.435	R\$150.859	4,21
perfumaria	R\$ 39.912.487	R\$9.978.122	4,20
construcao_ferramentas_jardim	R\$ 2.571.589	R\$642.897	4,19
fashion_bolsas_e_acessorios	R\$ 15.282.354	R\$3.820.589	4,19
Total	R\$ 1.359.164.370	R\$339.791.093	4,11