

# full\_note\_comercializadora\_20251001

October 1, 2025

## 1 Business Intelligence Dashboard

Automated insights for data-driven decisions

```
[51]: input_file = 'data/comercializadora/comercializadora_transactions.csv' # Input_
      ↪ CSV file

config = {
    'project_name': 'comercializadora',      # Project name
    'out_dir' : 'outputs',                   # Output directory

    # Data mapping
    'date_col': 'fecha',
    'product_col': 'producto',
    'description_col': 'glosa',
    'revenue_col': 'total',
    'quantity_col': 'cantidad',
    'transaction_col': 'trans_id',
    'cost_col': 'costo',

    # Analysis settings
    'analysis_date': '2025-03-01',          # Or 'current' for today
    'top_products_threshold': 0.2,
    'dead_stock_days': 30,
    'currency_format': 'CLP',
    'language': 'EN',
}

save = 0 # True or 1 to save outputs, False or 0 to just print
```

```
[52]: from modules.business_analytics import BusinessAnalyzer
      from modules.dashboard import ExecutiveDashboard
      from modules.advanced_analytics import AdvancedAnalytics
      from modules.reports import *
      from modules.utils import *

      # Initialize with AdvancedAnalytics (includes all functionality)
      # AdvancedAnalytics -> BusinessAnalyzer -> Business (inheritance chain)
```

```
analyzer = BusinessAnalyzer(data_source=input_file, config=config)

# Create dashboard and advanced analytics instances
dashboard = ExecutiveDashboard(analyzer)
advanced = AdvancedAnalytics(analyzer)
```

```
Data date range: 2024-12-01 to 2025-02-28
Recommended analysis_date: 2025-03-01 or later
Business initialized with data from:
data/comercializadora/comercializadora_transactions.csv (49372, 15)
Output directory: outputs\comercializadora\20251001_2041
All base metrics calculated
BusinessAnalyzer initialized for project: comercializadora
Dashboard output directory: outputs\comercializadora\20251001_2041
AdvancedAnalytics initialized for project: comercializadora
```

## 1.1 Quick Summary

```
[53]: summary = dashboard.create_quick_summary()
print_info(summary, analyzer.out_dir, "DASH_quick_summary.txt", save=save)
```

```
=====
DASHBOARD SUMMARY
=====

KEY METRICS:
• Total Revenue: $ 1.194.033.014
• Growth Rate: -16.6%
• Transactions: 49,372

CRITICAL ACTIONS:
• Revenue declining by 16.6%
  → Urgent review of sales strategy needed

KEY INSIGHTS:
• Top 20% of products = 65.5% of revenue
• Inventory Health: 9% healthy
• Dead Stock: 0 products

=====
```

## 1.2 KPIs

```
[54]: kpis = analyzer.get_kpis()
print_info(analyzer.print_kpis(), analyzer.out_dir, "BA_kpi.txt", save=save)
```

```
Periods considered for growth:
• Previous: 2024-12-01 -> 2025-01-14
```

• Current: 2025-01-14 -> 2025-02-28  
Growth: -16.6%

Revenue: \$ 1.194.033.014  
Transactions: 49,372

### 1.3 Alerts & Actions

```
[55]: alerts = analyzer.get_alerts()
print_info(analyzer.print_alerts(), analyzer.out_dir, "BA_alerts.txt",
↪save=save)
```

CRITICAL ACTIONS REQUIRED:

Revenue declining by 16.6%  
Impact: Negative business trend  
Action: Urgent review of sales strategy needed

SUCCESS INDICATORS:

Revenue well distributed across products  
Next Step: Maintain current portfolio balance

### 1.4 Revenue Concentration Analysis

```
[56]: pareto = analyzer.get_pareto_insights()
print_info(analyzer.print_pareto(), analyzer.out_dir, "BA_pareto.txt",
↪save=save)
```

TOP INSIGHT: Your top 8 products (20% of catalog) generate 65.5% of revenue!

Concentration Risk Level: Medium

Top 5 Revenue Generators:

1. SALMON FRESCO ATLANTICO KG: \$ 218.674.175
2. CONGRIO FRESCO KG: \$ 115.804.246
3. CAMARONES FRESCOS KG: \$ 101.053.247
4. OSTIONES FRESCOS KG: \$ 86.567.934
5. ARROZ SUSHI KOSHIHIKARI 5KG: \$ 69.358.298

80/20 Rule: Top 20% = 65.5% of revenue

### 1.5 Inventory Health Check

```
[57]: inventory = analyzer.get_inventory_health()
print_info(analyzer.print_inventory_health(), analyzer.out_dir, "BA_inventory.
↪txt", save=save)
```

Inventory Health Score: 9%

Dead Stock Alert: 0 products

## 1.6 Operational Efficiency

```
[58]: peak_times = analyzer.get_peak_times()
print_info(analyzer.print_peak_times(), analyzer.out_dir, "BA_peak_times.txt",
           ↪ save=save)
```

Peak Performance Windows:

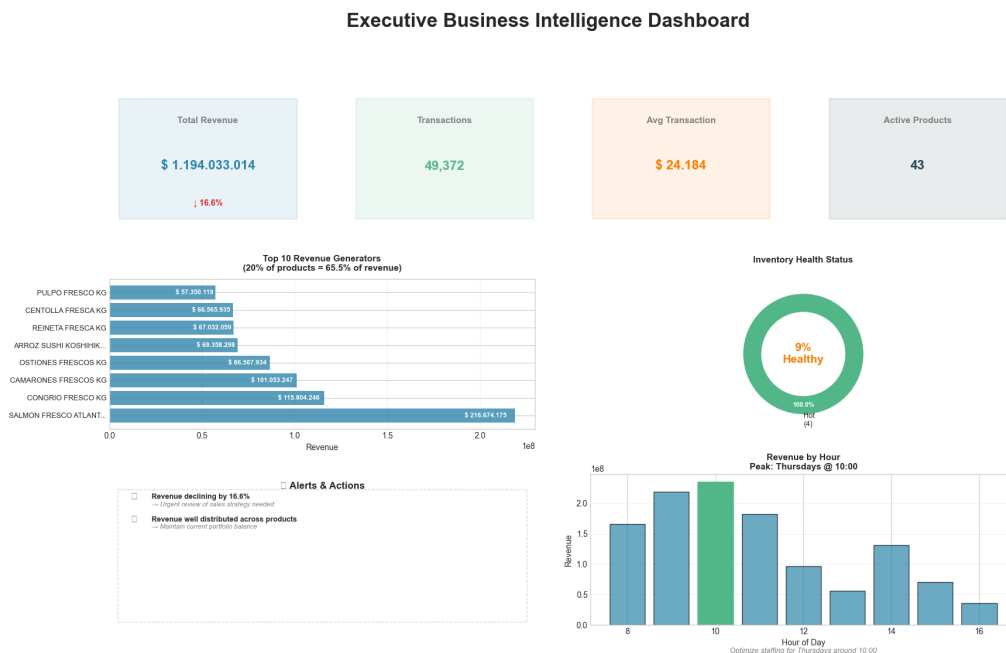
- Best Day: Thursdays
- Peak Hour: 10:00
- Slowest Day: Saturdays

Optimize staffing for Thursdays around 10:00

## 2 Visuals

### 2.1 Executive Dashboard

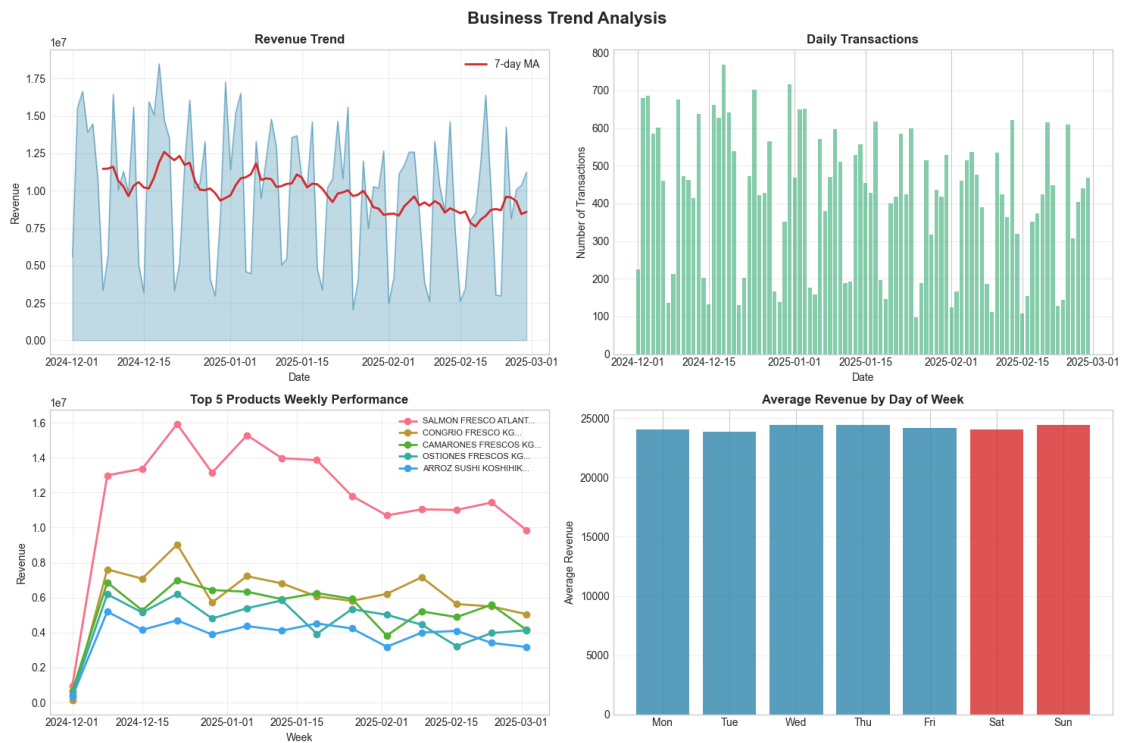
```
[59]: # Create and display the executive dashboard
fig = dashboard.create_full_dashboard(figsize=(20, 12))
print_fig(fig, dashboard.analyzer.out_dir, "DASH_executive.png", save=save)
```



Generated: 2025-10-01 20:41

## 2.2 Trend analysis

```
[60]: trend_fig = advanced.create_trend_analysis(figsize=(15, 10))
print_fig(trend_fig, dashboard.analyzer.out_dir, "DASH_trend.png", save=save)
```



## 2.3 Product velocity

```
[61]: velocity_fig = product_velocity_matrix(analyzer)
print_fig(velocity_fig, dashboard.analyzer.out_dir, "DASH_velocity.png",
↪save=save)
```



## 3.2 Cross-sell opportunities

```
[63]: cross_sell = advanced.calculate_cross_sell_opportunities(limit=3)
print_info(advanced.print_cross_sell_opportunities(), analyzer.out_dir,
↪ "ADV_cross_selling.txt", save=save)
```

No significant cross-sell opportunities found.

## 3.3 Anomalies

```
[64]: anomalies = advanced.calculate_anomalies(limit=3)
print_info(advanced.print_anomalies(), analyzer.out_dir, "ADV_anomalies.txt",
↪ save=save)
```

No anomalies detected.

## 3.4 Top Recommendations

```
[65]: recommendations = advanced.calculate_recommendations()
print_info(advanced.print_recommendations(), analyzer.out_dir,
↪ "ADV_recommendations.txt", save=save)
```

TOP RECOMMENDATIONS:

1. [HIGH] Address Declining Revenue Trend  
Revenue showing downward trend in recent period  
Action: Review pricing strategy and launch customer retention campaign  
Impact: Stabilize revenue decline | Timeline: Immediate

# 4 Reports

## 4.1 Weekly Comparison Report

```
[66]: weekly_comparison_report = weekly_comparison_report(analyzer)
print_info(weekly_comparison_report, analyzer.out_dir, "REPORTS_weekly_compare.
↪ txt", save=save)
```

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WEEKLY COMPARISON REPORT

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Revenue:

Last Week:	\$ 68.873.544
Previous Week:	\$ 86.282.928
Change:	↓ 20.18%

Transactions:

Last Week:	2,890
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Previous Week: 3,570  
Change: ↓ 19.05%

Products Sold:

Last Week: 43  
Previous Week: 43  
Change: → 0.00%

Avg Transaction:

Last Week: \$ 23.832  
Previous Week: \$ 24.169  
Change: ↓ 1.40%