

A wide-angle, slightly blurred photograph of a large supermarket interior. The foreground is dominated by a large display of yellow fruits, likely lemons or grapefruits, arranged in wooden crates. In the background, multiple aisles are visible, filled with shelves of various products. A sign for 'Bebidas' (Beverages) is visible on the left, and a sign for 'Laticínios' (Dairy) is visible in the distance. Several people are seen walking through the aisles, some carrying shopping bags. The lighting is bright, typical of a supermarket.

The GPA Demand Forecast Journey

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Content:

- **GPA Brands, Numbers, History and Strategy**
- **The GPA Demand Forecast Journey**
- **Recommendations, Lessons, Expectations**

GPA Brands, Numbers, History and Strategy

Numbers

Part of French Casino Group

#1 traditional retailer

#2 wholesale self-service

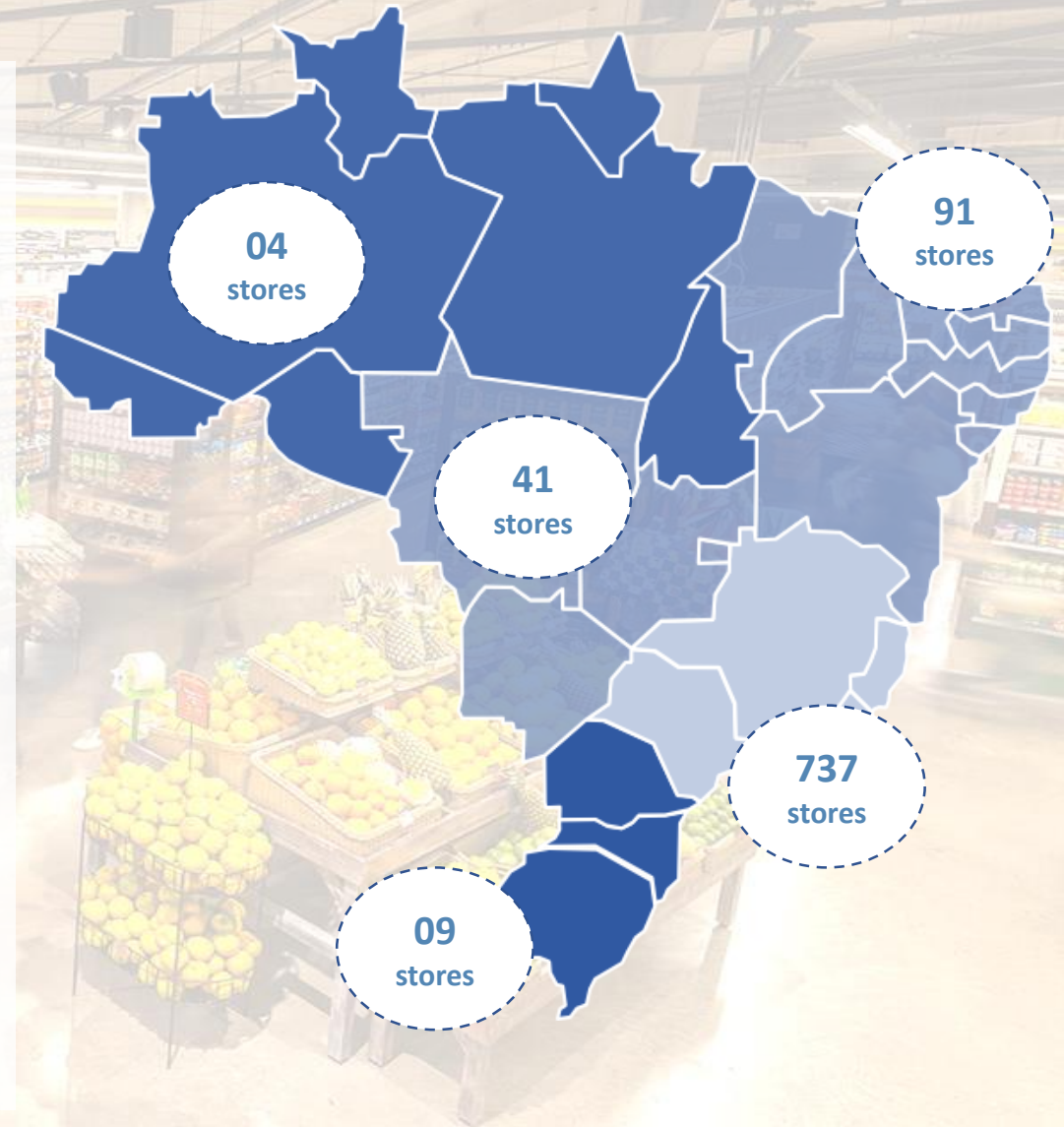
2017 gross sales - BRL 48.4 billion

600 million Tickets

91.000 employees

23 DCs and warehouses

1135 stores in 19 Brazilian states



GPA Brands, Numbers, History and Strategy

Brands

The logo for 'extra' features the word in a bold, red, sans-serif font. A stylized blue and red swoosh is positioned above the 'x'.

Hypermarkets and
Supermarkets

The logo for 'Pão de Açúcar' consists of two overlapping green circles above the brand name in a green, serif font.

Supermarket
Premium and
Food Delivery

The logo for 'minuto' has the word in a green, lowercase, sans-serif font. Below it, 'Pão de Açúcar' is written in a smaller green font with a small green circle icon.The logo for 'mini mercado extra' features the word 'mini' in a purple box, followed by 'mercado' in a green font and 'extra' in a red font with a small blue and red swoosh.

Neighborhood
Stores

The logo for 'GPA Malls' features a blue swoosh above the text 'GPA Malls' in a blue, sans-serif font.The logo for 'posto extra' features the word 'posto' in a red font above the word 'extra' in a bold red font with a small blue and red swoosh.

Other Businesses
Drugstores and
Gas Stations

The logo for 'ASSAÍ ATACADISTA' features a stylized orange and yellow sun above the word 'ASSAÍ' in a bold white font on a red background, with 'ATACADISTA' in a smaller red font below it.

Self-servise
Wholesale

The logo for 'multivarejo' features a stylized orange and red shape above the word 'multivarejo' in an orange, sans-serif font.

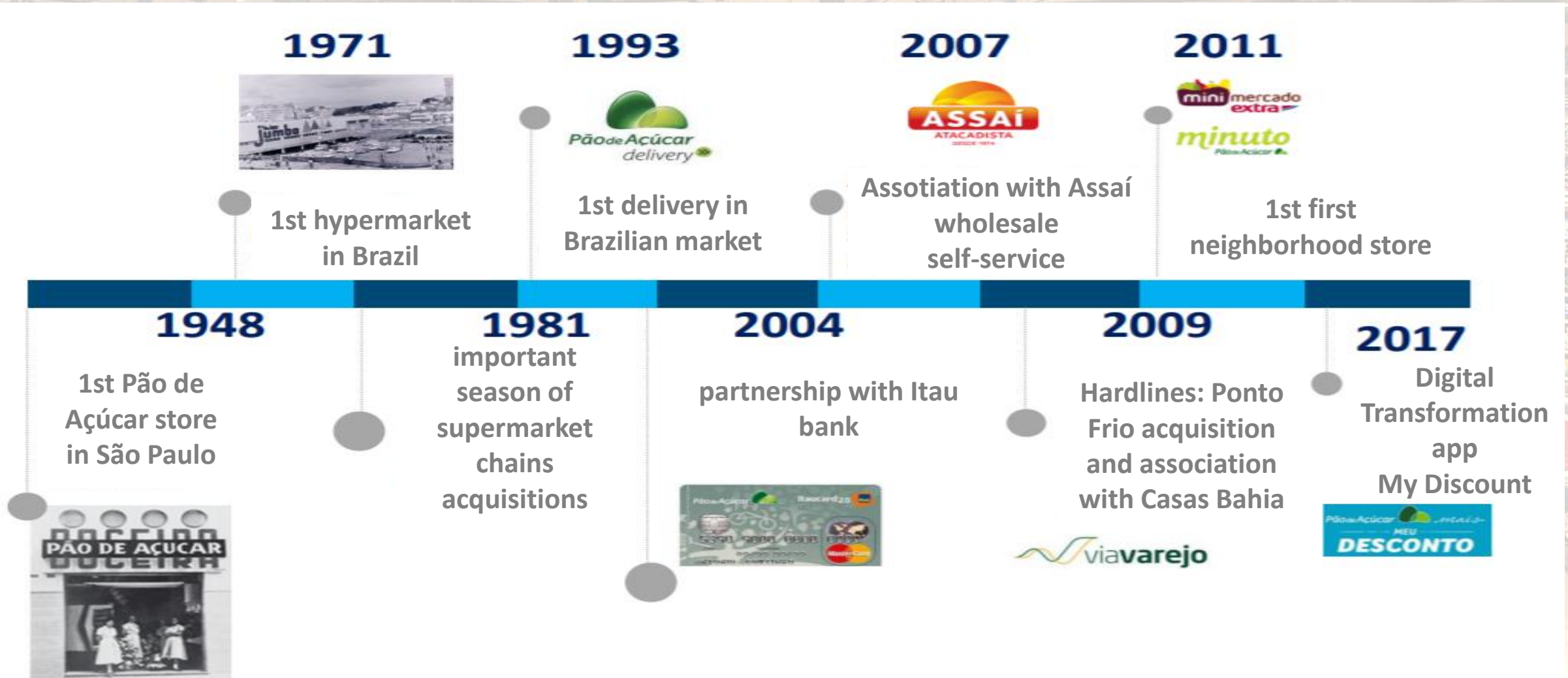
GPA Brands, Numbers, History and Strategy

Brands



GPA Brands, Numbers, History and Strategy

History



GPA Brands, Numbers, History and Strategy

Strategy 2018-2020

- Store portfolio: organic expansion and optimization
- Focus on formats and concepts of higher return – wholesale, new concept in Pão de Açúcar stores
- Repositioning of the retail formats offer
- Development of Private labels
- Digital transformation related to customer contact and operations
- Expansion of financial services, leveraging the expertise of the joint venture with Itaú Bank





The GPA Demand Forecast Journey

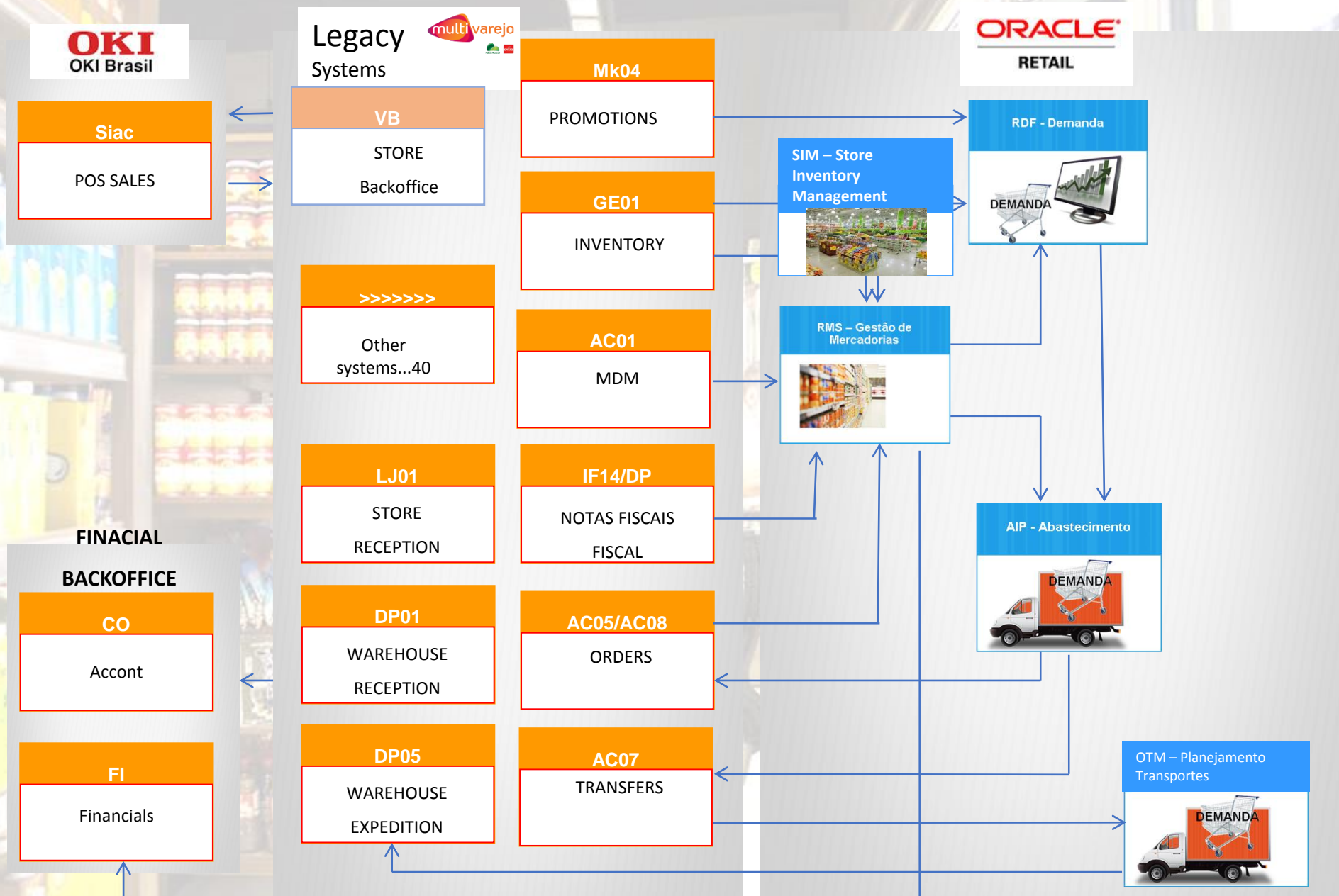
The GPA Demand Forecast Journey

Oracle Retail Footprint @ GPA

6 Retail Modules **49** Legacy and Satellites Systems

- Oracle Retail Merchandising System
- Oracle Retail Advanced Inventory Planning
- Oracle Retail Demand Forecasting (on premise)
- Oracle Transportation Management
- **Go live 2018 – 1st half:**
 - Oracle Retail Merchandising System + Oracle Retail Fiscal Management – Monet Project
 - Oracle Retail Demand Forecasting (cloud)
- **Go Live 2019 – 1st half:**
 - Oracle Retail Store Inventory Management
 - Oracle Retail Allocation

The GPA Demand Forecast Journey - The Project - Architecture



The Oracle Demand Forecast Journey

v9 – v13.2	v13.3 – v13.4	v14.0 – v14.1	v15	v16
2002 – 2010	2011 – 2012	2013 - 2014	2015	2016
<ul style="list-style-type: none">• Baseline Forecasting• Bayesian Forecasting• Promotional Forecasting• Historical Demand Estimation• Promotional Event Effects• Regular Price Effects• Configurable Science	<ul style="list-style-type: none">• Cross-promotional Effects• Promotional Price Effects• Flexible Science• RPAS Fusion Client Support	<ul style="list-style-type: none">• Returns Forecasting• Overlapping Promotion Effects• Demand Transference	<ul style="list-style-type: none">• RDF Cloud Service Launch• Flexible Source Level Groupings• Aggregate Causal Modelling• Attribute-based New Item Forecasting• Expanded Short Lifecycle Forecasting	<ul style="list-style-type: none">• Exception-driven Processes• Streamlined New-item Forecasting• Extensible SaaS





The GPA Demand Forecast Journey

2009

GPA started its transformational journey

2010

Creation of a Forecasting team and started using demand forecasting

2011-2013

Roll out for all categories

2014-2016

No implementation of upgrades, loss of statistical competencies

2017

Decided to upgrade to cloud version

2018

Move to the cloud project go live, reinforce team competencies

The GPA Demand Forecast Journey

Multivarejo Forecast main data



Department	SKUs	Forecast Combination
Grocery	36.000	4.500.000
Fresh Products	31.000	2.400.000
Bazar	34.000	1.200.000
Textile	14.500	370.000
Electronics	6.500	90.000
Total	122.000	8.560.000

Promo Share: 57%

People : 40



Multivarejo
Forecast RDF
Scope



The GPA Demand Forecast Journey

GPA Supply Chain Process with Oracle Retail



GPA Supply Chain Process with Oracle Retail



The GPA Demand Forecast Journey

Moving to the Cloud – Why change now?

IT

- Recap technological gap (V13)
- Oracle is the core for all demand forecast and automatic supply
- Needed new functionalities from cloud version
- Environment integrity and safety

Business

- Reduce out of stock and inventory
- Increase accuracy (actual ~75%)
- Increase sku/store accuracy (actual ~50%)
- Improve demand forecast for promotional items (+ 57% of sales are promotional)

The GPA Demand Forecast Journey

The Project - Implementation Partner: **Oracle Retail Consulting (ORC)**

Step 1

Improve on-premise

- ✓ Get quick wins
- ✓ Improve baseline forecast accuracy changing historical cleaning method
- ✓ Quick win for non-promoted items or periods

Step 2

Move to Cloud

- ✓ +Functionalities
- ✓ Model the promotion price information into causal forecasting
- ✓ Started with a pilot for 2 categories – April 2018
- ✓ Expand to new categories after initial pilot – S2 2018

The GPA Demand Forecast Journey

Forecasting Improvement Results Over the Years

- Orders are done based on forecast demand for all Grocery and major part of Fresh Products + Bazar
- Only a part of promotions is based 100% on system uplift
- Forecast accuracy from 50% to 75% at aggregated level
- Out of stocks reduced by 25%

Moving to the cloud:

- We are in the middle of migration starting homologation
- Improved accuracy at store/SKU level
- Better history cleaning and more accurate and specialized forecasting algorithm
- More automatized Promotional Uplift
- Gain of time and team optimization





Recommendations,
Lessons,
Expectations

Recommendations | Lessons | Expectations

Recommendations

- Skilled demand forecast staff and retail oriented consulting team
- Important to mix IT with high qualified forecast professionals
- Validate the results fast so you can keep improving
- Keep a permanent updated system footprint
- Check infrastructure:
 - data connectivity, security, storage, performance earlier as possible for the new environment
- Even for Cloud Version: Start by a deep training and GAP understanding

Recommendations | Lessons | Expectations

Next steps and Expectations

- Reduce out of stock by 50%
- Reduce Company Stocks by 22%
- RDF feed with all the promos faster in RDF Cloud
- Use more modern forecast algorithm and different ones per product category
- Better modeling the promotion price information into the forecasting
 - Contribute to the key strategic objectives of the group
 - Store portfolio optimization



The GPA Demand Forecast Journey

Thank you!



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