



Advanced Analytics &  
Business Consultancy

# Markdown program for close to expiration products

Practical case

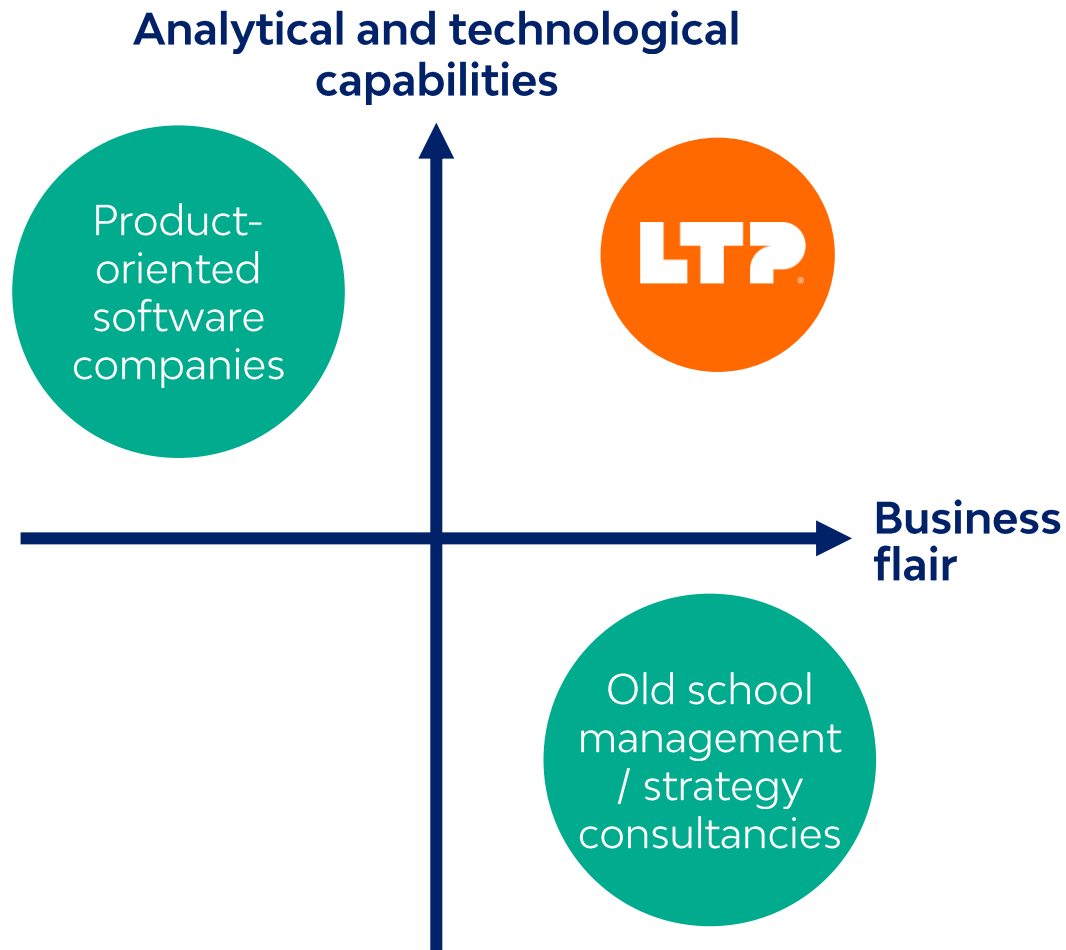
 2024



To empower **every business decision**  
with AI & Advanced Analytics

# It is the blend of analytical capabilities and business flair that truly sets LTP apart from other providers

What makes us different



## **LTP** Versatile analytical power

90+ consultants experienced in data science, optimization, simulation and BI

## **LTP** Rich business expertise

Vast work across sectors, by a team with diverse professional backgrounds

## **LTP** Solid research background

Academy spin-off with strong R&D skills (+100 case studies and papers on renowned entities)

# LTP is an advanced analytics & business consultancy firm

Who we are

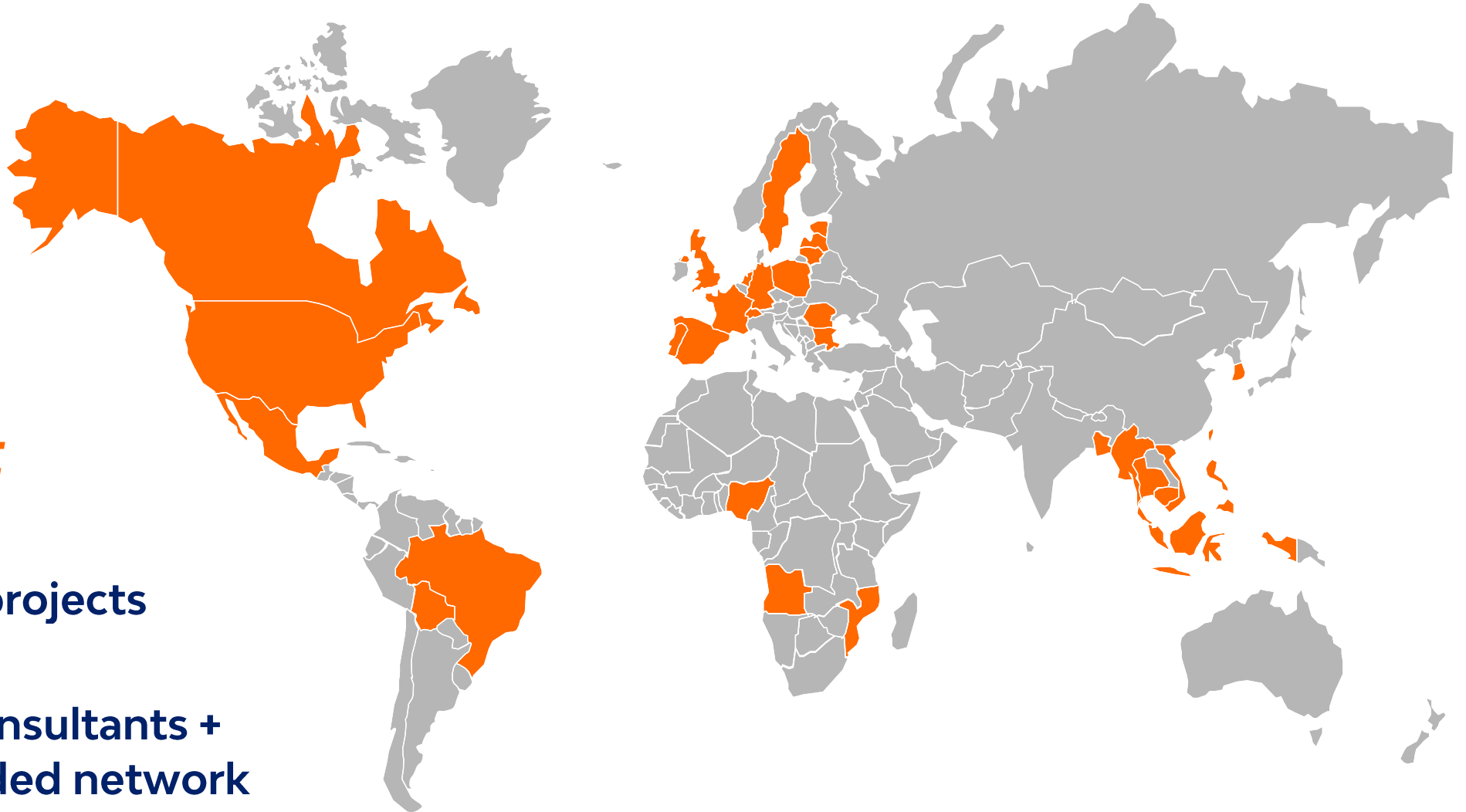
## *Our Footprint*



**300+ projects**



**90+ consultants +  
extended network**



# Reputable companies from several industries trust LTP as a key partner for business analytics

Our clients

NOT EXHAUSTIVE

## Services



## Retail



## Consumer goods



## Manufacturing

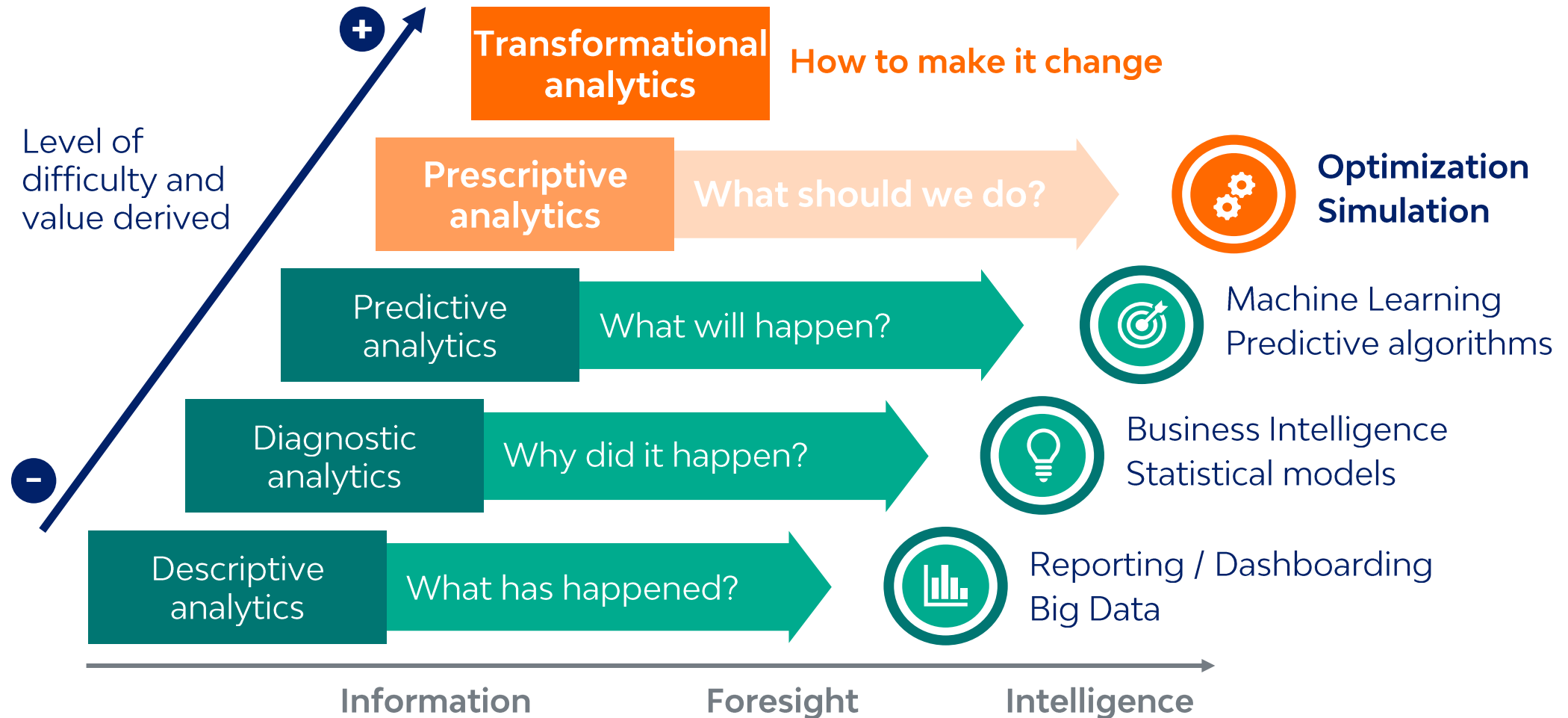


**50+** Organizations trust us as a key partner for business analytics

**90%** Of our clients partnered with us in **more than one project**

# LTP's work in business analytics is transformational

## The business analytics journey



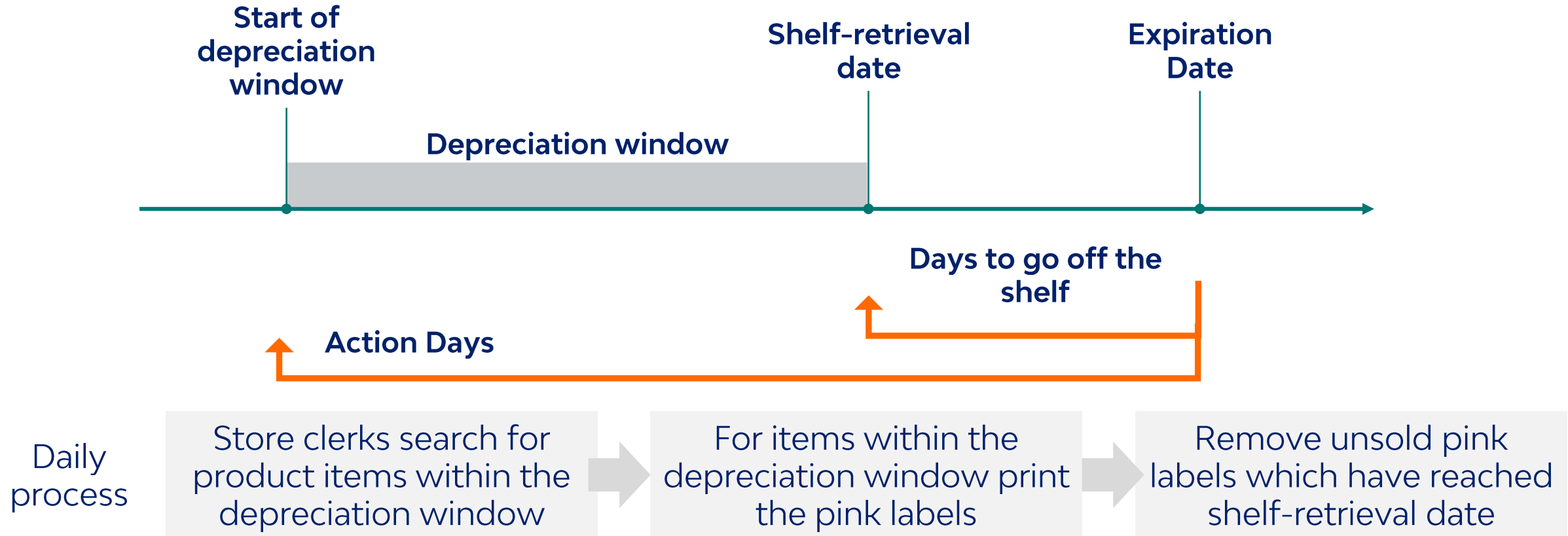
# Case Study – Discounts for close to expiration products (pink labels)

## Examples



# Case Study – Discounts for close to expiration products (pink labels)

## Process overview





# Case Study – Discounts for close to expiration products (pink labels)

## Data dictionary

Data_labels	Description
Idstore	Store printing the label
<b>Sku</b>	<b>SKU id for the label</b>
Brand	SKU brand
Oldpvp	Price before the markdown
Newpvp (discount)	Price identified in the pink label (discount rate applied)
Labelqty	Number of labels issued (always 1 in the dataset)
Weight	Weight of each SKU
Payment_method	Payment method used
Margin (%)	% of gross profit
Profit (€)	Gross profit in euros
perc_expiration_sku	Proportion of the shelf life remaining when the label was printed
expiring_date	Expiration date of the item
labelling_date	Labelling date
sell_date	Sell date of the label
Sold	(=1) if the label is sold before the expiration date, (=0) otherwise

Data_store	Description
Idstore	Store printing the label
type	Size of the store
selling_square	Selling area available
district	Location of the store

← Label

# The first phase of this case-study intends to recreate a real-life scenario with a dataset far from perfect

## 1<sup>st</sup> challenge

Firstly, the groups need to focus on **preparing a clean and usable dataset**. We expect that all group by the end of this phase:

1. **List the errors** found in the dataset
2. Suggest **efficient and analytical methods** to solve them

### Hints:

- The average expiration days left for “Marca 24” is near 11
- The average days it took to sell “Marca 27” is near 8
- The average new pvp for “Marca 22” is around 1
- The average flow rate for all products is around 53%

### Criteria:

Exhaustiveness, Analytical/Technical approach



# Now we challenge you to fully dive-into the dataset, understand it and craft an analytical approach for the problem

## 2<sup>nd</sup> challenge

Launching from a clean dataset, please answer the following:

3. Develop and create a **Power BI dashboard with more significant KPIs** (EDA, Descriptive analysis, etc)



### Criteria:

Relevance, Business sense, Exhaustiveness, Analytical/Technical approach



# Having the dataset and the approach defined, go ahead and test it

## 3<sup>rd</sup> Challenge

4. Considering the dataset you have, the business problem and other available data.

4.1. Find the best predictive variables

5. Develop a **predictive classification model** that is capable of predicting if a product will be sold (label) considering its discount rate and its characteristics

### Criteria:

Analytical/Technical approach, Proficiency demonstrated, Tools selected and their domain, Performance evaluation



# The final stage consists of delivering an amazing experience and discussing the results

## 4<sup>th</sup> Challenge

6. Prepare a **deck of slides** and deliver a presentation to show your work

### Criteria:

Quality of the slides, message clarity and structure, stage presence,



# Challenge Summary

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- 1<sup>st</sup> Challenge: Data quality – prepare the dataset to work properly
- 2<sup>nd</sup> Challenge: Descriptive and exploratory analysis – Power BI Dashboard
- 3<sup>rd</sup> Challenge: Machine learning – Classification prediction model
- 4<sup>th</sup> Challenge: Presentation – Prepare deck of slides





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