

HOTEL INDUSTRY

Customer Segmentation Group L

Pedro Adonis, id 20230994
Mohamed Taha Ben Attia, id 20230742
Márcia Lopes, id 20230493
Henrique Seganfredo, id 20230474
Deepak Lakhani, id 20231006



Business Case

The Problem

Hotel H, a hotel located in Lisbon, adopts a standard customer segmentation based solely on the origin of the customer.

This is an outdated approach.

Chain growth with acquisition of more hotel branches brought new challenges on the marketing team.

New Strategy

Recently created marketing department suggested to drill down more demographic and behavioral characteristics.

With a better segmentation it will be easier to define a new strategy and the needed steps to reach new customers and retain existing ones.

Goal

Propose insights for each recognizable group of customers and guide the creation of products and policies to leverage room occupancy ratios and company profit.



Methodology

Biz & Data Understanding

01

Hotel industry context and goal
criteria

Data description & Metadata
Summary statistics

Data Preparation

02

Coherence checks

Missing values

Feature Engineering &

Outlier Handling

Scaling & Encoding

Modeling

03

PCA

K hints for clustering

Assessment & Evaluation

Insights

04

Cluster analysis

Business inference &

Suggestions

Deployment





How retain and attract new customers?

“Beyond Stay, Experience Delight.”



1

Global guests

Average lead time

Mostly foreigners

Use of direct booking and agents

Flexible on requests

2

Prepared Travelers

Some advanced planning

Rely on Travel Agents

Bring good revenue

Preference for twin-beds &
comfort

3

Comfort Seekers

Some travel planning

Mix of foreigner & local

Like assistance from agents

Premium service

4

Domestic

Short leading time & stays

Strong domestic focus

Mixed booking channels

Lowest revenue



1

Impulse Travelers

Bookings closer to check-in date
High booking success rate
Brief stays
Low revenue, budget conscious

2

Advanced Planners

Meticulous planners &
high leading time & commitment
Reliable revenue
Groups and families

3

Balanced Customers

Solid booking success rate
Generate most revenue
Longer stays & services
Shared experiences



Project Challenges

01

Redundant and/or obsolete features

02

Geographic data demanded diverse grouping between hierarchies (Countries & Regions & Continents) for best business scenario understanding

03

ID fields & nationality & NOSHOW, club fidelity members, plus outlier treatment

04

Clusters had too many fields to be assessed for prevalence



1

Strengths

High Booking Success Rate
Premium services

2

Weaknesses

Loyalty programs customers

3

Opportunities

Premium services

4

Threats

The Tourism Market
changes inside Portugal
Lisbon airport facilities problems

What's next?



Improve room occupancy

Use prediction to optimize room occupancy with flash sales with direct marketing.



Improve Serviceability

Make changes on hospitality services thru gathering online reviews into service KPIs. Move on the PDCA cycle.



Go for the extra mile

Redefine inhouse offerings on food & room services, events & coworking.



THANK YOU

Write a closing statement or call-to-action here.

