Customer retention

The machine learning strategy

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Welcome
to Retail Intelligence

Index

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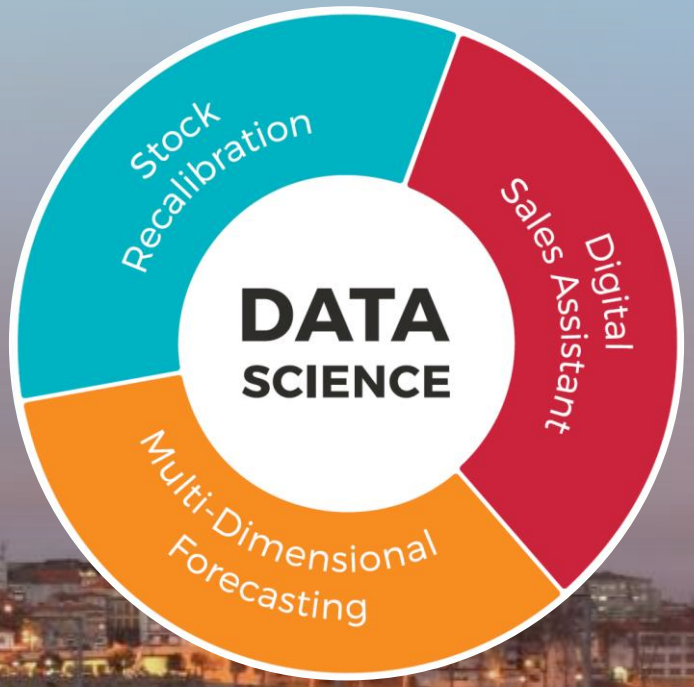
INOVRETAIL

We are a Retail Intelligence company, **committed to using data science to enhance core retail processes** and deliver actionable results



ON A MISSION
TO DEMOCRATIZE RETAIL DATA INTELLIGENCE

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CHURN INTRODUCTION

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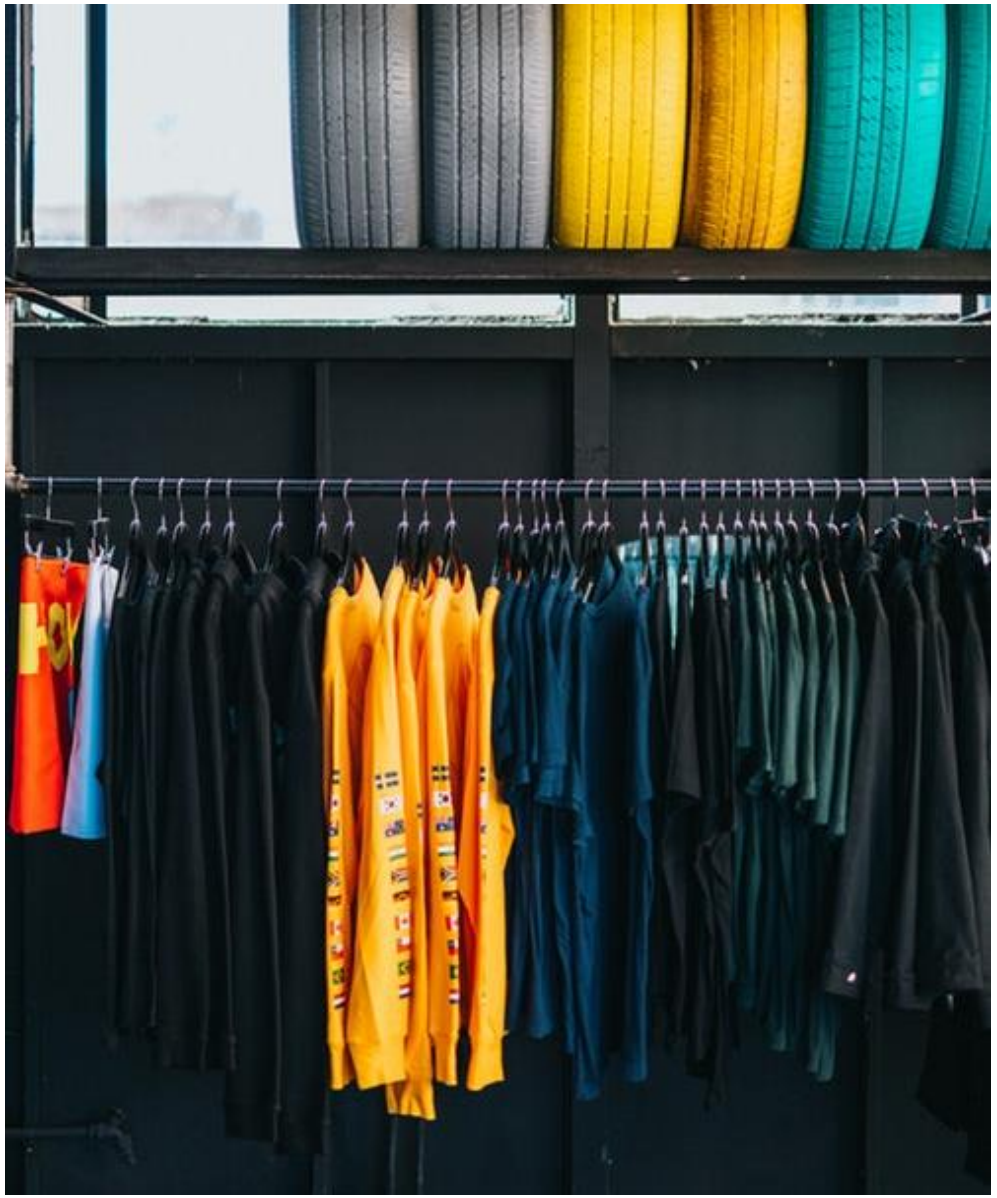
CHURN INTRODUCTION

Usually, the customers who stop using a product, service for a given period of time are referred to as churners.

In the retail industry, churn comes in different flavors and at different speeds.



CHURN INTRODUCTION

From a machine learning perspective, churn can be formulated as a binary classification problem.

Although there are other approaches to churn prediction (for example, survival analysis), the most common solution is to label “churners” over a specific period of time as one class and costumers who stay engaged with the store products as the complementary class of “non-churners”.

CHURN WORKFLOW

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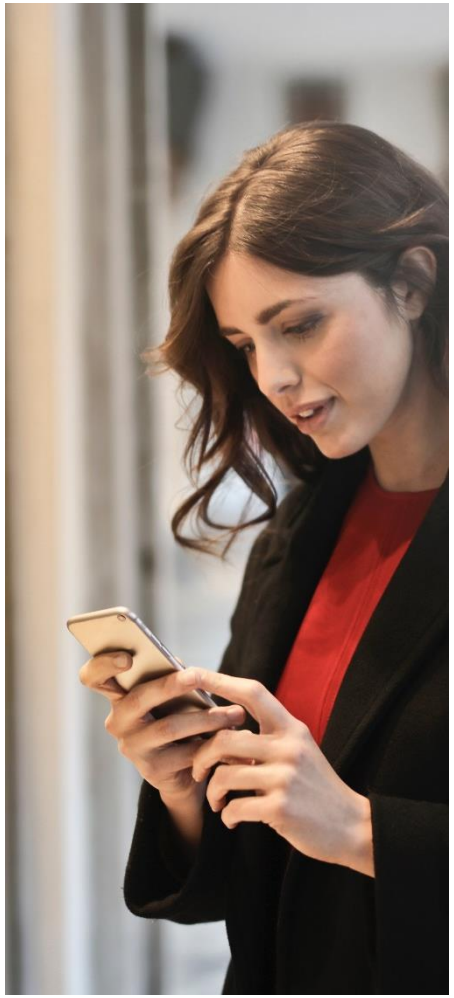
CHURN ANALYTICS → DATA INTEGRATION → DATA ANALYSIS → CHURN MODEL → CHURN ANALYTICS → CHURN ACTIONS



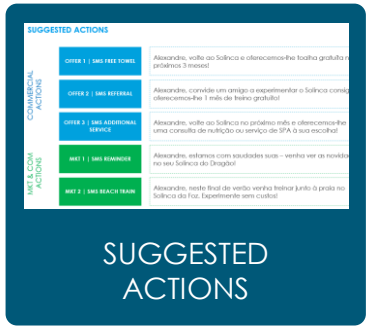
- ✔ CUSTOMERS
- ✔ PRODUCTS
- ✔ CONTRACTS
- …

- ✔ CUSTOMER DEMOGRAPHIC
- ✔ STORE
- ✔ CUSTOMERS ACTIVITY
- ✔ CUSTOMERS SALES
- ✔ CUSTOMERS CONTRACTS
- ✔ CUSTOMERS PAYMENTS
- …

MODEL CREATION & EVALUATION

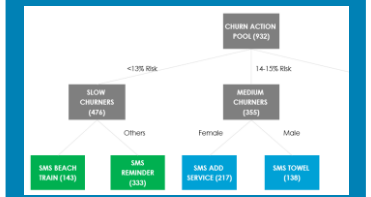
CHURNERS LIST (WITH RISK)

CUSTOMER DASHBOARD



SUGGESTED ACTIONS

CHURN RELEVANT INDICATORS



ACTIONS PLANNING

CHURNERS SEGMENTS

ACTIONS EFFICIENCY

CHURN MODEL

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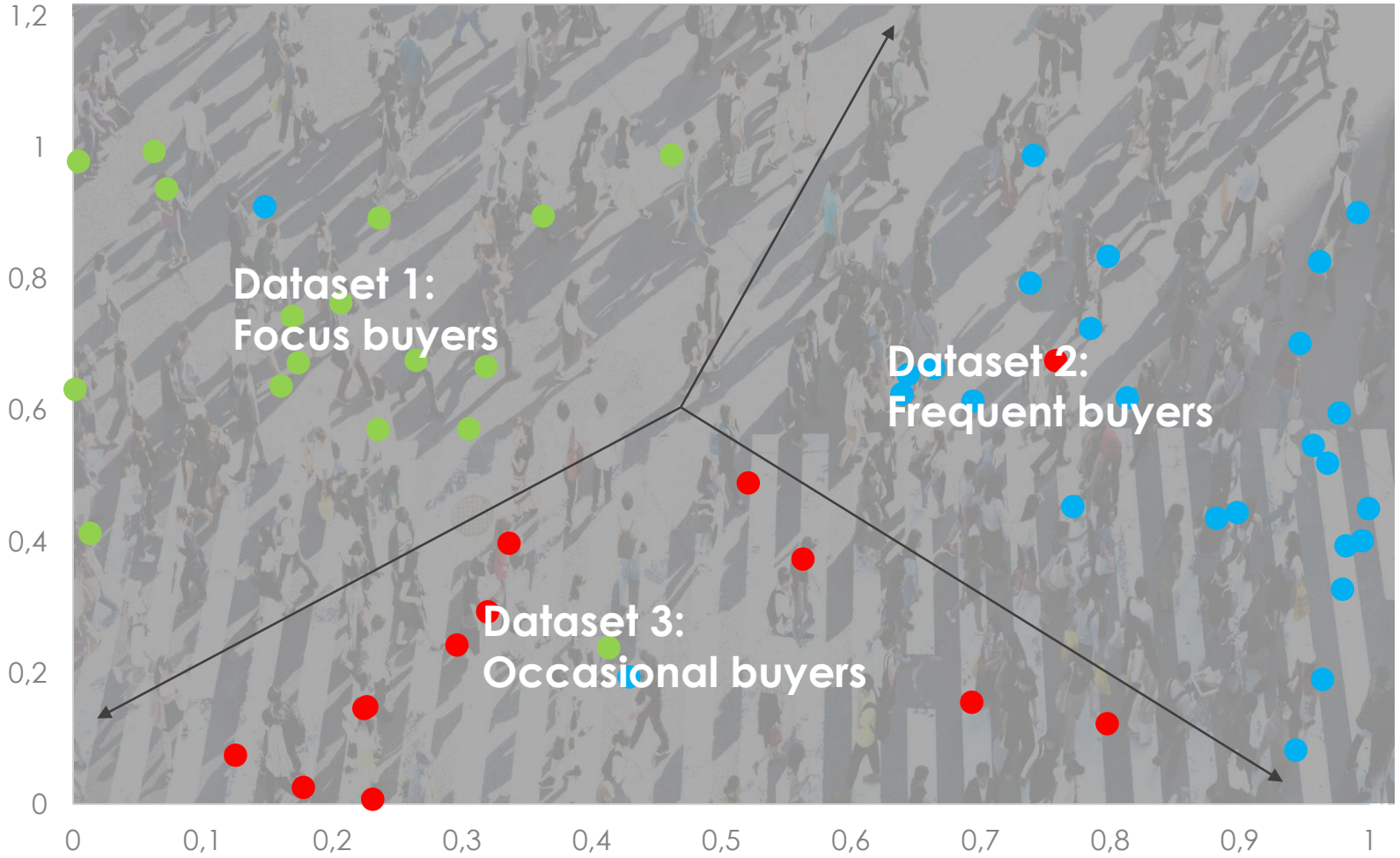
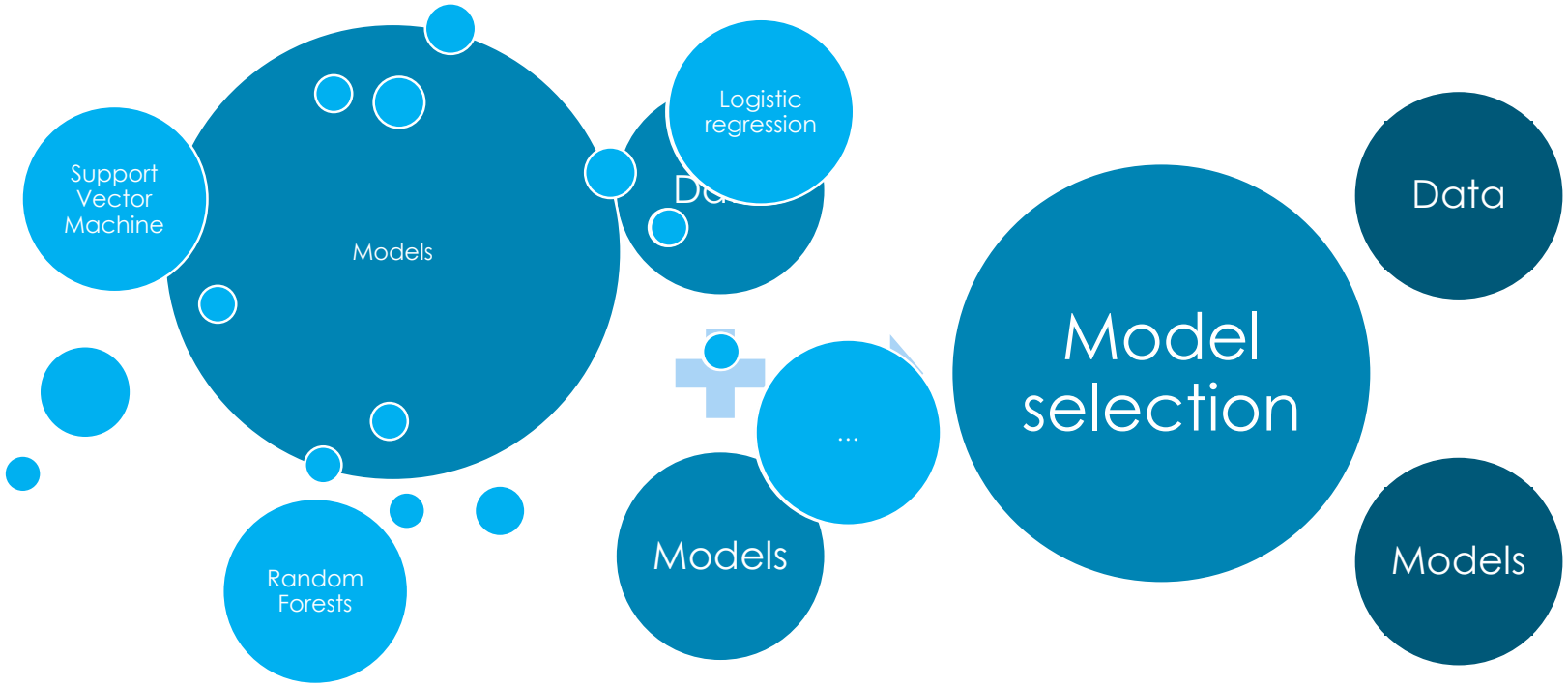
CHURN MODEL

Data Segmentation – “unsupervised clustering”



CHURN MODEL

Ensemble learning method - “bucket of models”



CHURN MODEL

Model generation approach – "variable reduction"

Variables:

Model 1

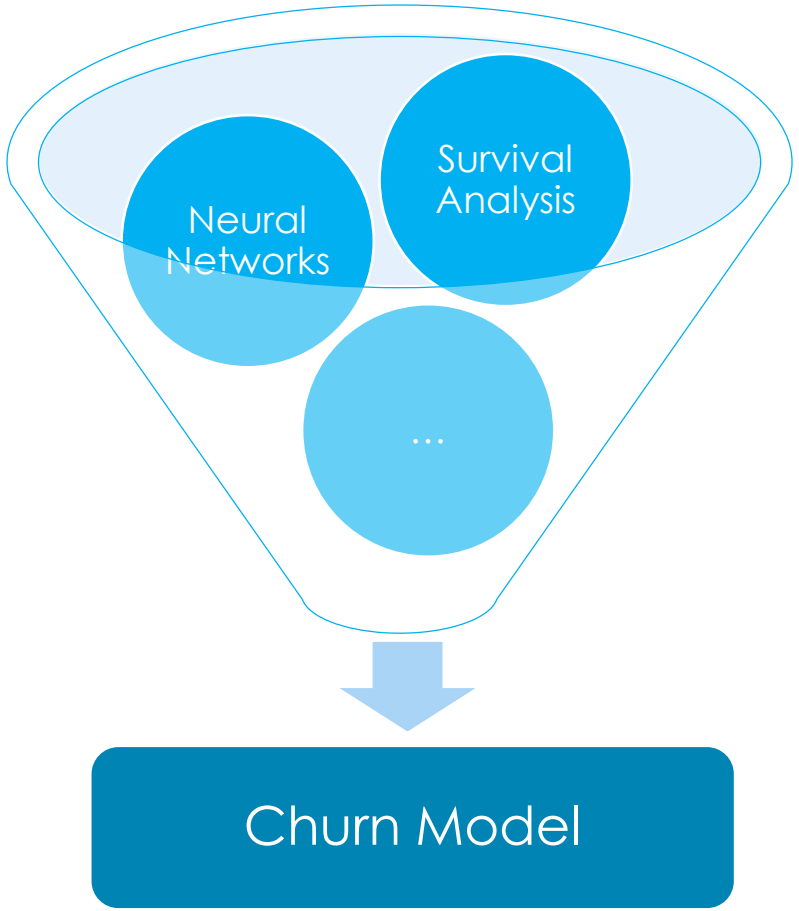
- [x] Gender
- [ ] City
- [x] Age
- [x] Total buy value
- [ ] Number of visits
- [ ] …

Model 2

- [ ] Gender
- [ ] City
- [x] Age
- [x] Total buy value
- [x] Number of visits
- [ ] …

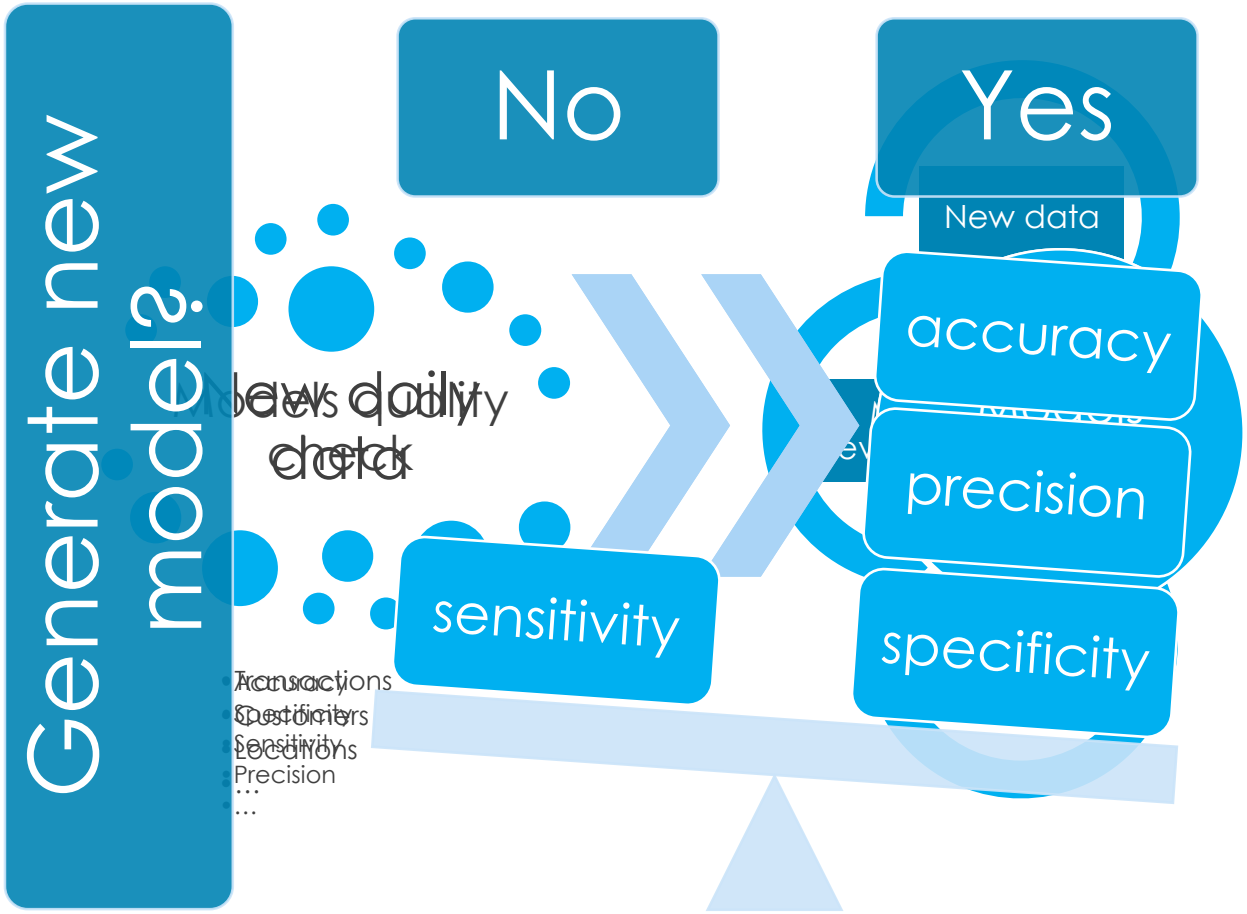
CHURN MODEL

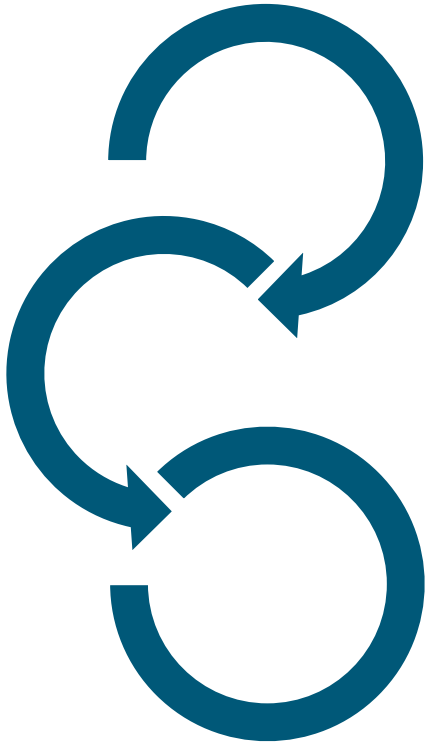
Model generation approach – “multi-model learning”



CHURN MODEL

Model performance testing method – "backtesting"

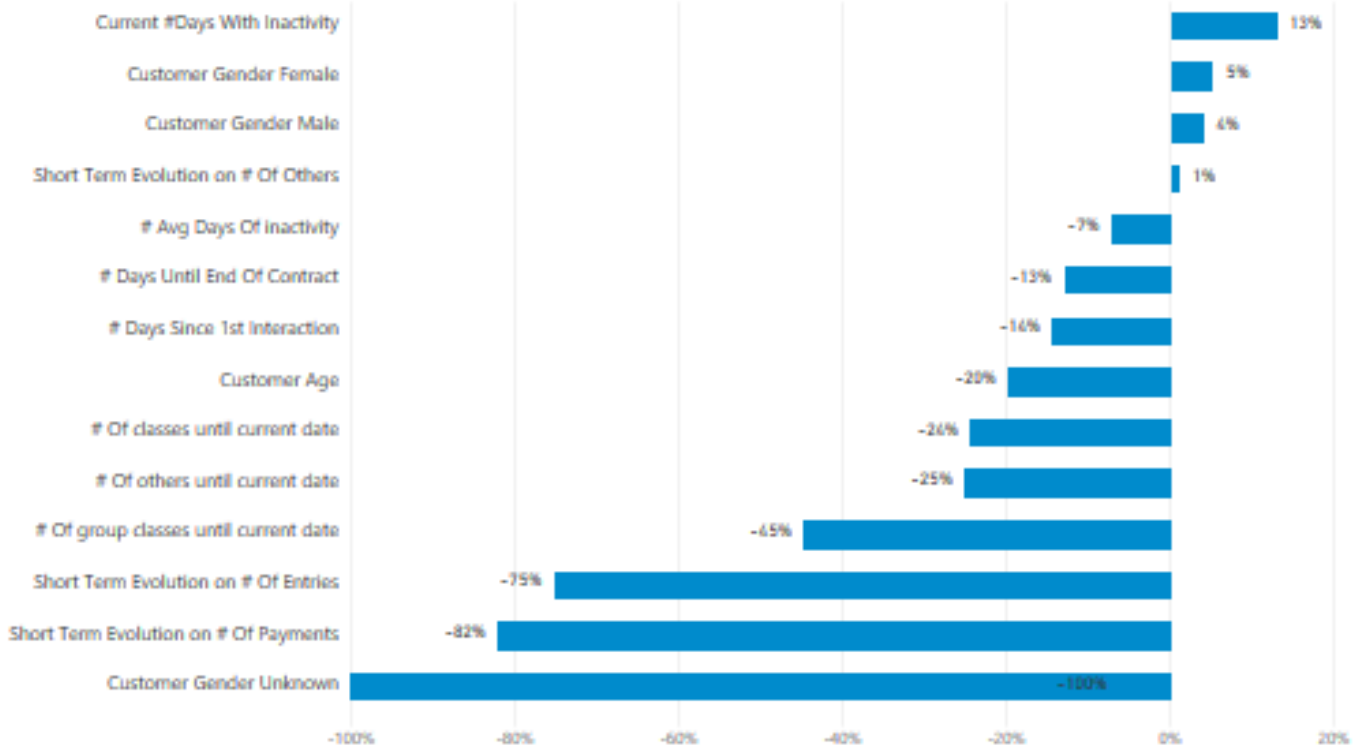




CHURN MODEL

Model output – "patterns & risk"

Churn Patterns



Potential Churners

Customer code	Customer value (€)	Risk (%)	Risk Grade
123	1374,10	20	Low
674	326,58	16	Very low
1	226,58	22	Low
143	324,16	22	Low
18	117,20	70	High
…	…	…	…

USE CASE

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USE CASE

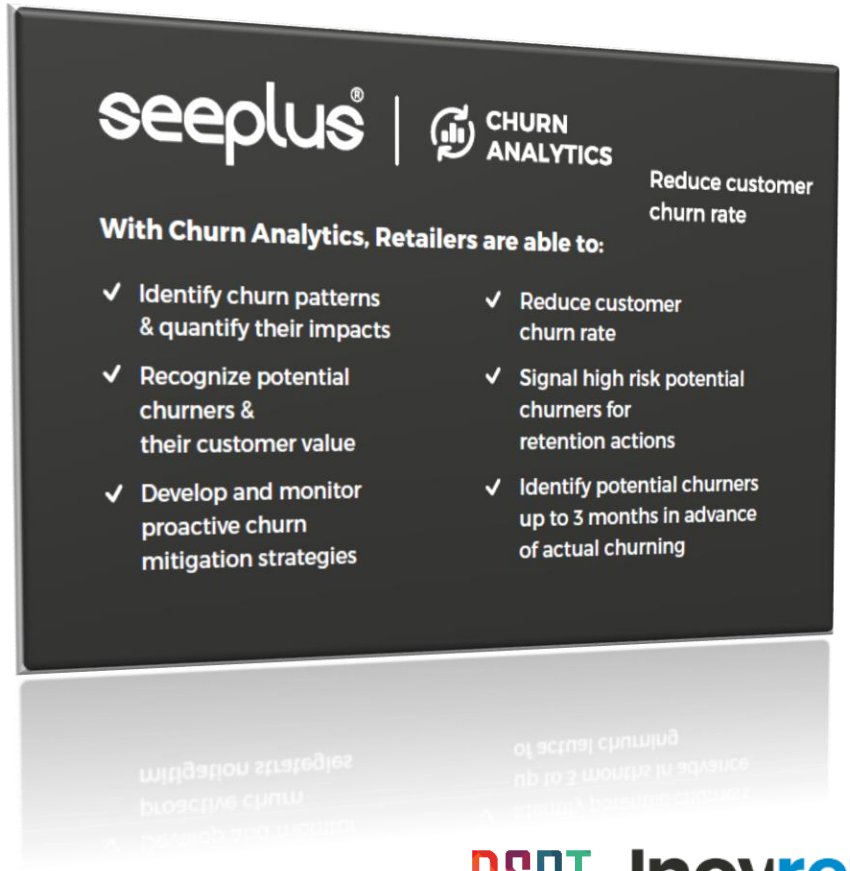
THE CHALLENGE: Create an automatic classification process to identify churn behaviour to allow a proactive management of these customers

WHAT WE HAD:

- Customer Demographics
- Detailed Gym Interaction
- Subscriptions & payment details

WHAT WAS REQUIRED:

- Identify customers with high churn likelihood
- Recommend ideal marketing action for each group of potential churn customers



USE CASE

SOLUTION:

- Automatic pattern recognition of churn behaviour based on the evolution of customer X gym interactions throughout the time.
- Multi model - starting with 130 variables hypothesised.

RESULTS & BENEFITS:

Thank you for your time!

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