



# SAC Smart Predict: let's start to look ahead

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# Motivation



# The Challenge: Gap between Ambition and Reality

## Ambition

we know that we need to use statistical methods to improve our business processes

- Analyze large amounts of data
- Speed up or automate decision-making to improve the quality of decisions
- Discover new rules
- On large amounts of data that are constantly changing
- To outstrip the competition



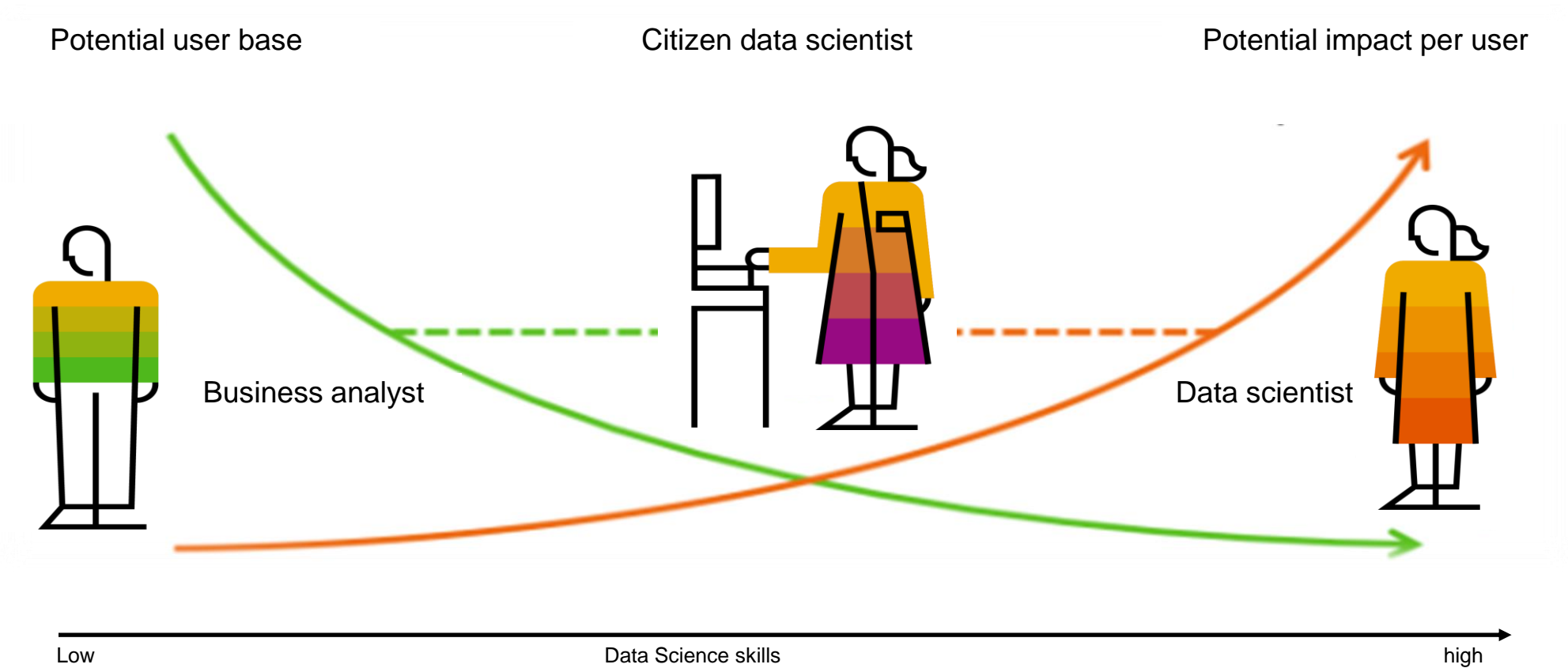
**Gap**

## Reality

- Because of the complexity of data and tools, few business analysts consistently use advanced and predictive analytics tools
- Lack of Qualified Analytics Analysts for Big Data Analysis
- More than 40% of data science tasks will be automated



# Smart Predict: Statistical Methods for Business User



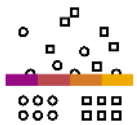
# Scenarios



# Predictive Scenarios: Guided and automated

- The business analyst chooses the predictive scenario that suits his business question
- In this workspace, the user is guided at
  - The selection of the dataset
  - The definition of the target variables and the predictors
  - The automatic creation of the best result
  - The assessment of the model quality

## Available Smart Predict Scenarios



### Classification

Who will churn or buy something in the next month / quarter?



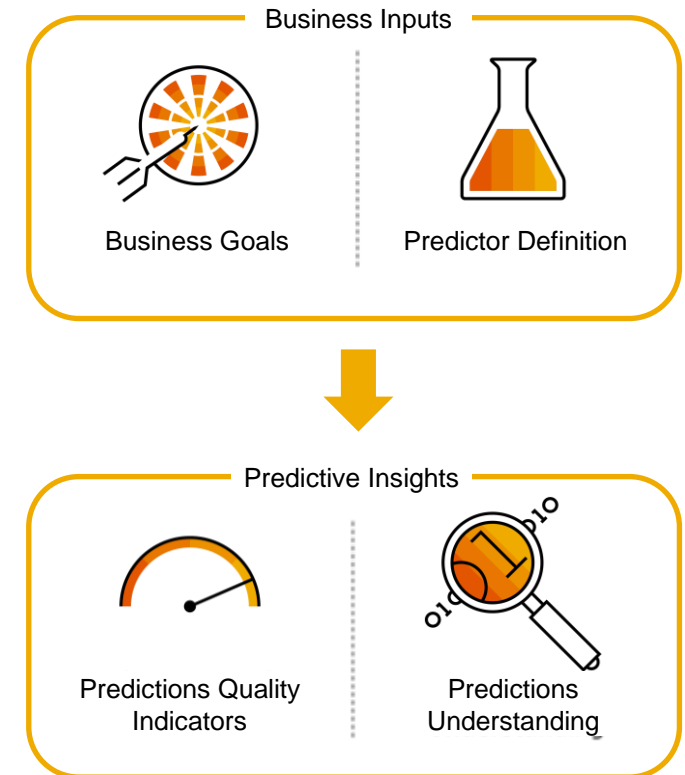
### Regression

How many products will a customer buy next month / quarter?



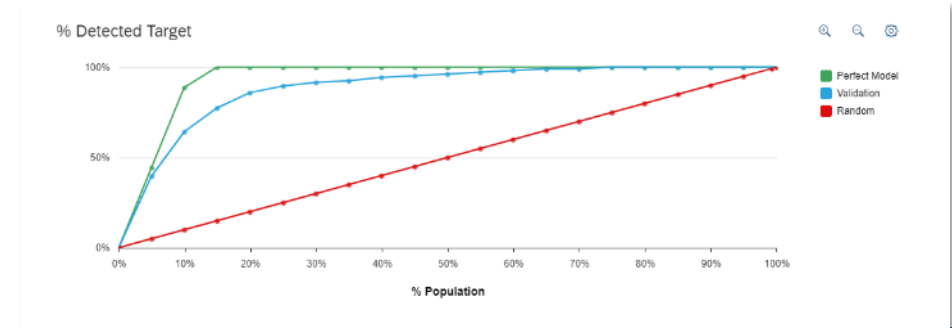
### Forecasting

What will be the monthly turnover or the number of churners in the next year?



# Smart Predict: Basic procedure

- No programming
- No technical terminology
- Guided process with business oriented questions
- Display of results in understandable form



The screenshot shows the SAP Smart Predict interface for an 'Attrition Classification Model'. The 'Settings' panel is open, showing the 'General' section with a description field. The 'Input Dataset' section shows the variable 'responses\_hb' selected. The 'Variable Roles' section shows the target variable field. The main results area displays the following data:

Metric	Using Predicted Contacts	Using Random Contacts
Total Profit	32,000.00	-82,000.00
Total Gain	114,000.00	+139.02%

Additional settings shown include:

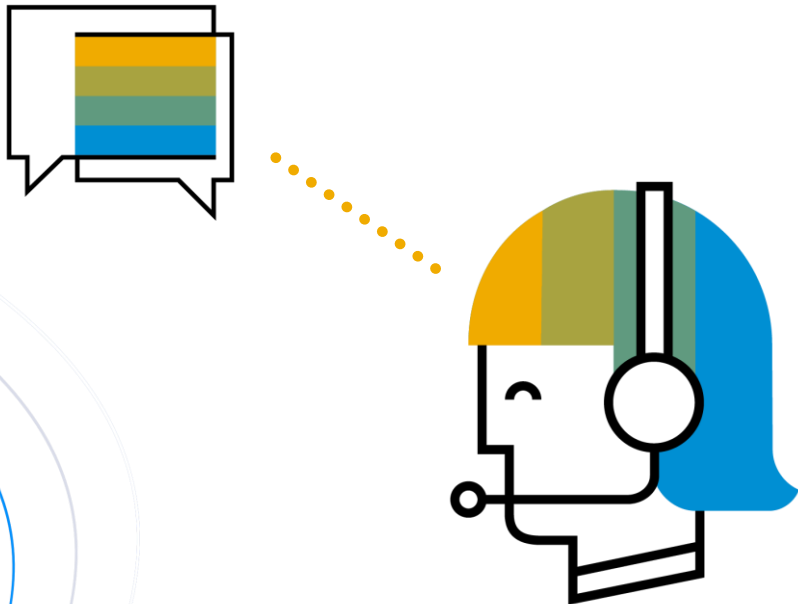
- Contacted Population: 5.3% (Number of Contacts: 50)
- Detected Target: 41.2% (Number of Detections: 44)
- Unit Cost VS. profit



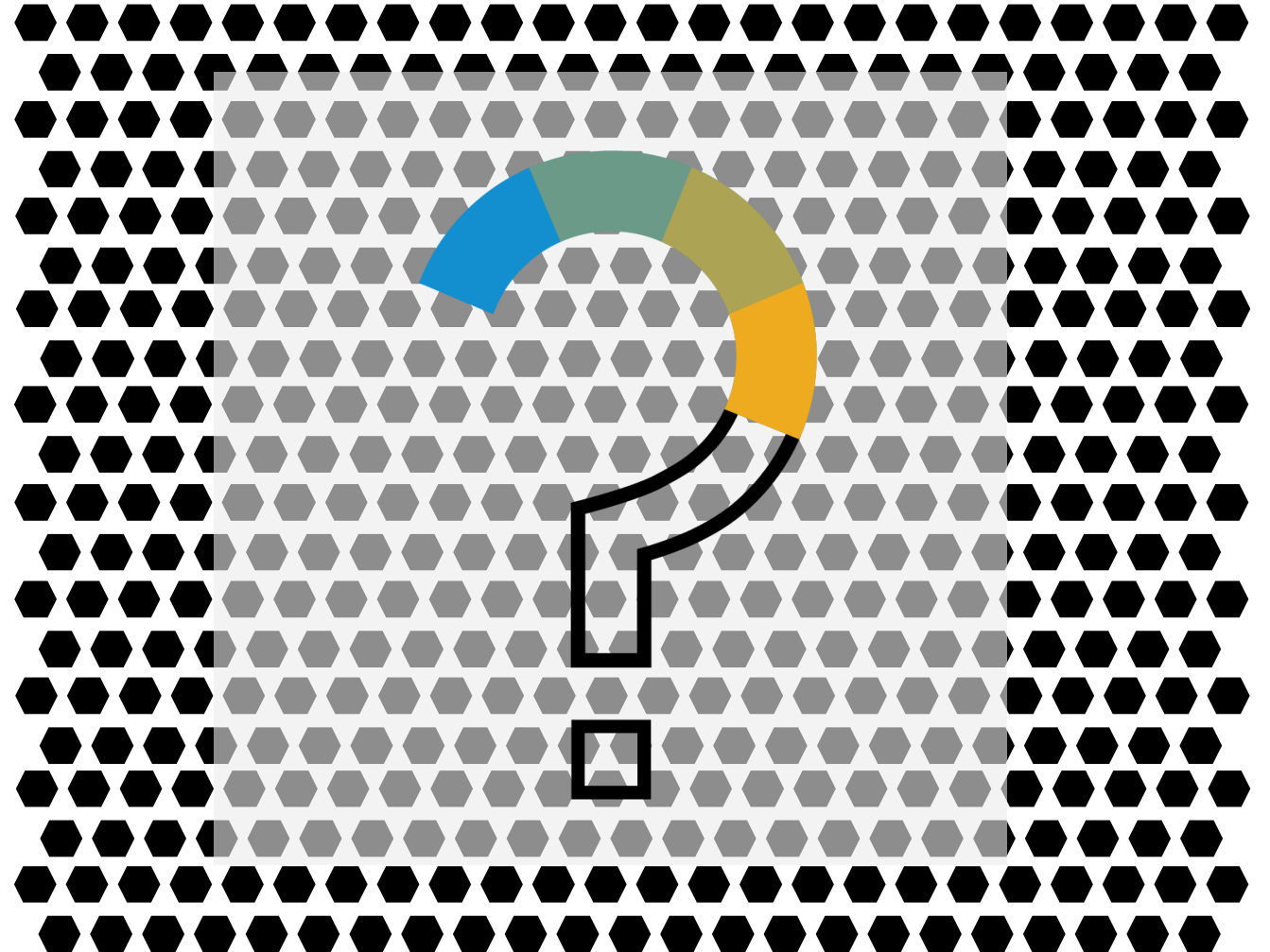
# Example: Contact the Customers with the highest Propensity to buy

## Call Center Challenge:

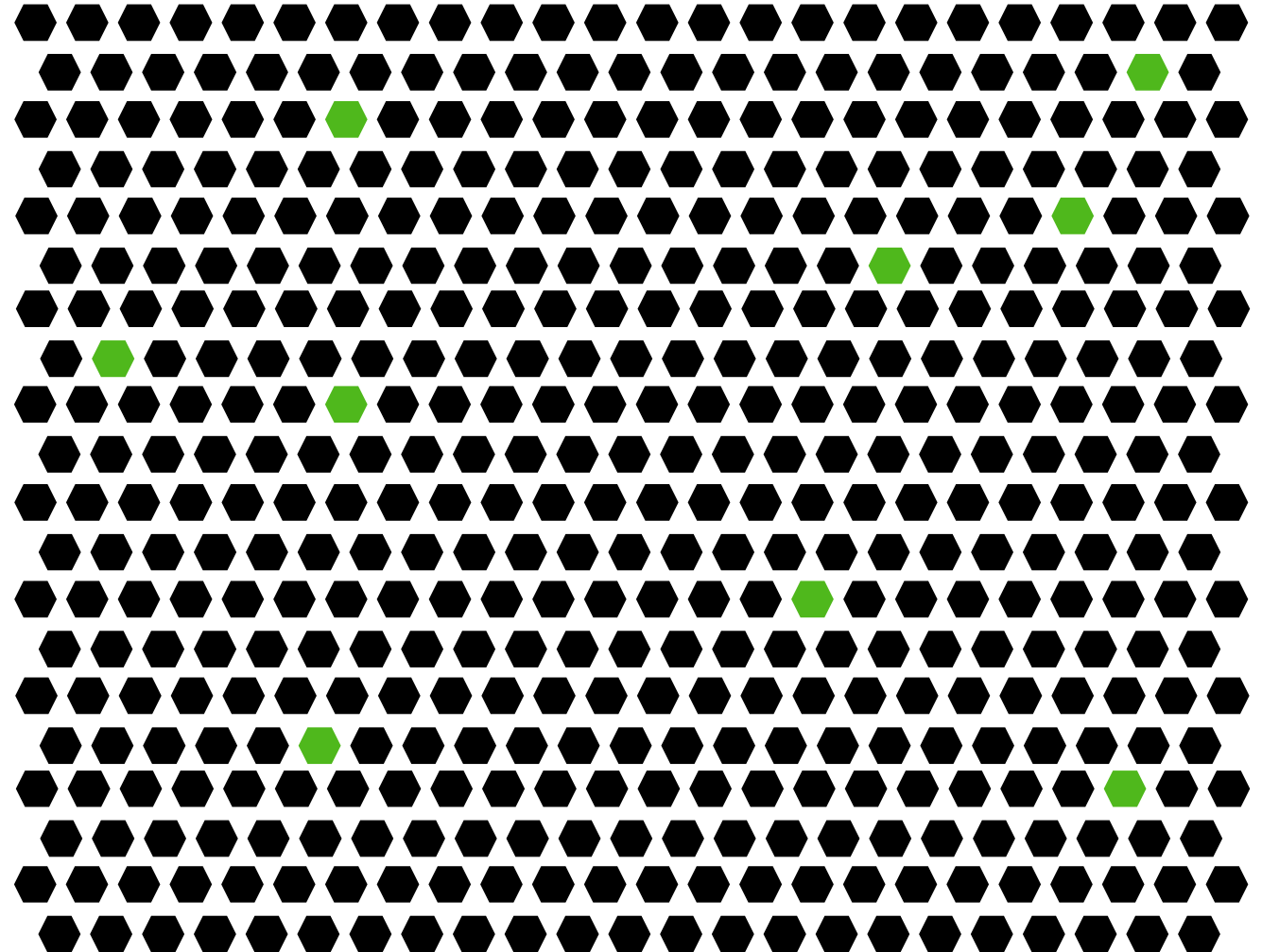
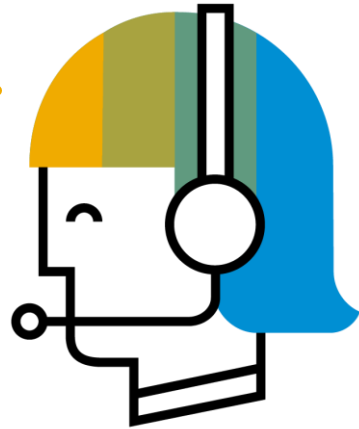
Contact the customers who are most likely to buy the offered product.



Our Customers: Who are the ones most likely to buy?

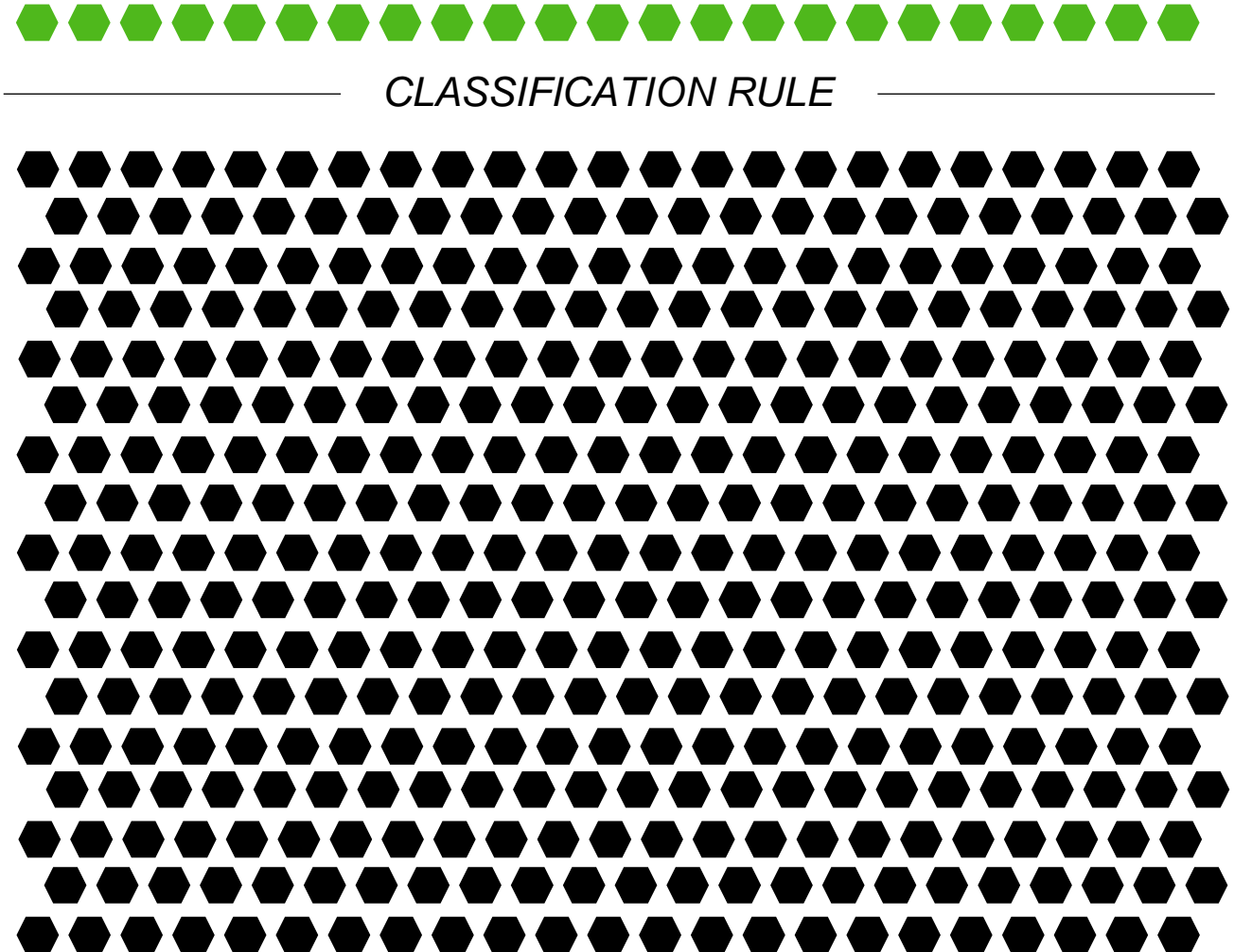
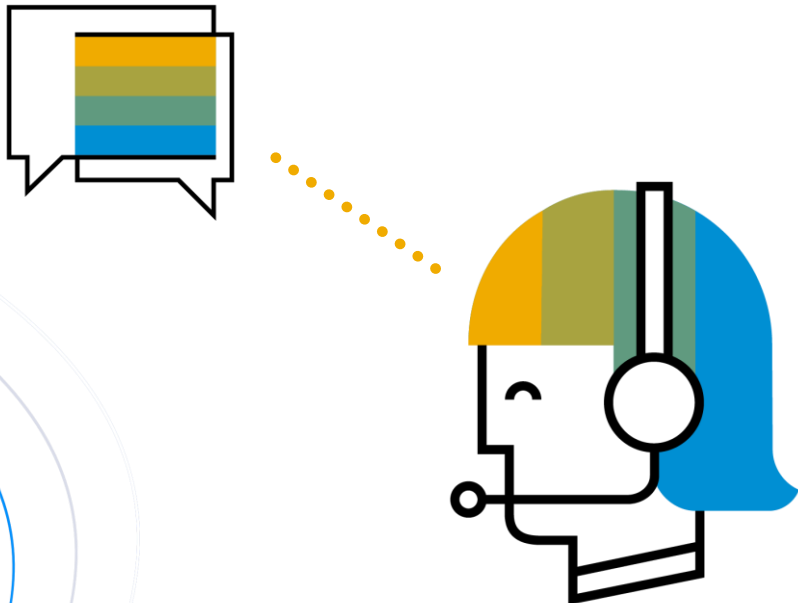


# Learn From the Past – Who bought during our last marketing campaigns?



# Learn from the past – Find a rule that separates the two groups

Train a predictive model with data from the past (buyers are known) to find the classification rule to separate the two groups

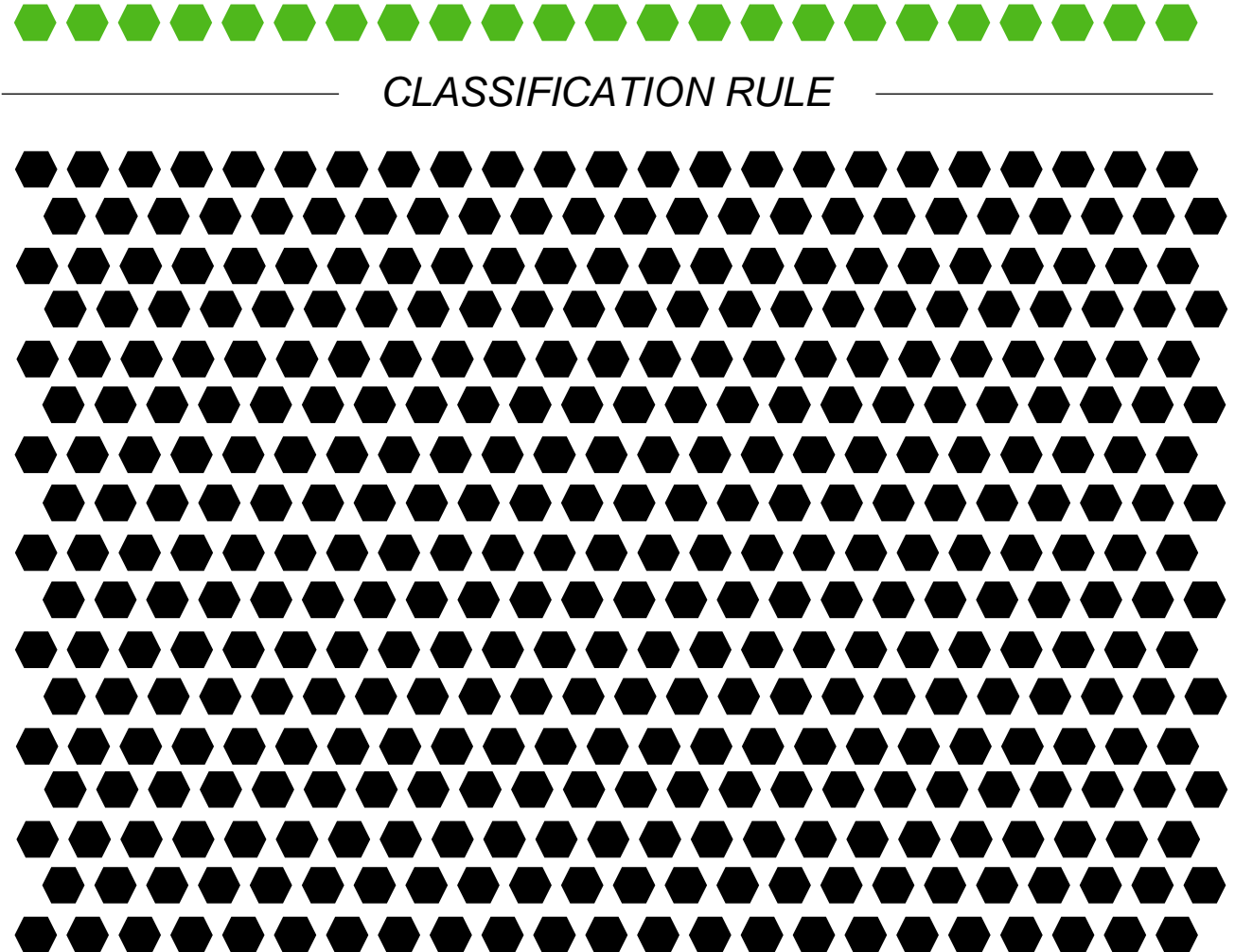


# Learn from the past - Choose the best Model

Train on one part of the historic data.  
Validate the result on the other part.

The data: Provide as much information as possible. Any information can help to separate the groups. For example:

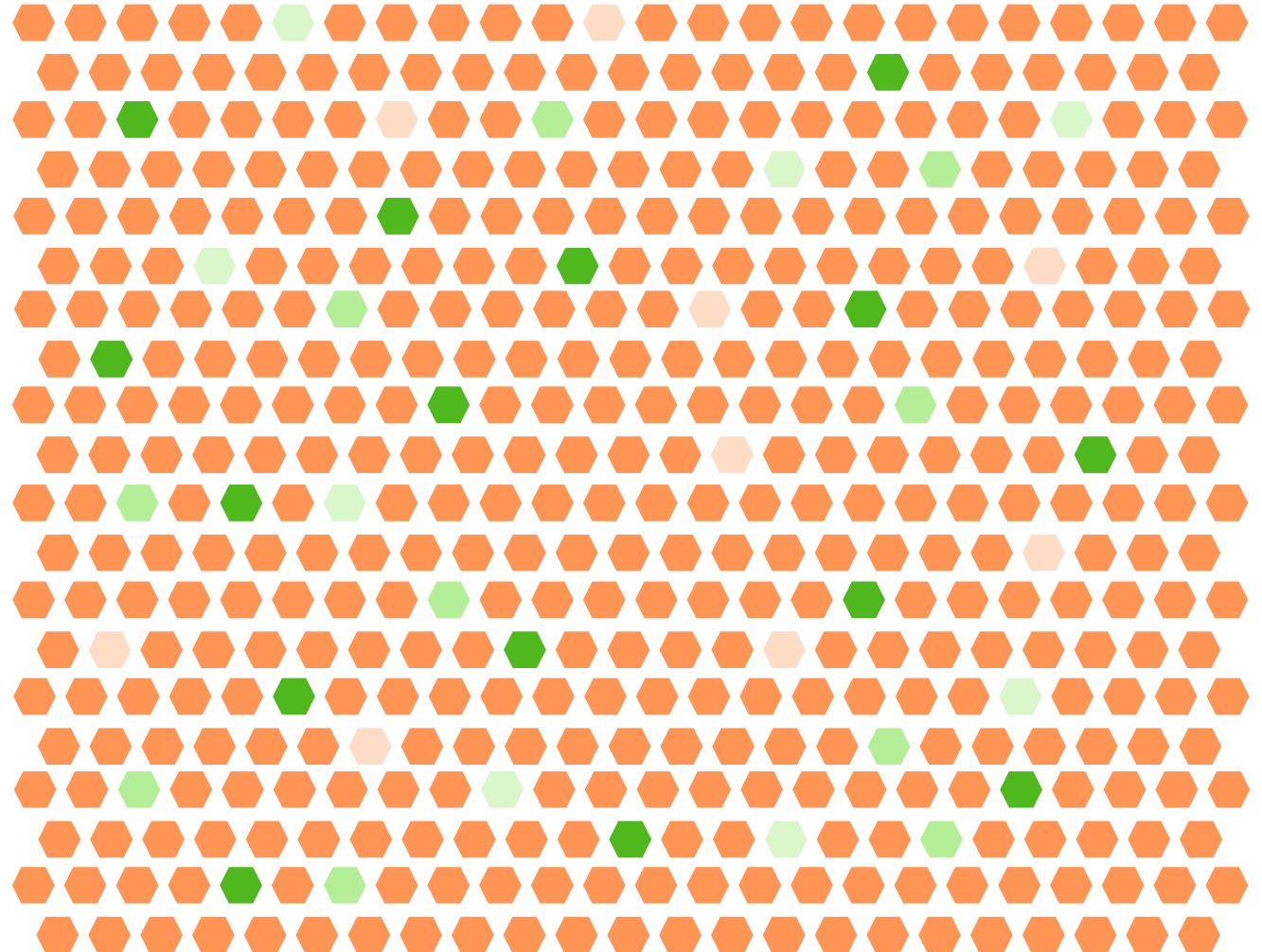
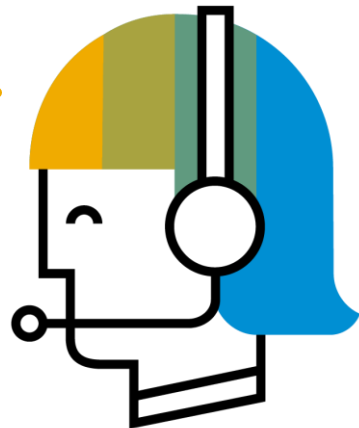
- Time spent on our shopping portal
- Number of abandonend shopping carts
- Age, Gender
- Martial status
- Sales current year
- Sales previous year
- Change of sales between years
- Number of contacts/visits
- Payment history
- Outstanding payments
- ...





# Learn From the Past – Apply the rule on potential customers

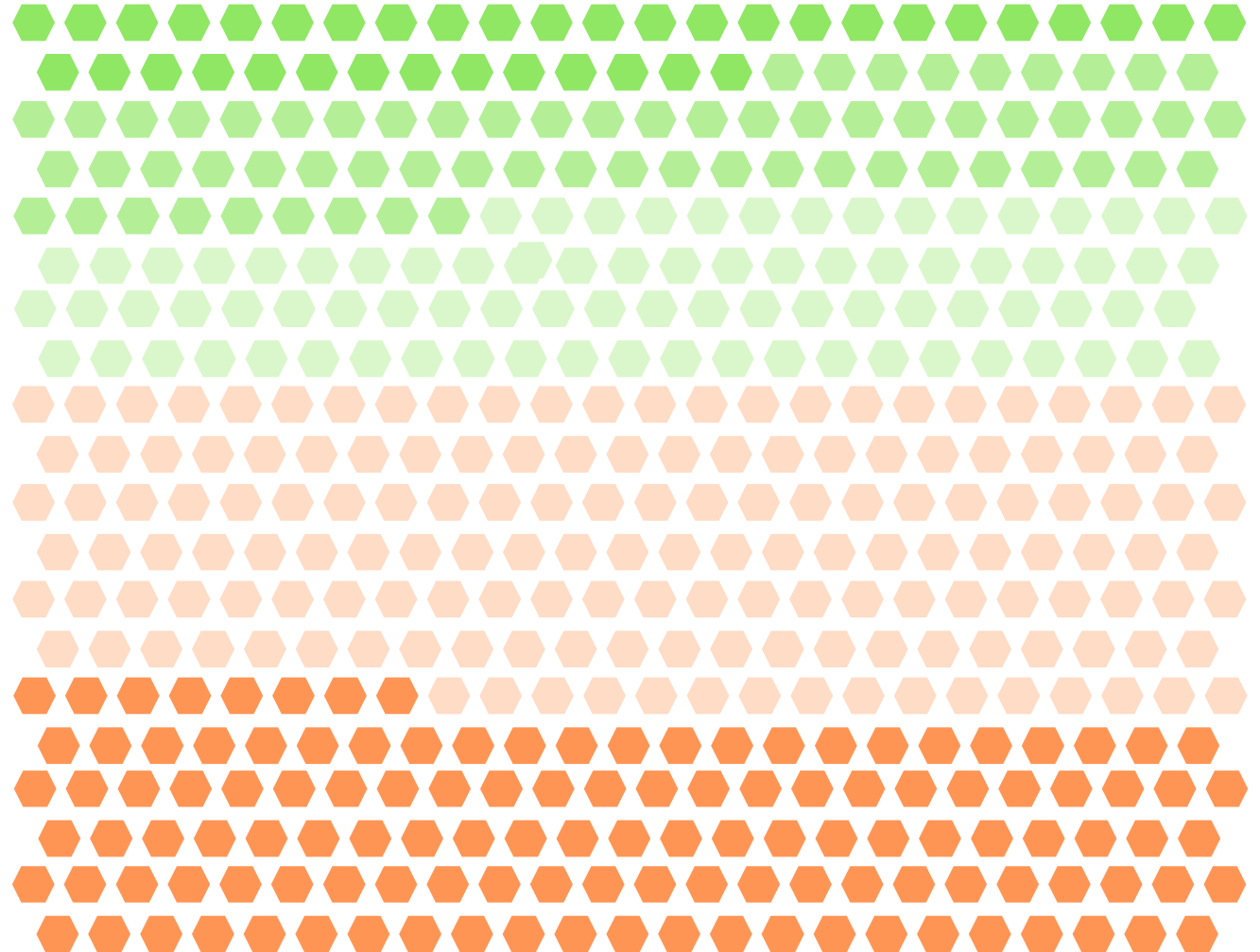
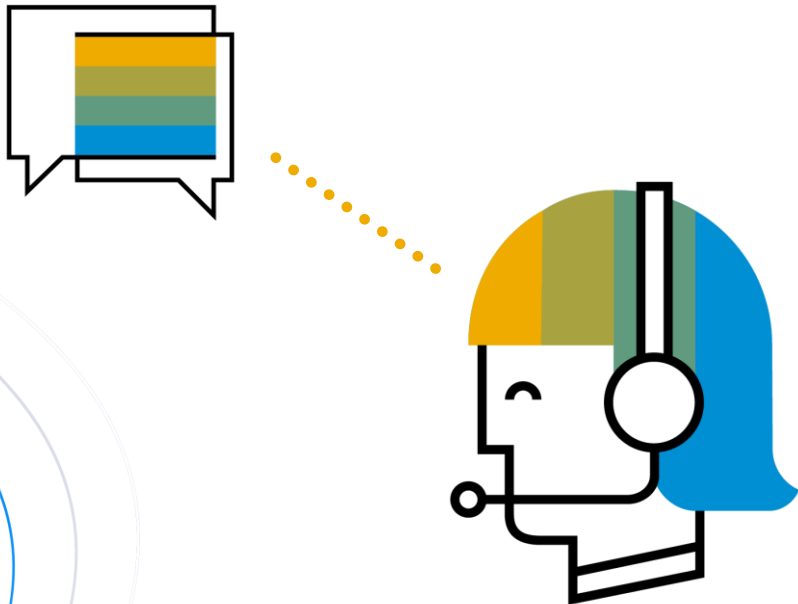
The rule is applied to potential customers and assigns a probability to each customer that stands for the likelihood that this customer will buy the offered product.



# Look into the future: Use the result of the Prediction

## Call Center Action:

Start at the top!  
Contact the customers with the highest probability.



# Vielen Dank.

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