# Case Study:

Telecommunication – Direct Marketing

# Overview:

A major Telecom player wants to promote data services by targeting existing customers. The direct marketing campaigns is planned using voice calls through call center. Often, more than one contact to the same customer is required, in order to access if the data pack would be (or not) subscribed.

# Telemarketing is an interactive technique of direct marketing via the phone / SMS which is widely used by Telecoms companies to sell value added or data services. Although direct marketing can be extremely powerful at generating sales, the vast number of marketing campaigns has reduced the effect on the general public.

# The aim of this study is to predict whether existing customer is going to subscribe to data pack or not. The target variable is a binary variable that indicates whether customer eventually subscribe for data pack.

# Goal:

The classification goal is to predict if the customer will subscribe a data pack (variable target). Goal of the case study is to come up with project implementation methodology with tested models which gives best prediction using the historical training data for building model logic and validating on the hold-out set.

# Data:

The test data is not released to the participants during the competition; now, however, jury will use it to validate the model accuracy using ranking ordering, mis-classification rate and KS statistics. Test data structure is same as the validation data structure and participants are expected to provide scoring logic that will be tested on “test dataset” for scoring.

* Age: age of customer (numeric)
* job: type of job (categorical)
* marital: marital status (categorical)
* education (categorical)
* connect: has more than one connection? (binary: "yes","no")
* balance: voice credit balance (numeric)
* landline: has landline? (binary: "yes","no")
* smart: has smart phone? (binary: "yes","no")
* last\_day: last contact day of the month (numeric)
* last\_month: last contact month of year (categorical)
* duration: last contact duration, in seconds (numeric)
* campaign: number of contacts performed during this campaign includes last contact
* passdays: number of days that passed by after the customer was last contacted from a previous campaign (numeric, -1 means client was not previously contacted)
* previous: number of contacts performed before this campaign
* poutcome: outcome of the previous marketing campaign (categorical)
* target: has the customer subscribed a data pack? (binary: "1","0")