# Solving a Business Problem with Analytics

## Defining the Right Business Problems (Answer the traditional six discovery questions)

1. What?
2. Who?
3. Where?
4. When?
5. Why?
6. How?

## Fill out the table below:

EXHIBIT 1 **Asking the Right Questions to Identify the Right Business Problem**

| BUSINESS CONSIDERATION | SAMPLE QUESTION |  |
| --- | --- | --- |
| **Context** | What happened?  What is the current problem we are trying to solve?  What is the potential opportunity?  Why is there an interest in solving this particular problem? What is the business doing to mitigate or solve the problem? What efforts have been made in the past? How has this problem evolved over time? |  |
| **Impacted unit** | Where did this problem happen? What divisions are impacted by this problem? When did it take place? |  |
| **Root-cause analysis** | What might have caused this? What do you think continues to drive this problem? |  |
| **Timeline** | When do decisions need to be made? What is the optimal timeline for reaching milestones along the way? |  |
| **Stakeholder** | Who is asking for the analysis? Who are the executives interested in the results of the analysis? Who will be impacted by the analysis and subsequent recommendations? Who will carry out the analysis? What financial or emotional interest is involved from stakeholders? Is it positive or negative? |  |
| **Expected impact** | What are the actions to take based on the analysis? What support will end users have? What is the anticipated ROI from solving this problem? What are the ethical implications of the analysis? |  |

## What type of Data Sources are used in this case?

1. **Primary data**? Explain in details:
2. **Secondary data**? Explain in details:

## What types of Data this project used?

1. Did the project use [**Structured data**](javascript:void(0);)? Explain in details:
2. Did the project use Unstructured Data? Explain in details!

## What types of Data Measurement this project used? Fill out the table below.

|  |  |
| --- | --- |
| DATA MEASUREMENT TYPE | List the variables used in this case |
| **Discrete** |  |
| **Continuous** |  |
| **Binary** |  |
| **Nominal** |  |
| **Ordinal** |  |
| **Interval** |  |
| **Ratio** |  |

EXHIBIT 3 **Data Measurement Definitions and Examples**

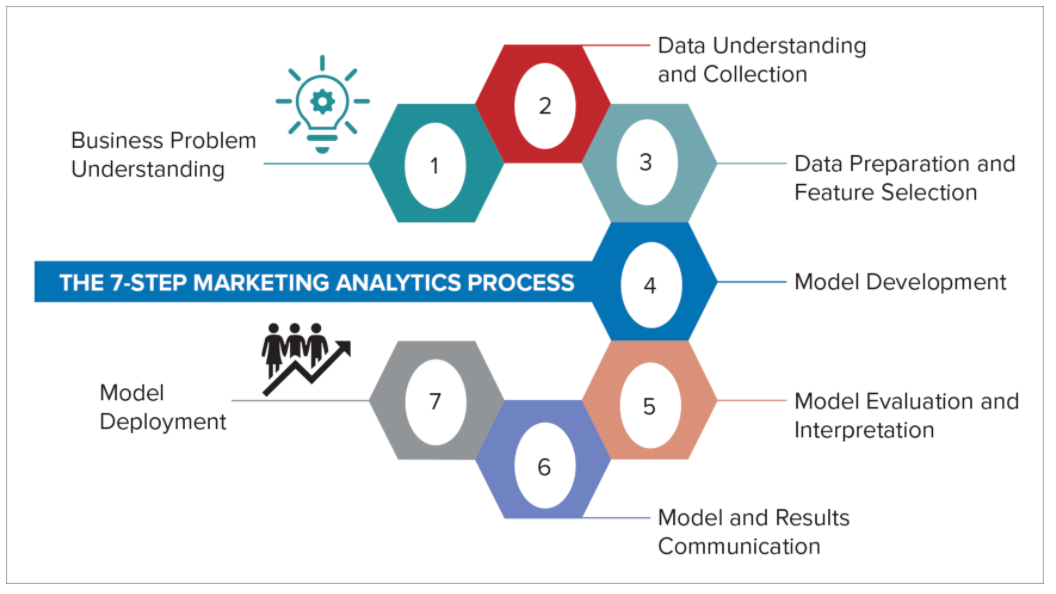
## Define the **independent** (predictor) **variable**s and the [**dependent**](javascript:void(0);) (target) or outcome variables used in this case. Explain in details:

## What Modeling Type used in this case study? Supervised Learning OR Unsupervised Learning. If it was Supervised Learning, did the case use [training dataset](javascript:void(0);), [validation dataset](javascript:void(0);), and/or [testing dataset](javascript:void(0);) - Explain in details!

Define the 7-Step Business Analytics Process of this case study! (There are seven steps involved in the business analytics process (see Exhibit 4). Data modeling is only part of the journey, not the full business analytics journey.

The 7-step business analytics process is iterative and continuously evolves to develop and manage improvements in the business analytics cycle. Each step plays an important role in achieving a successful outcome.)

Exhibit 4 The 7-Step Business Analytics Process



The 7-Step Business Analytics Process

## Step 1: Business Problem Understanding

## Step 2: Data Understanding and Collection

## Step 3: Data Preparation and Feature Selection

## Step 4: Modeling Development

## Step 5: Model Evaluation and Interpretation

## Step 6: Model and Results Communication

## Step 7: Model Deployment