

Module: 01

Topic: Business Understanding

Q1. For the below listed Business Problems, draft Business Objectives and Business Constraints.

S.no	Business Problem
1	Smart data platforms can bring together customer transactions data and data from real-time communication streams to disclose the insights concerning customers feelings about the services which allows addressing the satisfaction-related issues and churn prevention.
2	Advanced targeting allows predicting needs, preferences and customer's reaction to the telecommunication services and products on offer by segmenting their market and target the content according to each group.
3	Telecommunication companies tend to regard the customer's engagement process and internal channels as a guarantee of smooth functioning of the operations. Network management and optimization gives an opportunity to identify the root causes.
4	Ensuring the high-quality performance of the product according to the customer's requirement is not possible without applying smart data solution
5	Collection of positive & negative reaction to the service or product from social media sources, recent trends via Customer sentiment analysis. This may provide an opportunity of utilizing mechanisms for direct responding.
6	Acquiring as many subscribers as possible remains a critical goal, anyway. In recent years the number of users has been growing extremely fast, pricing emerged as a tool to limit congestion and increase revenue at the same time.
7	Customers usually search for better & cheaper services, so the telecommunication companies to measure, manage and predict the customer lifetime value (CLV). Smart solutions process real-time insights based on customer purchasing behavior, activity, services utilized, and average customer value.
8	In telecommunications, companies prevent bypass fraud by using big data to review the source of transactions, the cost of the call, and the destination number, in real-world situations.
9	Identify security issues, conduct predictive analysis, and use machine learning-based solutions to analyze any patterns of threats and automated escalations to resolve issues before they cause serious damage.

10	Retail industry use AI systems with built-in machine learning algorithms to collect and analyze data regarding products, transactions, etc. Based on findings from data, systems estimate the best strategies that can be implemented for the profit of the business
11	The price formation process depends not only on the costs to produce an item but on the wallet of a typical customer and the competitors' offers. The tools for data analysis bring this issue to a new level of its approaching.
12	Inventory, as it is, concerns stocking goods for their future use. Inventory management, in its turn, refers to stocking goods in order to use them in time of crisis. The retailers aim to provide a proper product at a right time, in a proper condition, at a proper place.
13	Customer feedback is taken as the important aspects of the retail store. To increase the store profits and customer satisfaction based on kiosk survey given by the customer
14	To be extremely efficient about the issue of the new store's location. To make such a decision a great deal location give a basis for understanding the potential of the market. Also, special settings concerning the location of other shops are taken into account
15	Airlines use AI systems with built-in machine learning algorithms to collect and analyze flight data regarding each route distance and altitudes, aircraft type and weight, weather, etc. Based on findings from data, systems estimate the optimal amount of fuel needed for a flight.
16	Airlines and flight operators can significantly reduce their operational costs and overhead by optimizing their sales revenue in the longer term to ensure all flights with AI-powered systems (Dynamic pricing)
17	As flight delays are dependent on a huge number of factors, an intelligent system can be applied to analyze huge data sets in real time to predict delays and re-book customers' flights in time.
18	By analyzing specific customers' flight and purchase patterns and coupling it with historic data, algorithms are able to point out suspicious credit card transaction and eliminate fraudulent cases, saving airline and travel companies millions of dollars every year.
19	The optimal way to schedule an airline's crew to maximize their time and increase employee retention?
20	The image of the enterprise in the community largely influences recruitment process. A person may not be interested to apply for a job in an enterprise whose goodwill is not good.
21	If the job is boring, hazardous, tension ridden and lacking in opportunities for advancement, very few persons may be available for such jobs.

22	One of the greatest challenges that an HR leader could face is keeping the staff satisfied.
23	Organizations face huge costs resulting from employee turnover. Some costs are tangible such as training expenses and the time it takes from when an employee starts to when they become a productive member.
24	Attracting the attention of a candidate and driving the traffic towards a company's hiring page is one place where an AI can and is seeing a widespread use.
25	HR departments are responsible for the implementation of training programs. Some of these programs are designed to ensure your staff follows policies and procedures while others are used for job advancement. In some job settings, employees are required to complete certain certification programs.
26	Understanding people and why they decide to stay at or leave a job is arguably one of the most important questions for HR to answer. Identifying attrition risk calls for advanced pattern recognition in surveying an array of variables.
27	Your HR department likely deals with many requests and queries from employees throughout the day. This could include queries about available time off, vacation time, or HR issues with their paycheck. They may also receive requests for shift swaps and other scheduling problems.
28	In Modern manufacturing, production can often depend on a few critical machines or cells, the same data that provides a manufacturer real-time monitoring can be analyzed through data science to improve asset management and prevent machine failure.
29	To helps manufacturers, analyze if their product and services are meeting all objectives for initial processes such as DMAIC framework. To be used to determine which product has the highest impact. helping in minimize errors and losses and eliminates unnecessary human effort, thereby increasing the overall quality of products and services.
30	Some flaws in products are too small to be noticed with the naked eye, even if the inspector is very experienced. The time taken for inspection is also slowing down the production.
31	To make design enhancements/upgrade the current version of the product to increase consumption of the product and thereby the brand image. To bring in the features most of the customers use we need to understand customer behavior towards the product, brand, and their interests.
32	For many contract manufacturers, product development is part of the service they provide, so having data to validate their choices to their customer is crucial. To validate the choices, we need to depend on a wide range of factors such as value for money, quality, reliability, and service. It is crucial to gather such data, also how your own potential customers weigh up their purchasing decisions.

33	Manufacturers are able to detect all kinds of issues on their routine methods of production, from bottlenecks to unprofitable production lines. Companies are taking a deeper look into their logistics, inventory, assets and supply chain management. The insights will bring high-value insights that uncover potential opportunities not just in the manufacturing process but also in the packaging and distribution.
34	The Department of Employment, Skills and Small Business carries out research to identify skill shortages in the labor market. Factors for Skilled labor shortage analysis are, adequate availability of vacancy, job postings and recruitments, applicants qualifications for the job, factors affecting the position to be filled, such as required licensing requirements, qualification and experience requirements are few of those constraints that should be considered.
35	The world is constantly changing. Thus, the sports industry is faced with the challenge of trying to predict the next trend, the next big idea that will capture their audience. Coupling this challenge with that of technology, it's clear that some sports teams and venues will always be at odds.
36	A team can find out the strengths and weaknesses of key players in the opposite team by analyzing past data and device their own tactics accordingly
37	Using machine learning algorithms to find out the profile of players who are best to be bought/sold
38	Betting companies to analyze the massive amounts of data generated by sporting events all around the world, to come up with probabilities for future outcomes. Goes without saying that predictive modelling using Machine Learning techniques plays an important role in this
39	Stadium management and Sponsors have studied the average profile of their audience carefully and have made targeted advertisements that appeal to their audiences. The broadcasters and stadium management has placed those ads carefully after conducting a careful analysis of its own resources for maximum impact

Hints:

1. Understanding the Business Problem

Should come up with short one-line statements using Maximize and Minimize terminology for Objective and Constraints