

“AÑO DEL FORTALECIMIENTO DE LA SOBERANÍA NACIONAL”

**UNIVERSIDAD ANDINA DEL CUSCO**

**FACULTAD DE INGENIERÍA Y ARQUITECTURA**



**MAPA MENTAL – ACTIVIDAD EN INGLÉS**

**ASIGNATURA:**

**INVESTIGACIÓN OPERATIVA II**

**DOCENTE:**

**MAG. CHOQUE SOTO, VANESSA MARIBEL**

**ALUMNOS:**

- FERNANDEZ LA ROSA, ALESSANDRO
- GONZALES VILLCAS, ORLANDO ANDRE
- MENDOZA SEGOVIA, KELMA ESTEFANNY
- PEÑA TEJADA, PABEL SEBASTIAN
- QUILLAHUAMAN TTITO, DUSHAN WILLY
- ROBLES FERIA, CRHISTIAN RAPHAEL
- SEGA HANCCO, MIGUEL ANGEL

**CUSCO - PERÚ**

2022



Manage business, data, statistics...

Business Analytics is a set of disciplines and technologies

**BUSINESS ANALYTICS**

- Types:
- Descriptive analytics: This type of analytics analyzes the data coming in real-time and historical data for insights on how to approach the future.
  - Predictive analytics: This facilitates the establishment of realistic goals for a company, strategic planning, and expectations handling
  - Prescriptive analytics: Prescriptive analytics advises on possible outcomes and results in actions that are likely to maximize key business metrics.



- What has happened?
- What could be the future outcome based on previous trends and patterns?
- What should a business do?



EXAMPLE: UNIQUE/MULTIPLE PRODUCTS

Unique product

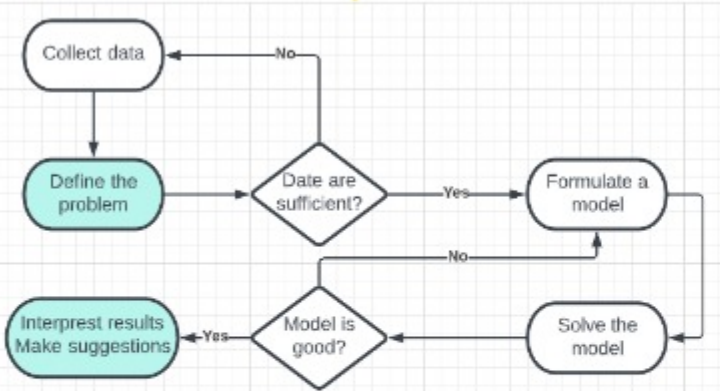
- Prevent understocking or overstocking.
- Estimate the random amount of demand during one order cycle time. (Data Analysis)
- According to the random amount of demand, find the inventory level to maximize the expected profit. (Operations Research)

Multiple products

- Demand substitution: "There's no Coke, how about Pepsi?"
- Estimate the probability of demand substitution between A and B, which is the probability for one to purchase B when A is sold out or vice versa. (Data Analysis)
- Given the substitution probabilities, find the best inventory levels of all products. (Operations Research)



The Process of Conducting an OR study



ANALYTICS IS NOT EVERYTHING



Advantages:



- It describes a problem in a precise and concise way (among people and between a person and a computer)
- It facilitates the use of computers to solve a problem whose model has been formulated.

Disadvantages:



- Some of the problems are hard to be formulated into mathematical models
- Some critical information is missing.