INTRO

How to increase productivity?  
How to promote decision-making?  
How to allow quick access to information?

The answers for these questions are a must in every company in every domain to answer them first you have to:

• Collection of necessary information.

Next:

• Analyze the information.

Then

• Making better decisions.

Which will lead to

• Improve the performance of the company.

And that will give you the ability to

• Quickly access to information

**THEORETICAL FRAMEWORK**

To clarify somethings from the beginning we are going to start with the main and the important word ‘business intelligence’:

* business intelligence belief’s that:

The main asset of a company is information

that she owns.

* And its objective is to:

Transform collected data into relevant information even in knowledge

So we can say that BI designates the means, tools and methods for collecting, consolidate, model and restore data of a company in order to offer a decision aid and to have a view of the activity covered.

**Business intelligence**

BI offers many solutions and have many advantages such as:

* Accelerate and improve decision making, optimize internal processes, increase operating efficiency, generate new revenue, and gain the advantage over the competition
* Plus Business intelligence data can include historical information, but also new data from source systems, collected as soon as it is generated. BI analyzes allow you to make both tactical and strategic decisions.

TARGETS

Of course, Business intelligence is not just an application or a report it’s a whole process that have a THE STRATEGIC VISION:

* First: its whole construction of the decision system is based on the formalization of the objectives for the different company officials.
* Second: its objective is defined as a goal to be achieved and not a task.
* Third: its Decision analysis is based on a series of indicators. These indicators will be analyzed across dimensions. The basic indicators, which share the same set of dimensions, are grouped in a fact table.

**State analysis**

through this project, we are working to overcome a significant lack of decision-making. This lack is characterized by the almost inexistence of decision support support, and the unavailability of effective Reporting means.

So the ability to provide adequate information in a timely manner.

And this process will have 5 steps as follows:

* Step 1: The collection of information and elaborating the data bases
* Step 2: graphic representation of raw data to over come malfunctions and errors
* Step 3: query and analyse the data
* Step 4: use the analysis and the outcome of the query to make a dashboard and reports
* Step 5: help the deciders to make the decision

**Project approach**

So, we will consider these steps as a project of two phases

* Phase1: Creation of a database and development of an ETL:
  + We will start with collecting data.
  + Then transform it.
  + Finally load it to databases
* Phase 2: is the part where we will Develop the dashboard:
  + Which will contain an interface for viewing reports.
  + And detailed visualization of reports.
  + Also, the option to export it

Project management

* This project aims to implement a corrective action within the company and communication support between managers
* It will be considered as a tool for detecting opportunities and anomalies and highlighting actual and potential performance as well as malfunctions
* So it will Promote decision-making, after analysis of remarkable values.

Design

The system actors in this application are:

* + **The Consultor**: it’s the person who simply use the project for informative purpose only such as farmacies workers.
  + **The decision maker:** It’s the person who commits sustainability or the purpose of the organization such as the directors of the company.

**Design:**

**The ENTITY-RELATIONSHIP DIAGRAM (ERD)** displays the relationships of entities set stored in a database. In other words, we can say that ER diagrams help you to explain the logical structure of databases, so as we can see here the we have a fact table based on measures from the transaction and produit tables and its linked with three foreign keys to make the visualization more comprehensive.

Implementation

We will start with Presenting what’s the ETL and how it will help us:

it allows us to extract raw data from a database, then restructure it, and finally load it into a Data Warehouse.

ETLs allow real-time ingestion, data enrichment, support for billions of transactions. They also support structured or unstructured data from on-site or cloud sources. Likewise, these platforms must now be scalable, flexible, fault-resistant, and secure. With that we will have reliable reports to make a wise and good decisions.

Implementation

Here you can see a glimpse of the dashboard and the report that this application can generate:

From a technical overview we can say that the state of the company is actually good it is rocking the market with 839 turnover, if we analyze the pie-chart we can say that about 50% of the turnover is from paracetamol category and the lowest percentage is smectite so in case of emergency we can invest more in the paracetamol and stop the distribution of smectite products for some time, or we can change the region for the smectite and invest 60% in the paracetamol and 7% in smectite from other sector.

And As we can see here that panadol have the highest sales with more than 112MD

This sided bar-plot tells a different story we can see that doliprane 1000 and doliprane 500 are the same meds from they same category with the same effect, so it would be wise to drop down the doliprane 500 and make 50% investment instead in doliprane 1000 since it promesis a higher sales and returns and we can invest the other 50% percent in Panadol but in an other region to win a wider area of distribution and sales and more promising returns

Implementation

Another method of visualization is with geo location that could give us more dynamic and atheistic look to the dashboard even an easier and better understanding of the situation

And to the right we can see a couple of tables explaining the turnover (chiffre daffaire) and the quantity of products sold by region and the names of pharmacies in each sector with a

bar plot below explaining all of that

Conclusion and perspective

What have we learnt from this project professionally!

• a new profession.

• Familiarization with PowerBI and PHP, Talend, MySQL tools

• how to Manage and organize work.

• field of decision-making.

**Personally:**

• a better view of the working domain

• Patience and determination.

• Responsibility.

• Communication.

•and finally expertise.

Tools and technologies used in this project are :

* Talend for ETL
* PhpMyAdmin from wamp for databases
* Microsoft excel for raw data
* Mysql language
* Yed graph editor for Entity Relationship diagram
* Powerbi for dashboarding

THANK YOU FOR YOUR ATTENTION