Welcome to the School of Visual Concepts!

Introduction to Data Analytics

DOWNLOAD:
Tableau Public and Data Set

1. Tableau Public → Search on Google
2. Class Materials → goo.gl/28Uqqc

INSTRUCTOR CONTACT
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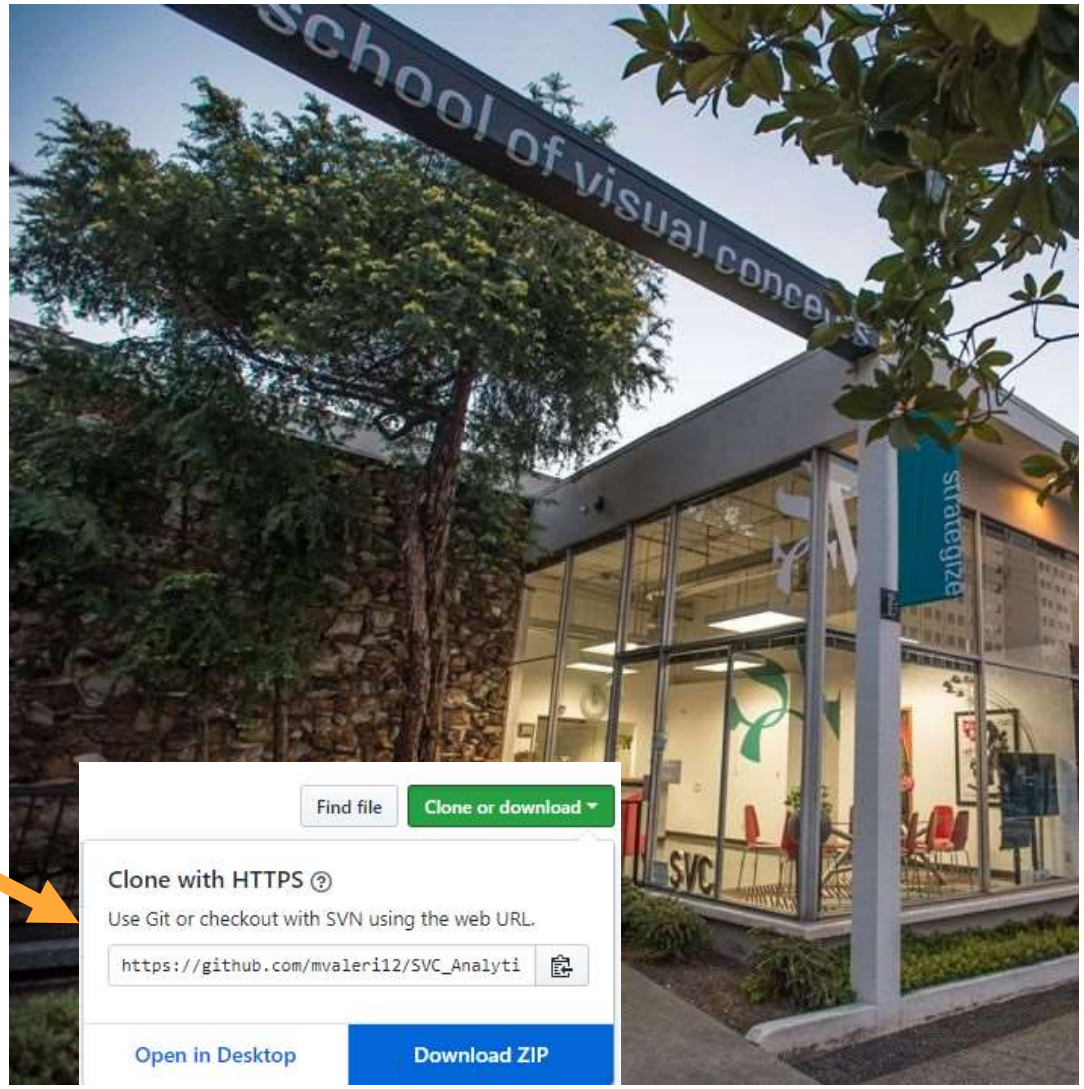


Mission

MINIMIZE TIME AT DESK

GENERAL ASSEMBLY

GoDaddy

BIG FISH

T-Mobile

2012 2013 2014 2015 2016 2017 2018

amazon

Expedia

H10 Capital

LET'S GET STARTED...

AGENDA

Part 1 – Introduction (30 min.)

- What is Data Analytics?
- What is the current state of Data Analytics
- What framework do analysts use to analyze data?
- Explain tools analysts use to tell a **story** with data.

BREAK (10 min)

Part 2 – Hands on Learning (2 hr. 10 min.)

- Analyze a dataset…
- Build A Tableau Public Dashboard

Part 3 – Q&A (15 min.)

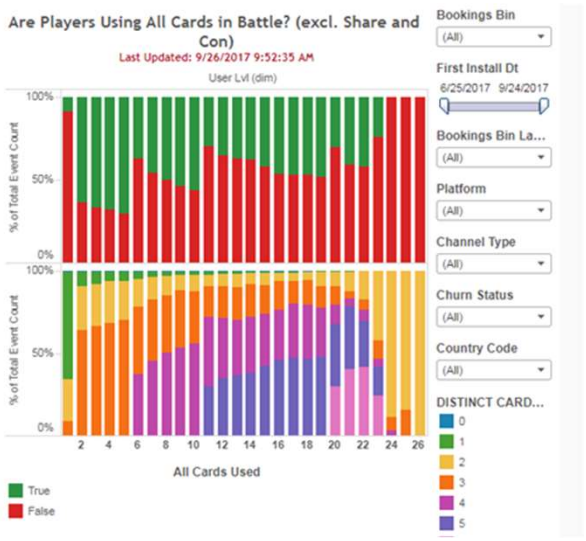
CLASS EXERCISE

TALK TO OTHER PEOPLE ABOUT DATA

INTRODUCTION

What Is Data Analytics?

What is Data Analytics?




```
SELECT
sum(A.quantity) as Quantity
,C.CategoryName

FROM orderdetails A

LEFT JOIN Products B
ON A.productid = B.productid

LEFT JOIN Categories C
ON b.categoryid = c.categoryid

GROUP BY
C.CategoryName
```

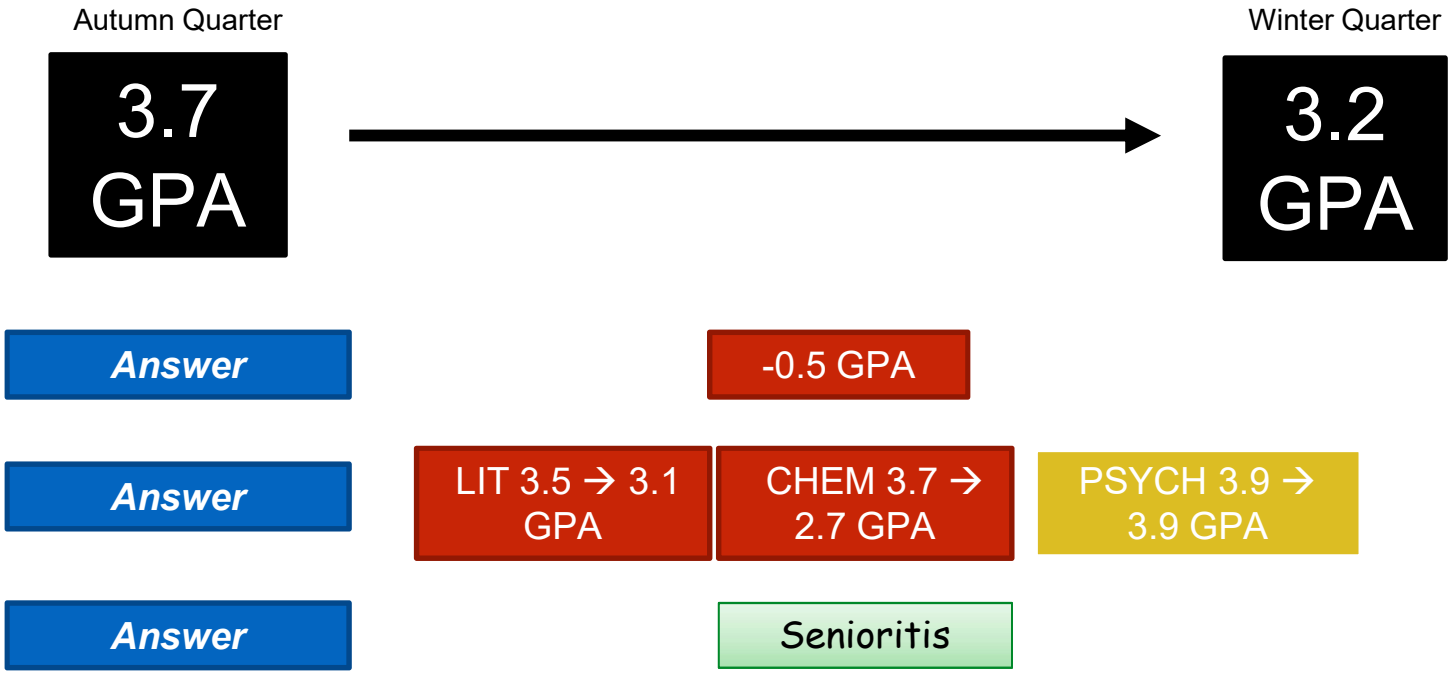
Fancy Charts?

Writing Code?

Presenting Information?

Sort of….

What is Data Analytics? – GPA Example



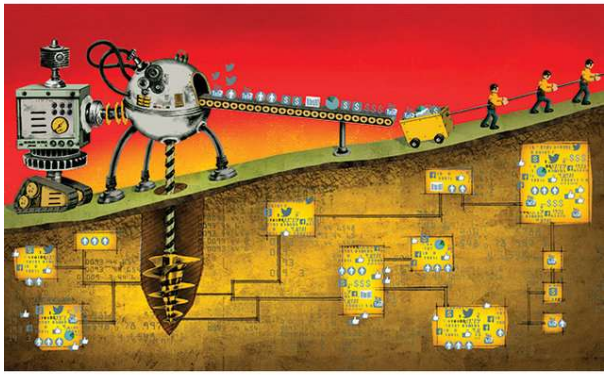
What is Data Analytics?

Storytelling with numbers

WHAT IS THE CURRENT STATE OF DATA ANALYTICS?

Current State of Data Analytics

DATA GOLD RUSH OF 2018



WHAT HAPPENED TO THE GOLD?

IT'S GONE

WHAT WILL HAPPEN TO THE DATA?

IT WILL NEVER *EVER* DISSAPEAR

Future State of Data Analytics – By 2020

40 zettabytes

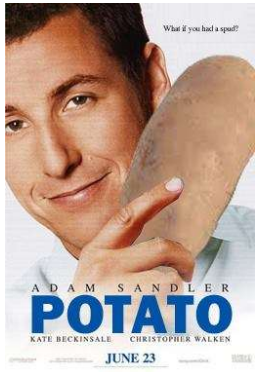
Future State of Data Analytics – By 2020

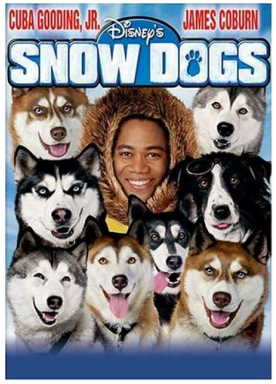
1 zettabytes = 250 Billion DVDS

1 DVD = 180 min

Future State of Data Analytics – By 2020

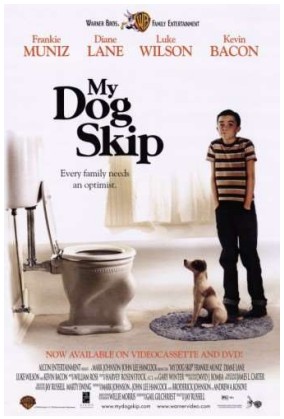
NEED 181K more people to analyze this data by end of 2018!

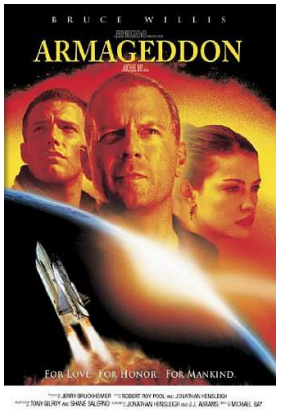




3/4

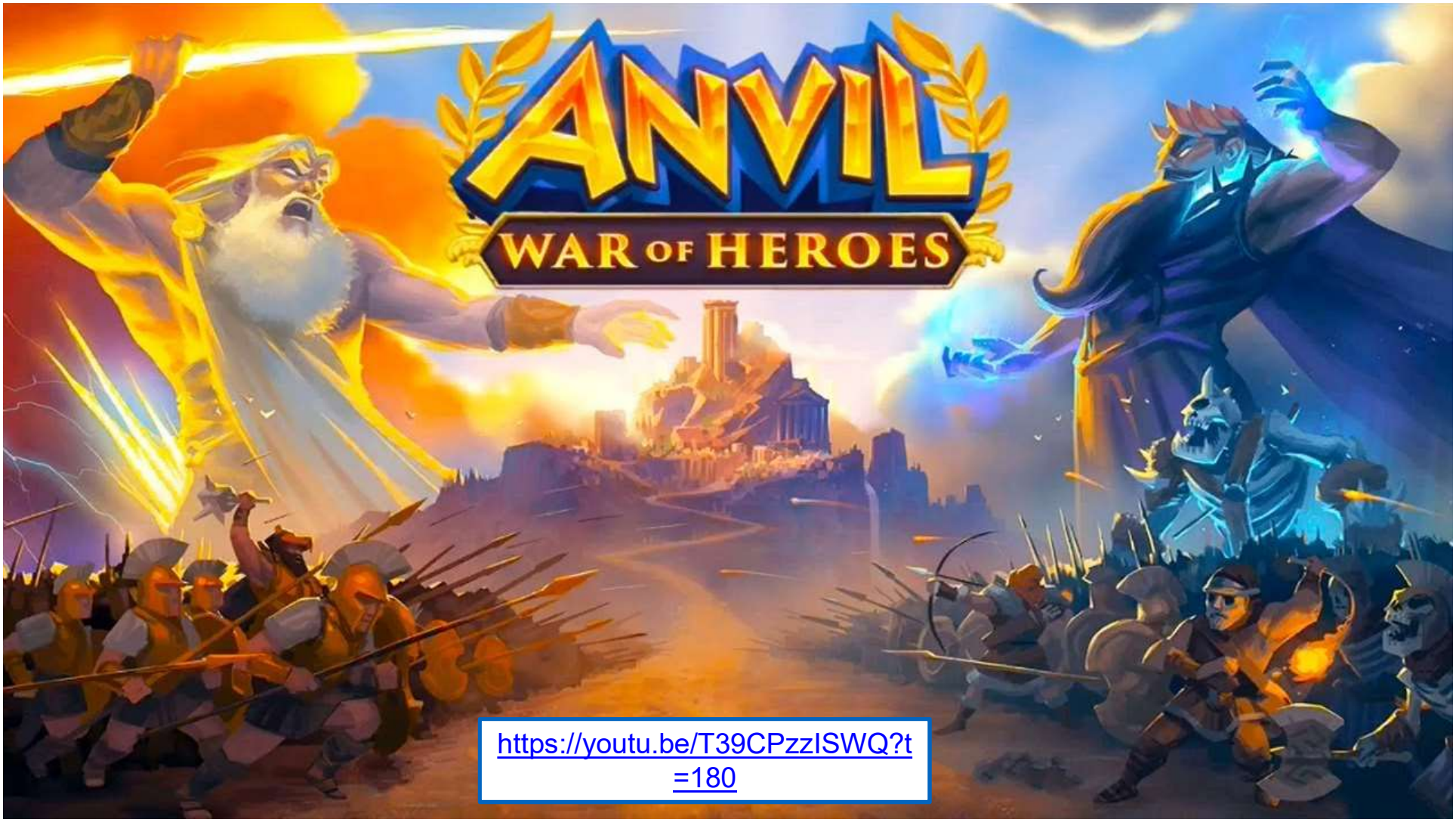
Of Earth's History
on DVD Quality Video
(Earth is 4.5 billion years old)



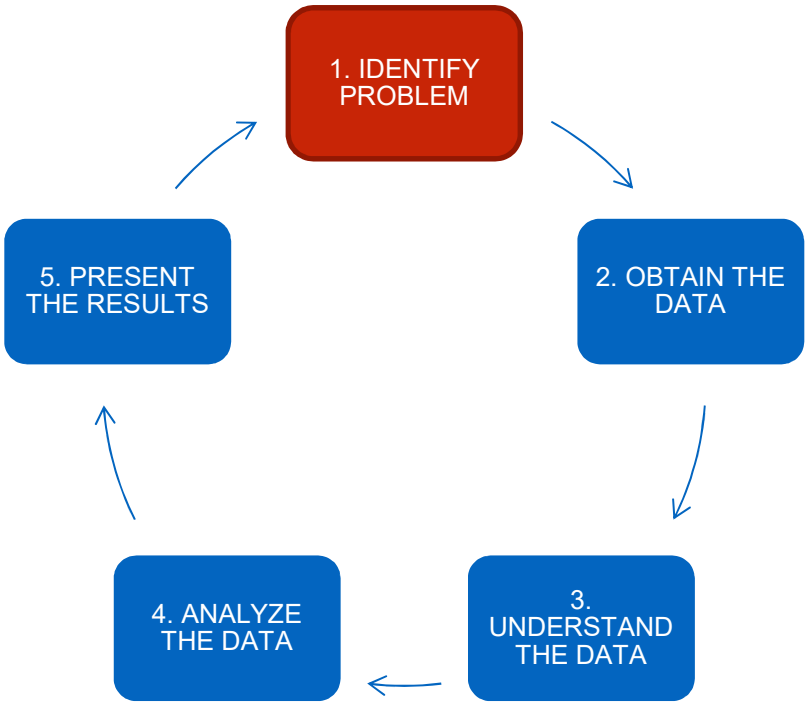


LESSON

HOW DO ANALYSTS THINK ABOUT DATA?


ANVIL
WAR OF HEROES
https://youtu.be/T39CPzzISWQ?t=180

HOW DATA ANALYSTS THINK ABOUT DATA?



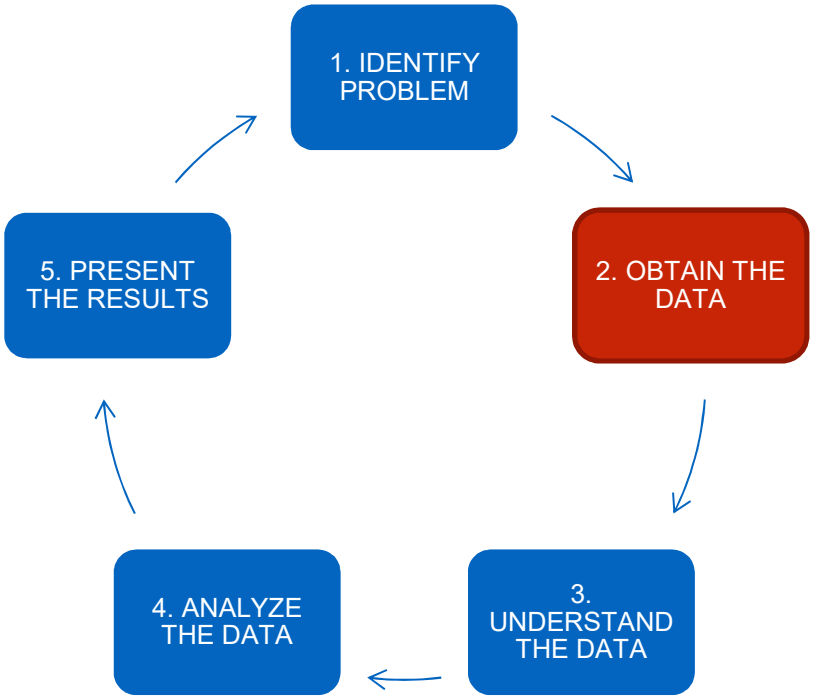
Step 1: Identify the Problem

Before you begin working with data, you need to understand the problem you are trying to answer.

Michael, figure out if the game designers should revamp the UX for the card upgrade system…

Jon G.
Head of Marketing, Big Fish Games

HOW DATA ANALYSTS THINK ABOUT DATA?



Step 2: Obtain the Data

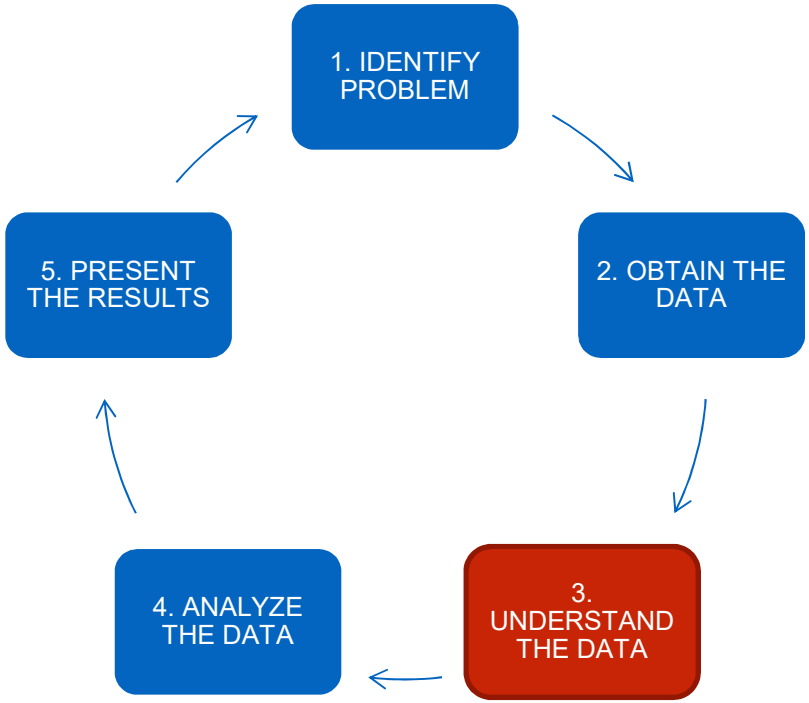
Most data needs to be obtained through a Data Warehouse. A database with a collection of tables. You need to find the right tables that store this information.

Database

SQL → *Talk to Database*

Data table → Output of SQL

HOW DATA ANALYSTS THINK ABOUT DATA?

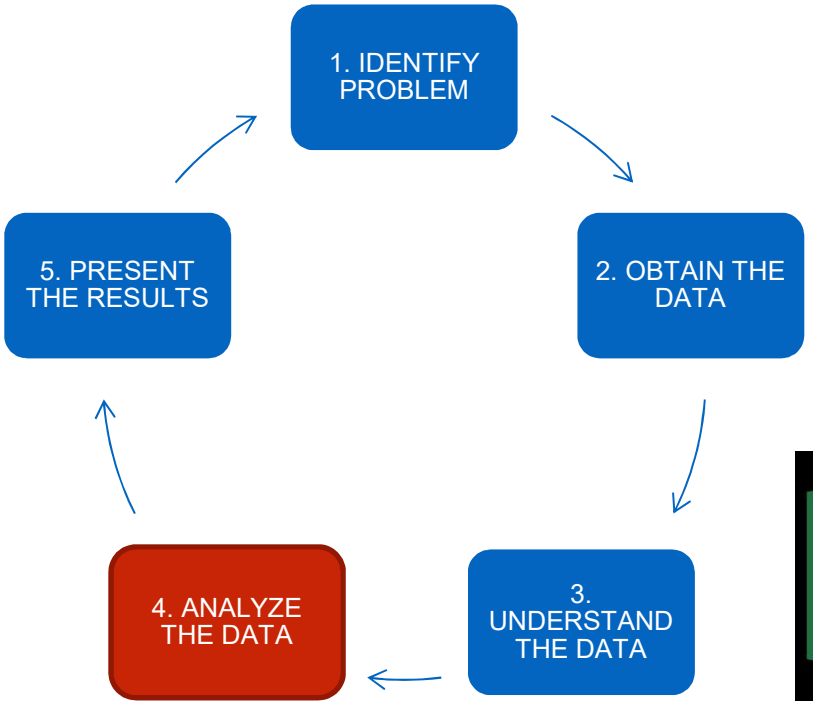


Step 3: Understand the Data

Then you need to see if you can correctly interpret the results and trust the data

USER_ID	USER LEVEL	CARDS AVAILABLE TO UPGRADE	CARDS UPGRADED	DEVICE_TYPE
345742	4	30	2	iPhone
798202	6	20	5	Android
736201	8	16	4	iPhone
736201	8	16	4	Android

HOW DATA ANALYSTS THINK ABOUT DATA?



Step 4: Analyze the Data

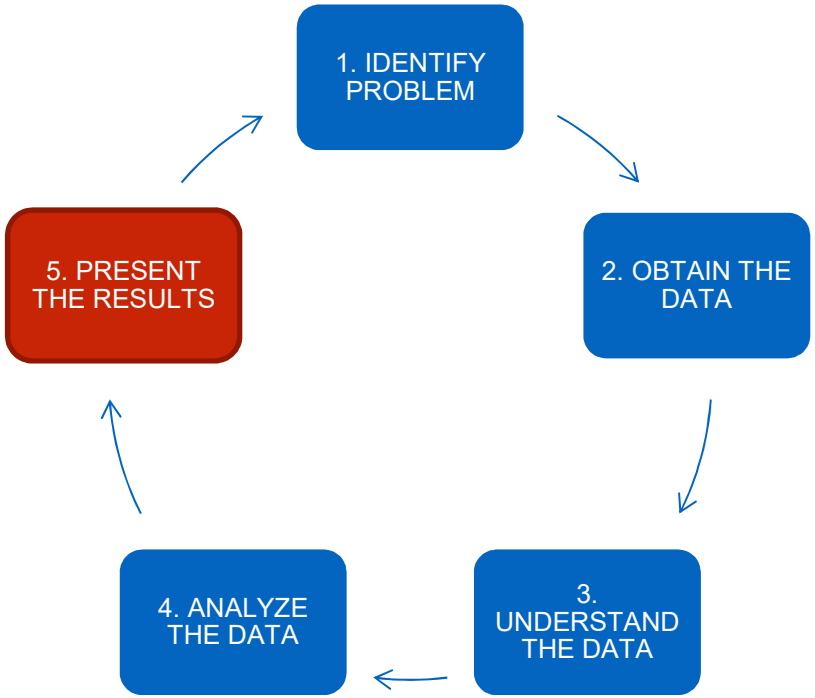
Now, you are ready to uncover the answer to your question, assuming you haven't ended up at a prior step due to missing data or a poorly understood question.

WHO ARE THE USERS?

WHAT USERS HAVE UPGRADED A CARD?

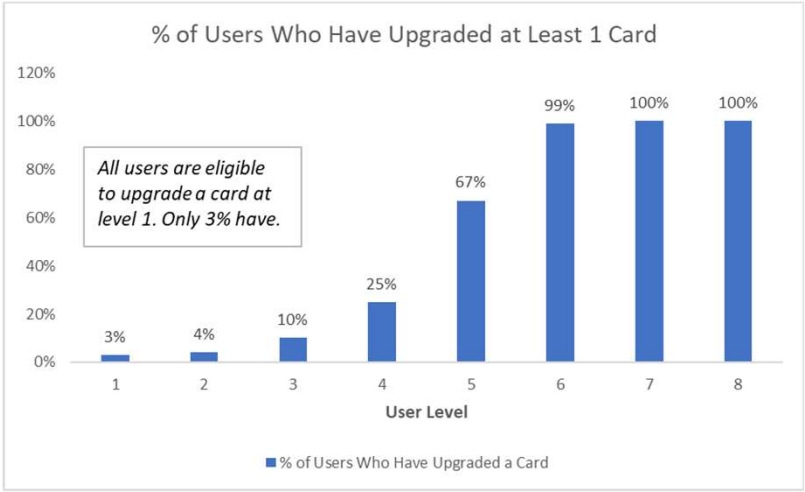
HOW MANY TIMES HAVE THEY DONE IT?

HOW DATA ANALYSTS THINK ABOUT DATA?



Step 5: Present the Results

Assuming you find what you are looking for, and it seems compelling enough to share with others, you need to determine the best way to share your results with others.



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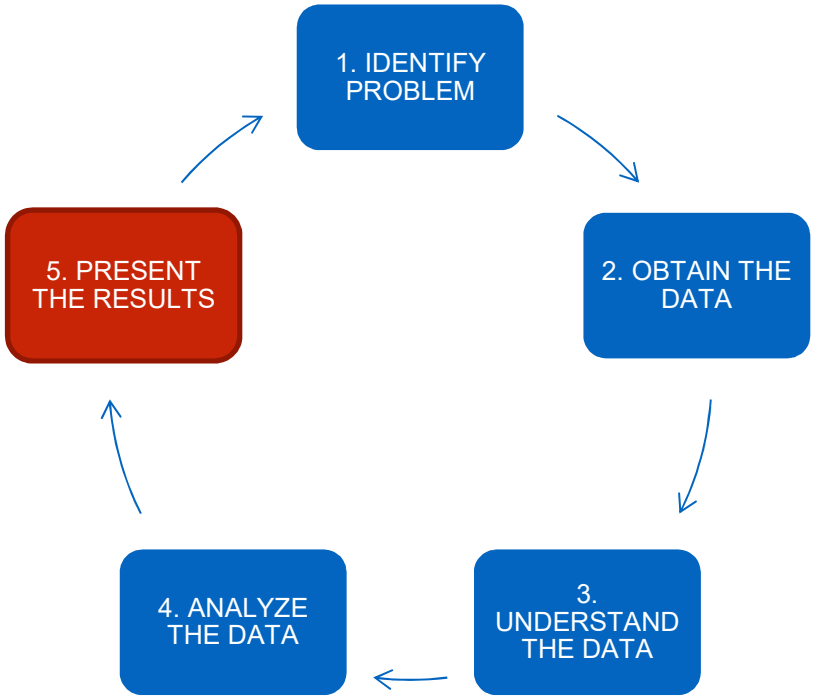

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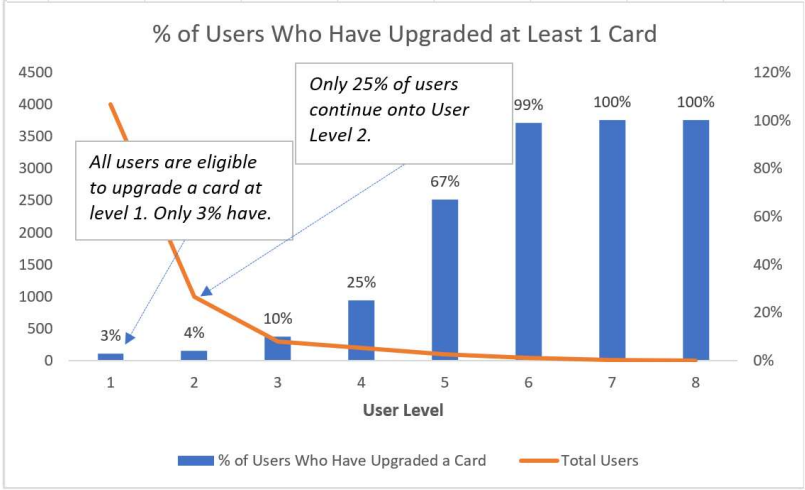

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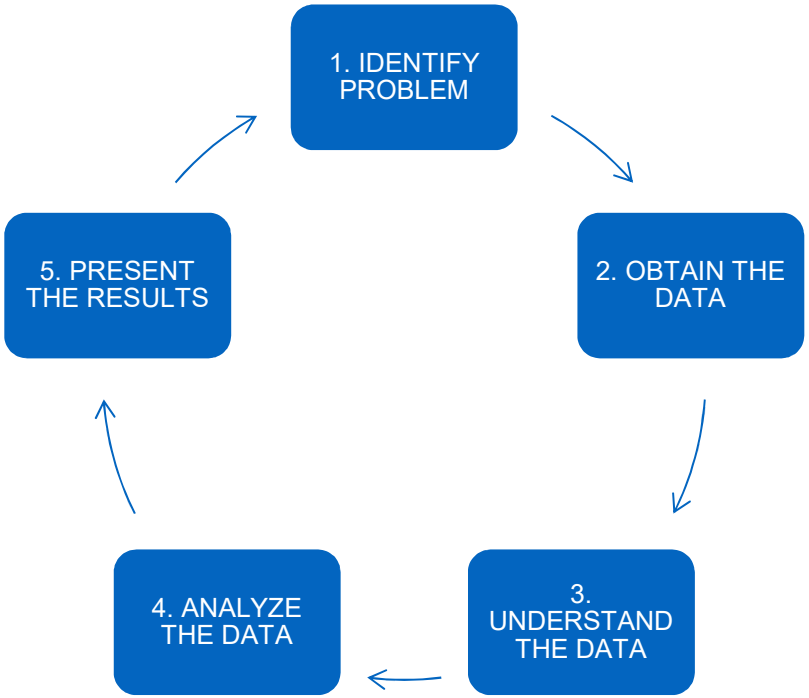


KEY TAKEAWAYS

- The workflow is not strictly linear, you'll need to jump back and forth between steps
- The most important step, is IDENTIFY THE PROBLEM
- Make sure the problem you are solving for ADDS BUSINESS VALUE.

LESSON

TOOLS OF THE DATA ANALYST

TOOLS OF THE DATA ANALYST – THE TRIFECTA

MINING

Technical

REFINING

Analytical

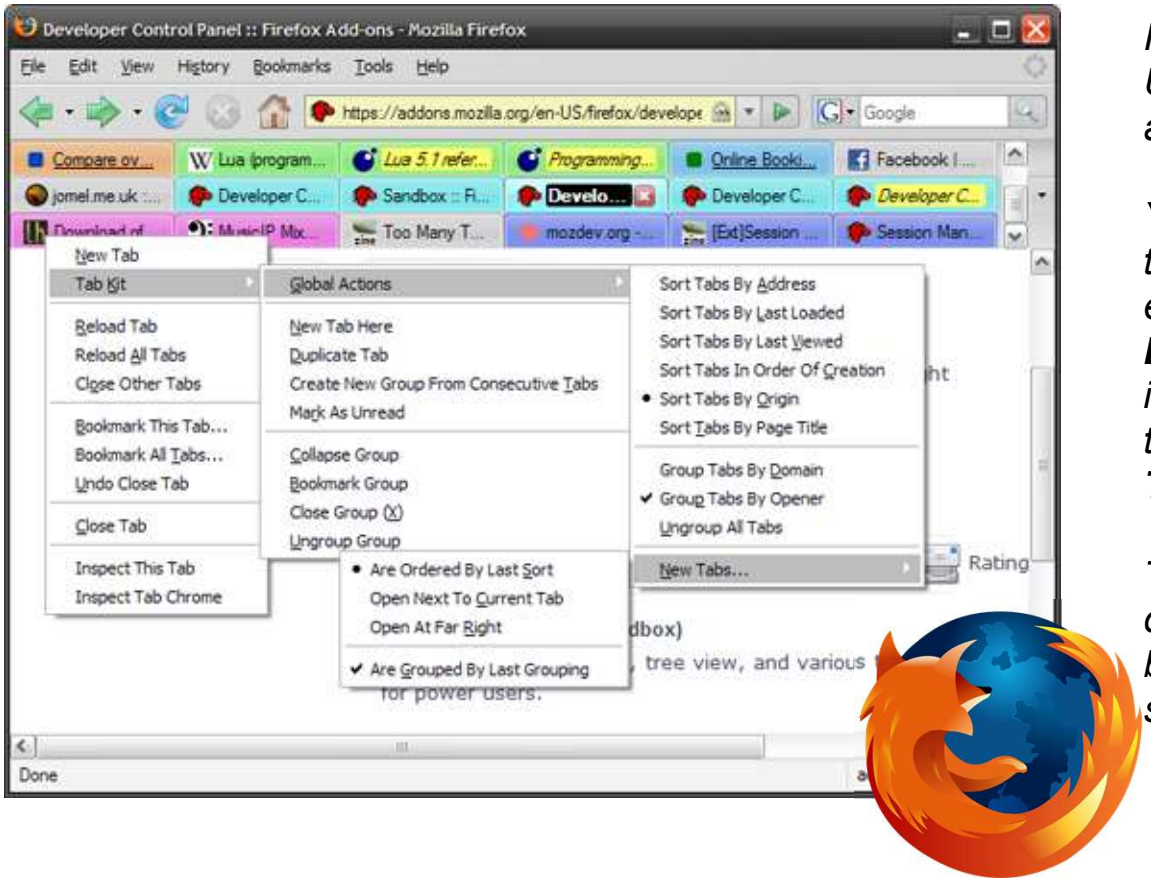
PRESENTING

People

HANDS ON LEARNING

USING DATA TO INFORM DECISIONS

USING DATA TO INFORM DECISIONS – Firefox UX Design



It's the year 2010. You are a Junior UX Designer for the Firefox product at Mozilla.

*Your boss, Chad, has asked your team to re-design the user experience for the product's **Bookmark** feature. You believe this is a waste of time and suggest the team should focus on improving the **Tab** experience instead.*

To support your case, you request a data pull from BI to explore bookmark and tab usage from a sample week of surveyed users.

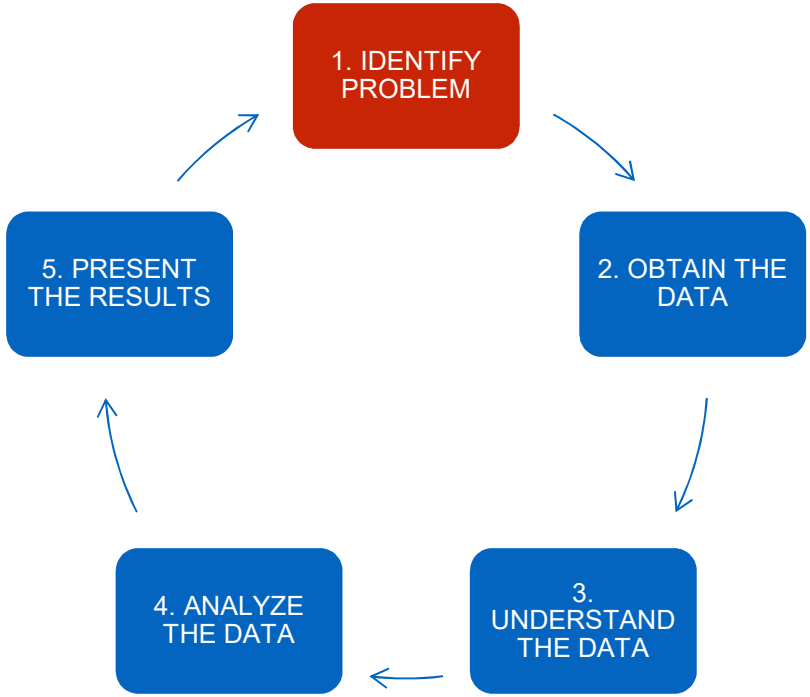
USING DATA TO INFORM DECISIONS – Identify the Problem

Should we invest in bookmarks or tabs?

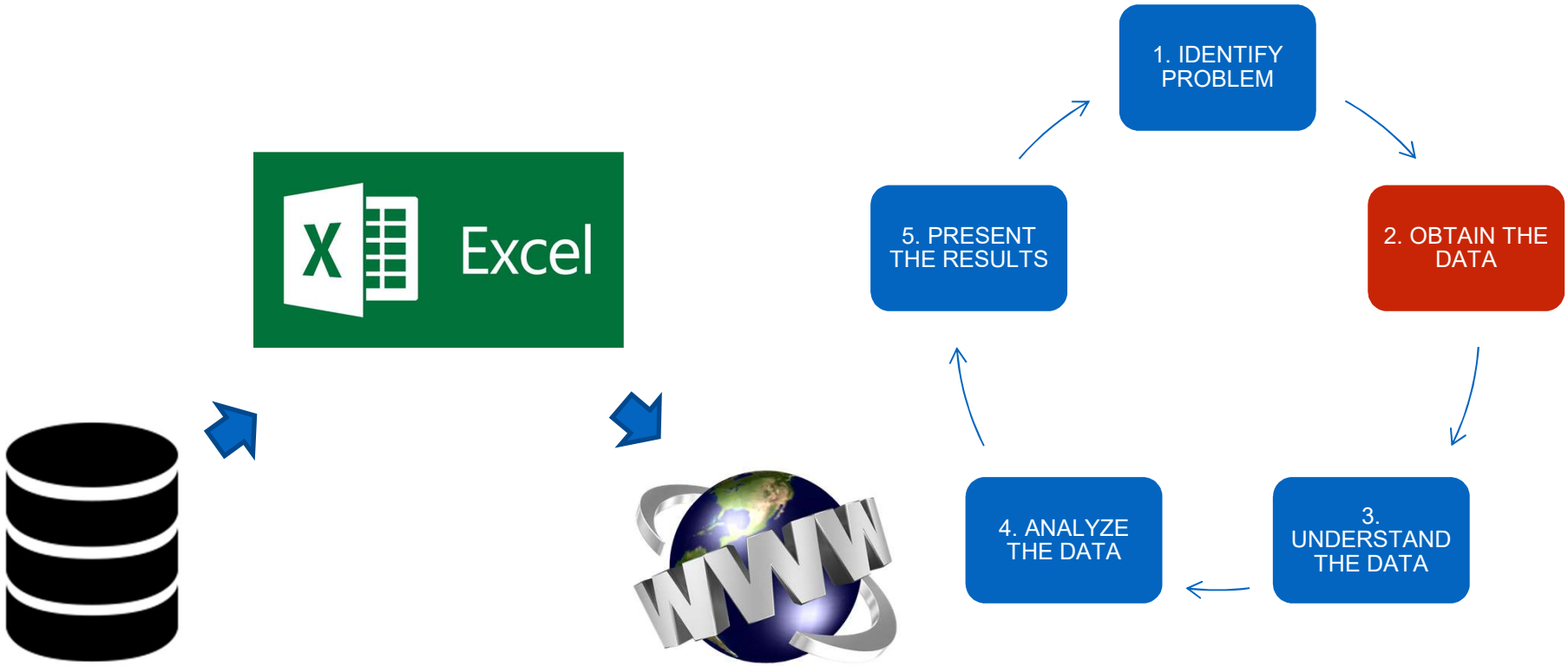
***1. WHO** – Description of Who These Users Are*

***2. WHAT** – Description of What Activities They Are Doing*

***3. HOW** – Description of How Often They Are Doing Them*



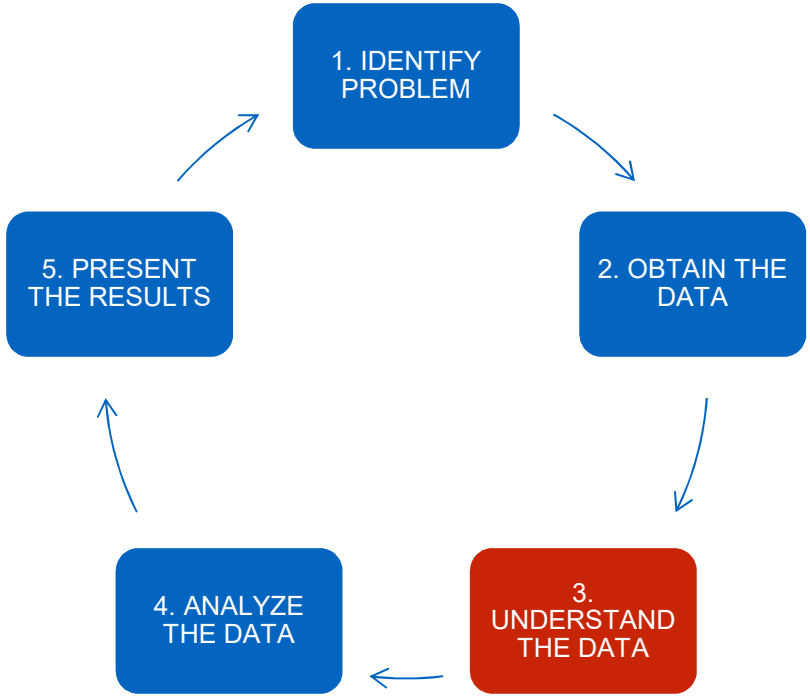
USING DATA TO INFORM DECISIONS – Obtain the data



USING DATA TO INFORM DECISIONS - Understand the data

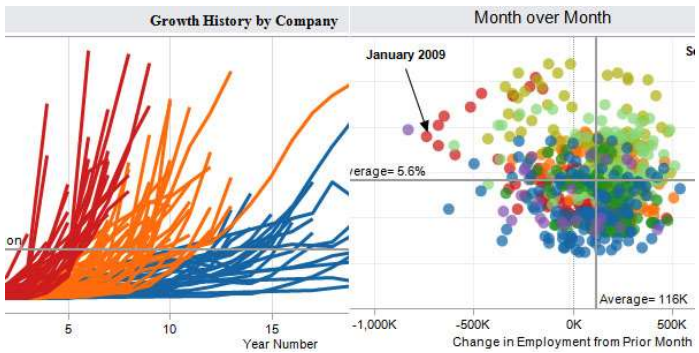
Firefox Usage - Metadata

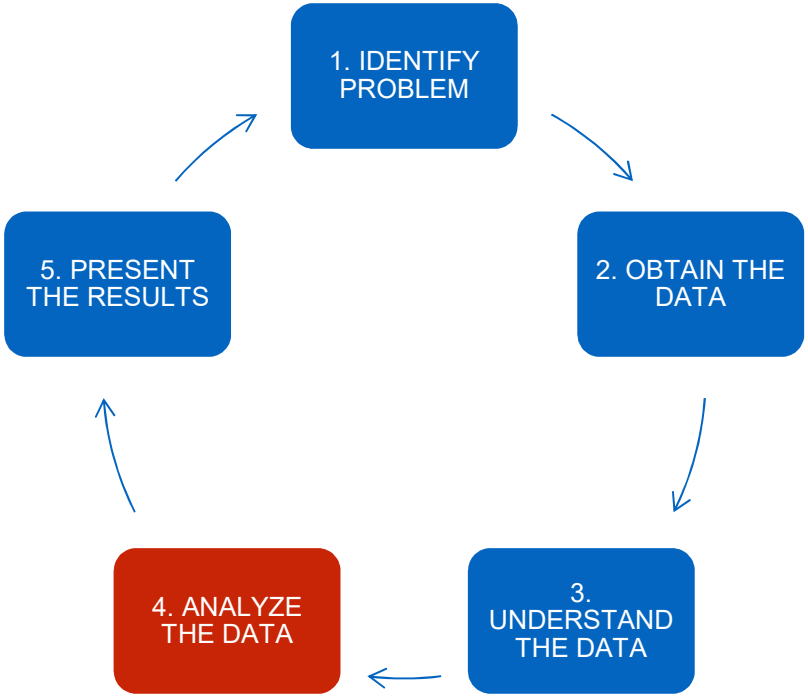
column	column_information
user_id	unique id associated with the user
time_with_firefox	the number of years the surveyed user has been using Firefox
Primary_Browser	the primary browser of the surveyed user
Gender	the gender of the surveyed user
Age_Range	the age range of the surveyed user
Web_Use_Per_Day	the total hours of web use per day of the surveyed user
Technical_Skill_Rating	the opinion of the users technical skill rating
Smartphone_Model	the smartphone model the user has
Views_News	whether the user views news
Views_Social_Media	whether the user views social media
Views_Browser_Based_Games	whether the user plays browser based games
Views_Shopping	whether the user does online shopping
Views_Online_Bill_Pay	whether the user pays their bills online
Views_File_Download_Sites	whether the user downloads files off the internet
Views_Webmail	whether the user views email
Views_Forums	whether the user views web forums
Views_Adult_Sites	whether views adult web sites
Views_Gambling_Sites	whether the user uses gambling sites
Views_Google_Docs	whether the user uses google docs
Extension_Count	the number of extensions the user has installed
User_OS	the operating system of the User
Max_Bookmarks	the total number of bookmarks the user has in the sample week
Bookmarks_Created	the total number of bookmarks the user created in the sample week
Browser_Starts	the total number of browser starts in the sample week
Bookmarks_Launched	the total number of bookmarks launched in the sample week
Max_Tabs	the maximum number of tabs the user had opened in the sample week
HAS_EVENT_DATA	whether the user generated data in the sample week



USING DATA TO INFORM DECISIONS – Analyze the Data

tableau public





CONCLUSION

CONCLUSION

- Today, we've seen the Data Analytics workflow in action!

- We've identified questions to answer with data; we took the necessarily steps (obtaining, understanding, and preparing our data) prior to starting our analysis; then, we performed analysis. Finally, we've used our analysis to form actionable insights from our data.

Q/A

THANK YOU