

APPLY DESIGN THINKING TO ANALYZE A DATASET

Telco Churn Project - Nguyen Lan Linh



EMPATHIZE

1. Answer the questions

1.1 Who is the report for?

1.1 Manager

1.2 What is the purpose of the report?

1.2 Identify the customer churn

1.3 What is the desire of the viewer?

1.3 Understand why users churned and
suggest solutions for customer retention



EMPATHIZE

2. Understand the dataset

One table from a telecom company

Dimensions: Customer ID,
Churn Label, Unlimited Data
Plan, Phone Number, Gender,
Age, Under 30, Group, Device
Protection & Online Backup,
Contract Type, Payment Method,
Churn Category, Churn Reason

Measure: Account Length (in months),
Local Calls, Local Mins, Intl Calls, Intl
Mins, Intl Active, Extra International
Charges, Customer Service Calls, Avg
Monthly GB Download, ,Extra Data
Charges, Number of Customers in Group,
Monthly Charge, Total Charges

EMPATHIZE

3. Evaluate and clean data

- Missing values
- Unusual values
- Data types

(Perform in Power Query)



DEFINE

- Define important **Attributes**

- Who are churners?
- Why did they cancel the service?

- Brainstorming question list

- Ranking => Pick

- List down **Key metrics**:

Churn rate, Total number of
churner, Retention rate, Avg
monthly charges, Avg Total
charges, Age Group, Tenure Bin



DEFINE

Brainstorming question list

- Who are chuners?

- What is the churn rate? Retention rate?
- What is a chunner's demography (Gender, Age, Group or not,...)?
- What is the churn reason they presented?
- Which services did they use most?
- How much did they pay before quitting?
- Any characteristic in their contracts and paying methods?

- Why did they cancel the services?

- How did the churn rate change by time/age?
- Compare to clients:
 - Chuners paid more?
 - Which services did they use more/less?
 - How the paying rate change in 2 group of users?

IDEATE

Concept

- Compare Churn vs Non-Churn
- From overview to detail
- From past to now



IDEATE

Structure the report

- **Demographic**

- Total churning, Churn rate?
- Churn rate by age/senior citizen/

Age group/Group...?

- Reasons to churn?

- **Services**

- Their tenure?
- Which service is used the most?

- **Contract and payment:**

- The most used payment?
- The most contract types?
- How much did they pay per month? □
- How much did they pay in total? □

Build and Review

Final the report

- Contain 2 page: Churn, Non-Churn
- Layout: $\frac{1}{3}$ (Demography, Service, Contract and Payment)
- Chart types, sizes: various
- Color theme: light and dark green

