

	Detail	Hint	Answer
Step 1 - Empathize	Stakeholder Challenge	What challenge are stakeholders trying to solve?	Reduce user churn
	Dashboard Goal	What is the goal of this dashboard?	Provide stakeholders with information about: 1. The current user churn situation 2. Characteristics of churners and reasons why users churn
	Dataset understanding	Identify dimensions and measures: - Dimensions contain qualitative values such as names, dates, or geographical data - Measures contain quantitative values that you can measure. Measures can be aggregated	1. Dimension: Churn label, Intl Active, Unlimited Data Plan, State, Phone, Gender, Age, Under 30, group, contract type, payment method, Churn Category, Churn Reason 2. Measure: Account Length, Local calls, Local mins, Intl calls, Intl Min, Extra International Charges, Customer service call, Avg Monthly GB Download, Extra data charges, number of customers in group, monthly charges, total charges
	Dashboard audience	- Who is the dashboard audience? - What does the audience want to gain from the dashboard?	1. Audience: Level manager of a Telecom company 3. Audience expectations: understand who churn users are + why users churn + how to improve the status quo.
	Dataset cleaning	Suggested questions to consider: - Are there many null values? - Are there outliers/anomalies? - Is the data type accurate? ....	- Null: 2 columns (Churn Category and Churn Reason) contain many null values. This might be because churners did not fill survey about churn reasons or because those users are not churners (therefore not applicable in the 2 columns) - No duplicates - No other anomalies
Step 2: Define point of view	Top Down	From the stakeholders' standpoint, list down important questions (suggested approach: logic tree, brainstorming question list)	1. Overall customer and churner situation - Total customer, total churner, churn rate - Is there any difference between customer profile and churner profile? 2. Information about churner - In terms of demographic, age, tenure, contract type, services,..., how are churners distributed? - What are the reasons behind user churn? How are those reasons distributed? Are those reasons internal or external?
	Bottom Up	From raw data, identify key dimensions and key measures, which will then form layer 0, layer 2, layer 2 in Step 3 - Ideate	1. Key dimensions: churn label, churn category, churn reason, gender, age, tenure, intl active, unlimited data plan, payment method, contract type 2. Key measures: monthly charges, intl calls, extra charges, total charges, no.churners, churn rate,...
Step 3 - Ideate	List down key metrics	Layer 0 dimension	Number of customers, Number of churners, Churn rate
		Layer 1 dimension	1. Breakdown of gender, age group, tenure, contract, payment method and calls of each churn label 2. Service usage and customer service calls of each churn label 3. Total charges and monthly charges of each churn label 4. Breakdown of churn category
		Layer 2 dimension	Breakdown of churn category by specific reasons
	Dashboard layout	Table	
	Dashboard layout	Layout for each page of dashboard. There is no limit on the number of pages, but make sure that each page serves a specific goal and all contribute to the main goal of the dashboard	2 pages + Page 1: Customer vs Churner profile (overview to details) + Page 2: Churn reason (breakdown by category and specific reasons)
Step 4 - Prototype	Build a complete dashboard	Suggested factors to consider: - Visualization type - Visualization size - Visualization arrangement - Theme color ...	
Step 5 - Review	Review the dashboard		