



# STATE BUDGET EXPLORER



Public Finance - Usability Testing Report

# ALL ABOUT PUBLIC FINANCE

Open Budgets India was born with the principal to make India's budgets open, usable and easy to comprehend. Currently open budget India is housing multiple open data dashboards which cater to various aspects of budgets and provide fiscal data.

The research team at CivicDataLab did a short survey to understand what kind of public information/data users seek/prefer to know about State Budgets

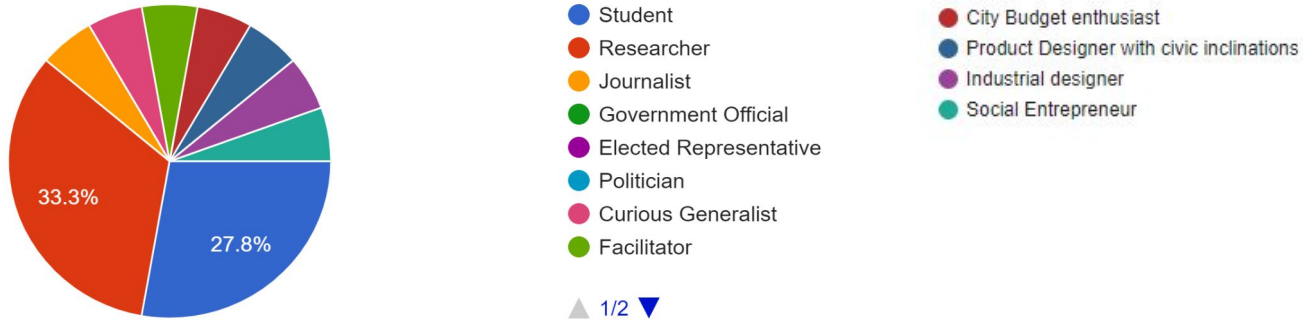
## **PURPOSE**

The aim of this research is to gain a preliminary understanding of the potential users of a platform that shall disseminate information on the state budgets and various heads

The findings of this would help us design a more well-informed data platform that will increase civic engagement in India.

# DIVERSITY OF PARTICIPATION

Select the role that you identify with the most  
18 responses

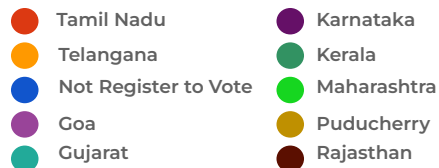
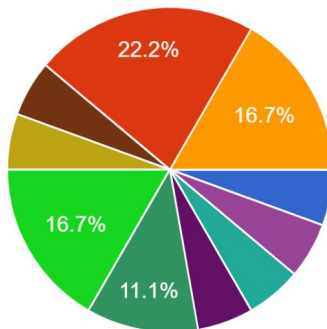


This survey was a public survey which was promoted on multiple mediums to encourage diversity of participation of users from various professional backgrounds and their interest.

# DIVERSITY OF STATES

Select the state / UT in which you are a registered voter

18 responses

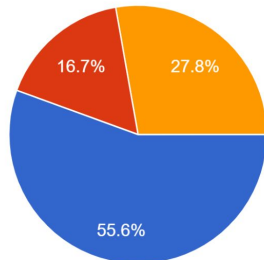


The key objective was to conduct a preliminary survey keeping the state budget objective in mind. So we encouraged participation related to maximum state diversity in India.

# INTERACTION & FREQUENCY

How do you interact with public finance data ?

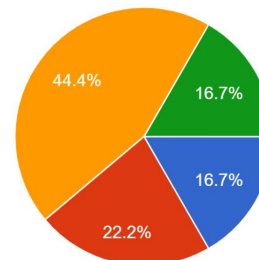
18 responses



- As a part of work
- As a part of study
- As a part of information

How often do you interact with any data /information related to the budget?

18 responses



- A few times a month
- A few times a year
- Closer to Budget season
- Never / Rarely

The objective was to understand how and at what frequency do people interact with information related to budgets. Majority of people interact as a part of work and most closely to budget season in India.

# INFORMATION SOURCE

Budget Documents  
of State & Union  
Budget

Indiabudget.gov.in

Money Control

Data.gov.in

RBI States of  
Finances

Annual Budgets

Economic Times

News articles

Annual Budgets

CMIE , EPWRF

PRS India, PIB

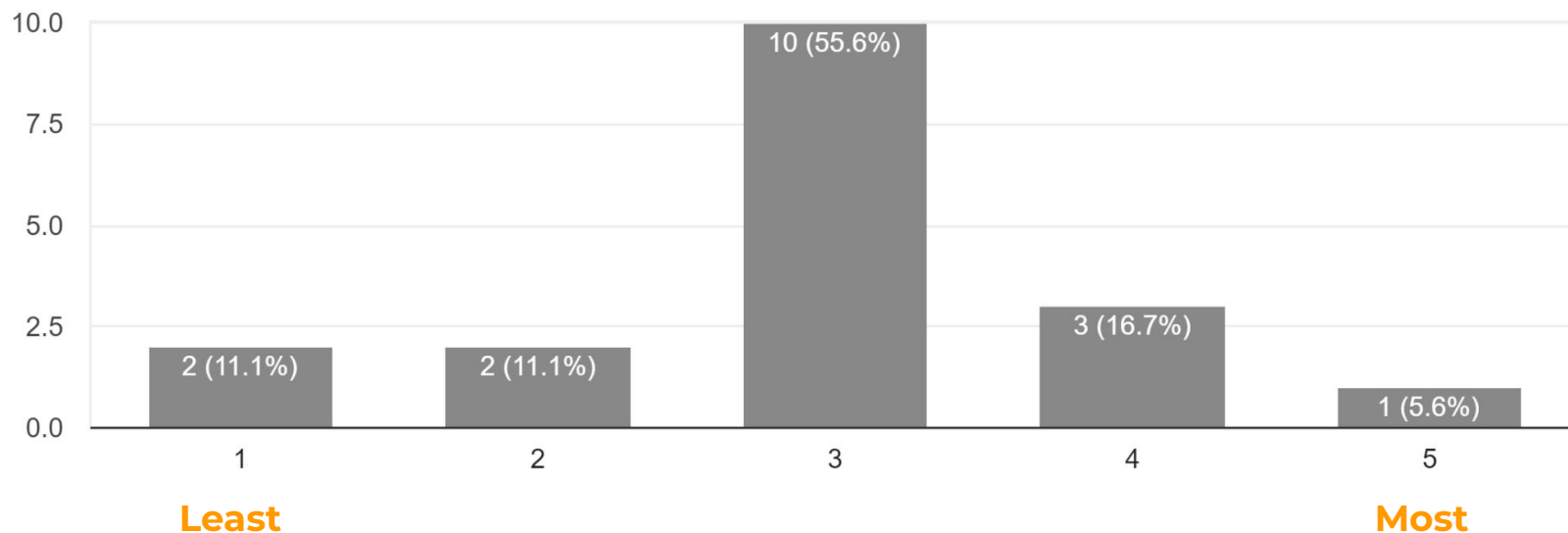
Ministry of  
Finance,  
Statista

# DATA CONSUMPTION

## Discoverability

Discoverability | How easy it is for you to search, discover required data and/or information?

18 responses

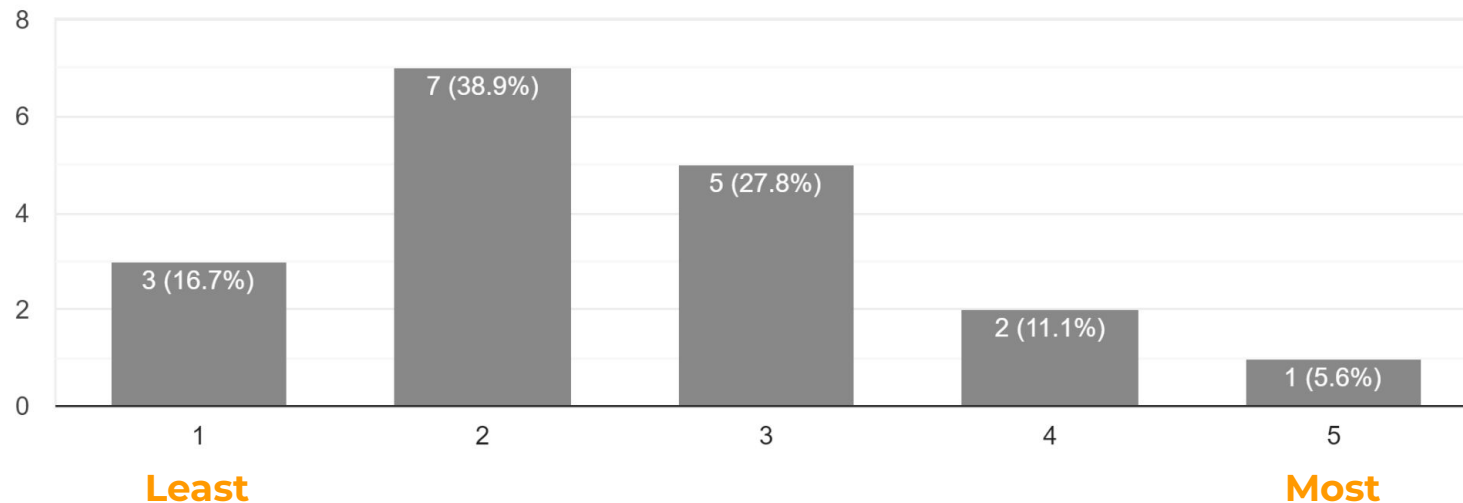


# DATA CONSUMPTION

## Usability

Usability | How easy is it for you to analyse and or adapt the data and/or information to fulfil your requirements?

18 responses



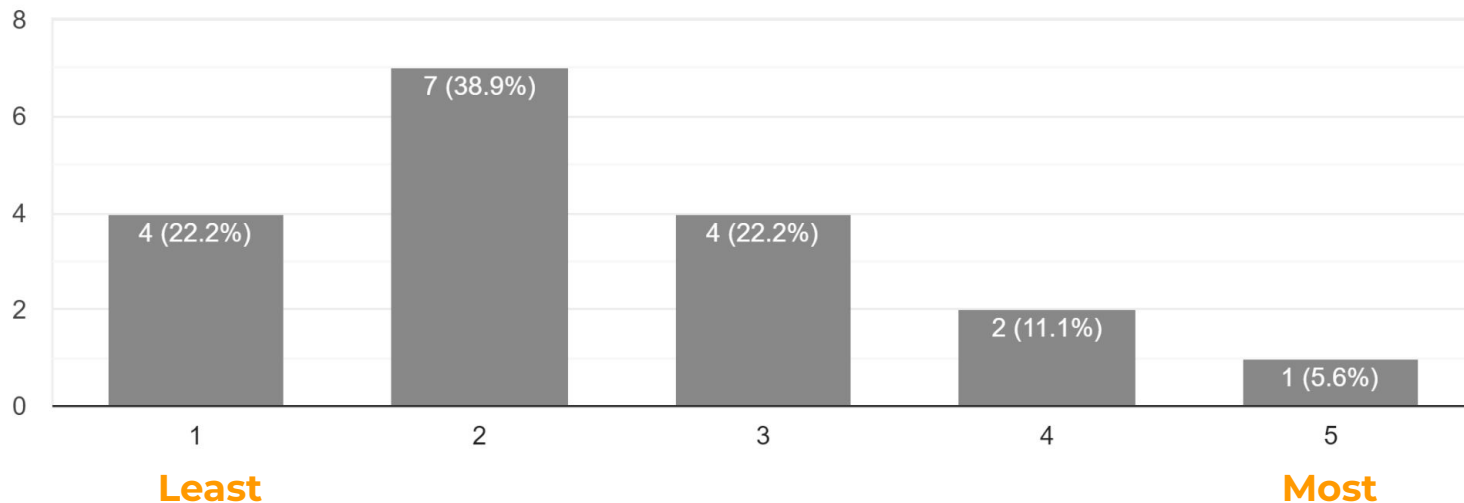


# DATA CONSUMPTION

## Actionability

Actionability | How easy it is for you to employ the data to make decisions related to your area of work?

18 responses

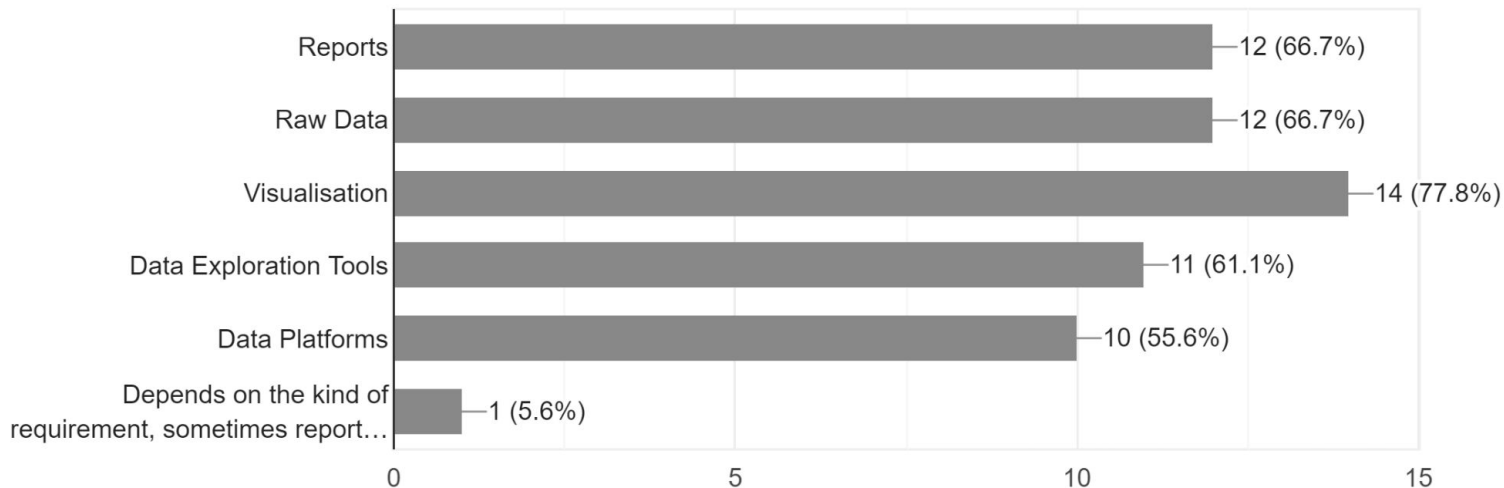


# DATA CONSUMPTION

## Mediums Preferred

What kind of data and/or information mediums would you prefer to better understand the state budgets? Select all that apply

18 responses



# OVERVIEW

State Budget Explorer is an open source platform for data related to Budgets allocated for a state. It lays out the estimated income and estimated expenditure of the government to meet its obligations. These documents are a reflection of the values and priorities of the government and the people they represent.

The Assam Budget Explorer presents the comprehensive money flow data of the Assam Budget 2021-22. It presents both the sources of revenue as well as the expenditure commitments of the Government of Assam.

The aim of the usability test was to uncover user behaviour with existing dashboard and to discover and improve opportunities with design

## 18 People

participated for remote usability testing workshop

## 4 task

4 Task Designed to obtain inputs on various aspects of user experiences

## Diverse Backgrounds

We had participants who hailed from diverse backgrounds for the research

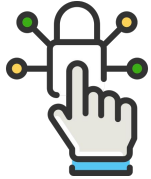
## Feedback

Qualitative and Quantitative Feedback for platform user Experience

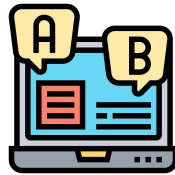
# OBJECTIVE

The larger objective of the new State Budget Explorer is to cater to distinct types of audience with different objectives. Therefore the representation of the platform should be a delicate mix of their priorities.

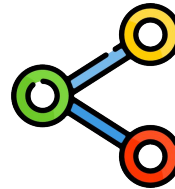
The new version of The State Budget explorer has to ensure to fulfill the following things for the users:



**Accessibility** of data  
and information to  
distinct users



**Direct and  
Dejargonized**  
information layering



Visually represented  
and **easily shareable**



**Easy to navigate** and  
comprehend data

# PARTICIPANT MATRIX

Participant Name	Age-Group	Gender	Role	State
P1	25-34	Male	Curious Generalist	Maharashtra
P2	25-34	Male	Management Consultant	Tamil Nadu
P3	35- 44	Male	Student	Gujarat
P4	18-24	Female	Student	Maharashtra
P5	25-34	Female	Researcher	Tamil Nadu
P6	25-34	Female	Researcher	Tamil Nadu
P7	25-34	Male	Designer	Tamil Nadu
P8	18-24	Male	Student	Haryana
P9	25-34	Female	Government Official	Odisha
P10	25-34	Female	Social Enterprenure	Tamil Nadu
P11	25-34	Female	Researcher	Tamil Nadu
P12	35-44	Female	City Budget Enthusiast	Karnataka
P13	25-34	Male	Product Designer	Puducherry
P14	25-34	Female	Public Policy Professional	Delhi
P15	25-34	Female	Curious Generalist	Maharashtra
P16	25-34	Female	Researcher	Telangana
P17	25-34	Female	Researcher	

# GOAL

After few discussion internally the critical task to target for any potential user to able to perform were identified as :

The new version of The State Budget explorer has to ensure to fulfill the following things for the users:

1. **Identifying grants and expenditure** on a particular grant
2. **Department wise allocation** with year comparison
3. **Estimated amount received for a particular head** from union government
4. **Estimated Expenditure** spending of previous years

## Major Target Areas for the Usability Test



**Overall Navigation  
Experience with the  
task**



**Clarity on the  
Terminology Used**



**Clarity on the  
Visualizations  
Presented**



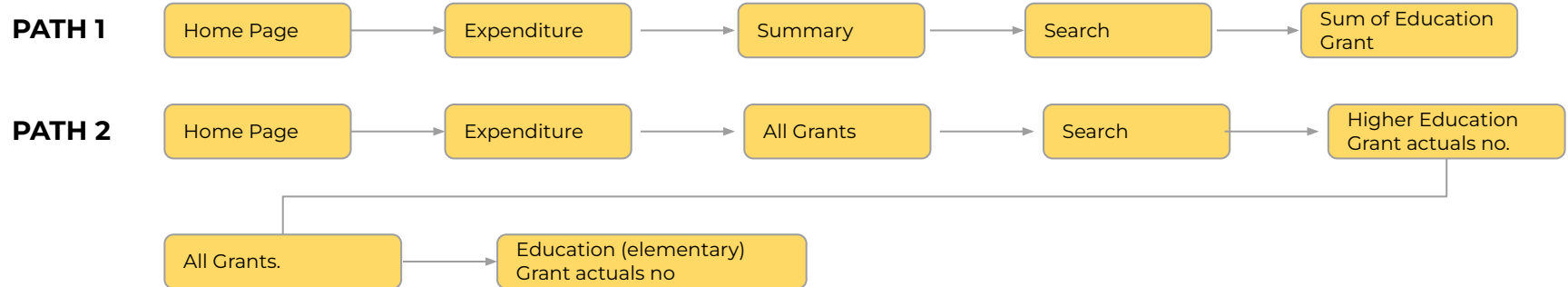
**Placement of  
Information**

# TASK 1

## TASK 1

Can you try to calculate the total expenditure on education by the Government of Assam for the year 2019-20

### Expected Success Path



# TASK 1

## TASK 1

**Can you try to calculate the total expenditure on education by the Government of Assam for the year 2019-20**

### Planned Observation

- Participants navigation path
- Participants level of ease to understand the small functions provided to explore data.
- How much time does a participant spend in navigating the data or information

## SUCCESS MATRIX

Participant 1	Participant 2	Participant 3	Participant 4
Participant 5	Participant 6	Participant 7	Participant 8
Participant 9	Participant 10	Participant 11	Participant 12
Participant 13	Participant 14	Participant 15	Participant 16
Participant 17			

	Could process easily
	Could process but were confused in terminology
	Could process but with lot of exploration
	Failed to proceed



# PARTICIPANT SUCCESS MATRIX

## OBSERVATION

52%

Participants could navigate the answer as per the mentioned paths with less amount of navigation

17%

Participants found difficult to navigate due to lack of understanding of terminology (Actuals/budget estimates/revised estimates)

23%

Participants found difficult to navigate and went through multiple exploration of pages and tabs .Also, registered single figure and not sum

Note : Figures are in Crore(s)

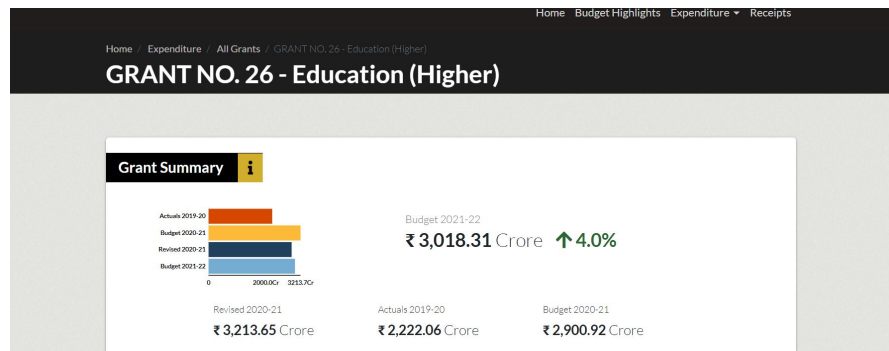
Search:

[CSV](#) [Excel](#) [PDF](#)

Grant Number	Actuals 2019-20	Budget Estimates 2020-21	Revised Estimates 2020-21	Budget Estimates 2021-22
Grant No. 26 - Education (Higher)	222206.08	290092	321365.01	301831.18
Grant No. 71 - Education (Elementary,Scy Etc.)	1167477.13	1387732.82	1509269.4	1452230.14

Showing 1 to 2 of 2 entries (filtered from 82 total entries)

[Previous](#) [1](#) [Next](#)



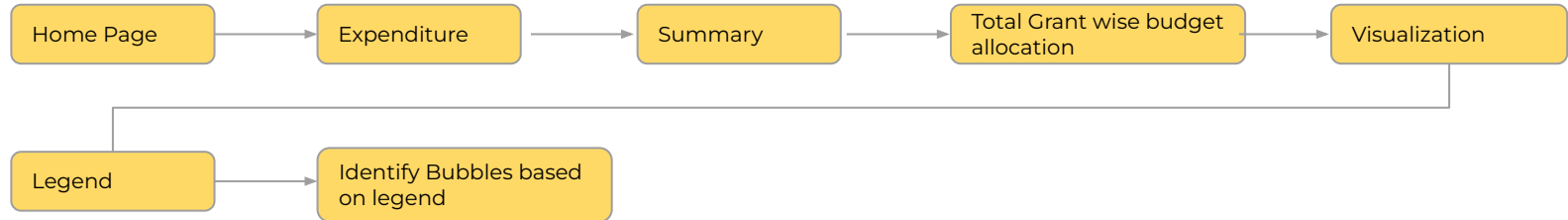
# TASK 2

## TASK 2

**Name three departments with 25% more allocation in 2021-22 than 2020-21**

### Expected Success Path

#### **PATH 1**



# TASK 2

## TASK 2

**Name three departments with 25% more allocation in 2021-22 than 2020-21**

### Planned Observation

- Participants navigation path
- Participants understanding of Visualization
- How do participants interpret visualization

## SUCCESS MATRIX

Participant 1	Participant 2	Participant 3	Participant 4
Participant 5	Participant 6	Participant 7	Participant 8
Participant 9	Participant 10	Participant 11	Participant 12
Participant 13	Participant 14	Participant 15	Participant 16
Participant 17			

	Could process easily
	Could process but found it difficult to interpret the visualization
	Could process but with lot of exploration
	Failed to proceed

# PARTICIPANT SUCCESS MATRIX

## OBSERVATION

47%

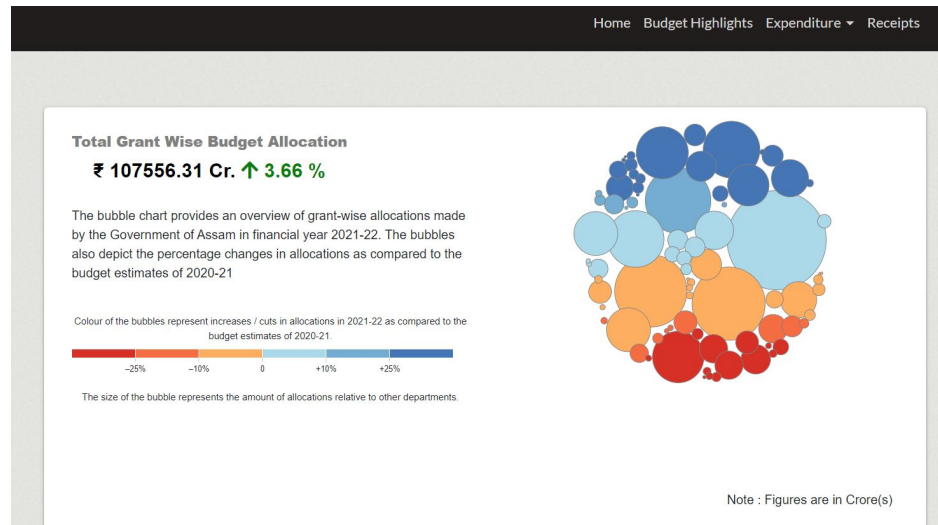
Participants could navigate to the visualization and interpret it correctly

7%

Participants found it difficult to interpret the visualization. The visualization did not cue the users to hover.

23%

Participants found difficult to navigate to the visualization. They had to explore other tabs to reach the summary section. Also, they found the information loosely grouped along the visualization.



# TASK 3

## TASK 3

**What is the estimated amount received in 2021-22 from the Union Government as support for centrally sponsored schemes?**

### Expected Success Path

#### **PATH 1**



#### **PATH 2**



# TASK 3

## TASK 3

**What is the estimated amount received in 2021-22 from the Union Government as support for centrally sponsored schemes?**

### Planned Observation

- Participants navigation path
- Participants understanding of Visualization
- How easy participants find to associate information placed together

## SUCCESS MATRIX

Participant 1	Participant 2	Participant 3	Participant 4
Participant 5	Participant 6	Participant 7	Participant 8
Participant 9	Participant 10	Participant 11	Participant 12
Participant 13	Participant 14	Participant 15	Participant 16
Participant 17			

	Could process easily
	Could process but were confused with grouped information
	Could process but explored a longer path
	Failed to proceed

# PARTICIPANT SUCCESS MATRIX

## OBSERVATION

17%

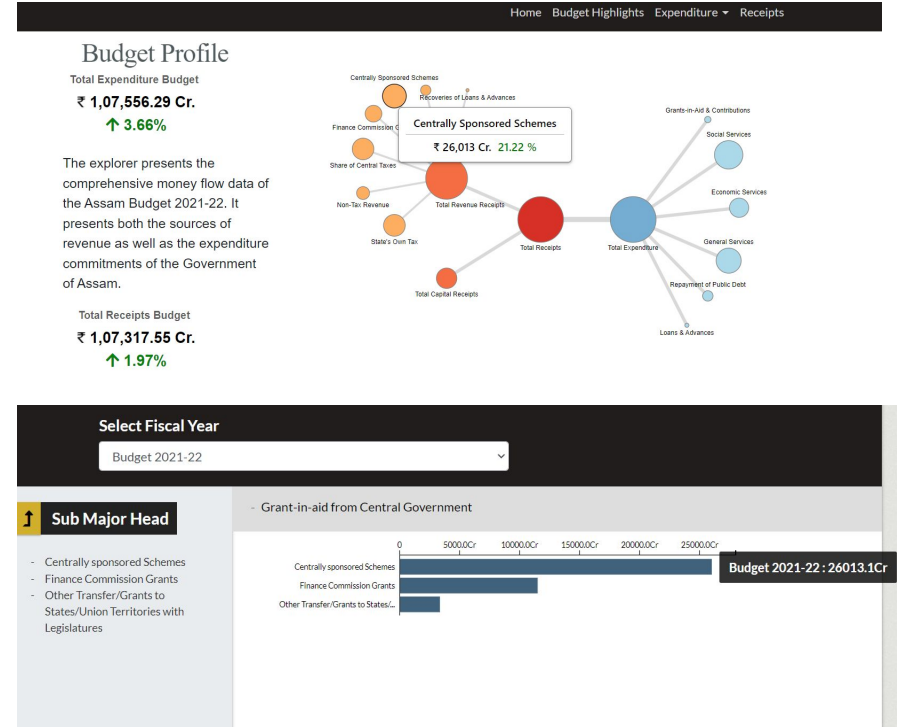
Participants got the required figure in one shot through the visualization

17%

Participants found it difficult to understand the grouped information as (no clear indication of year, budget allocated from the union government.) No cue to hover over the visualization

52%

Participants are going through longer path. Explored through Receipts - Explore heads - central aid



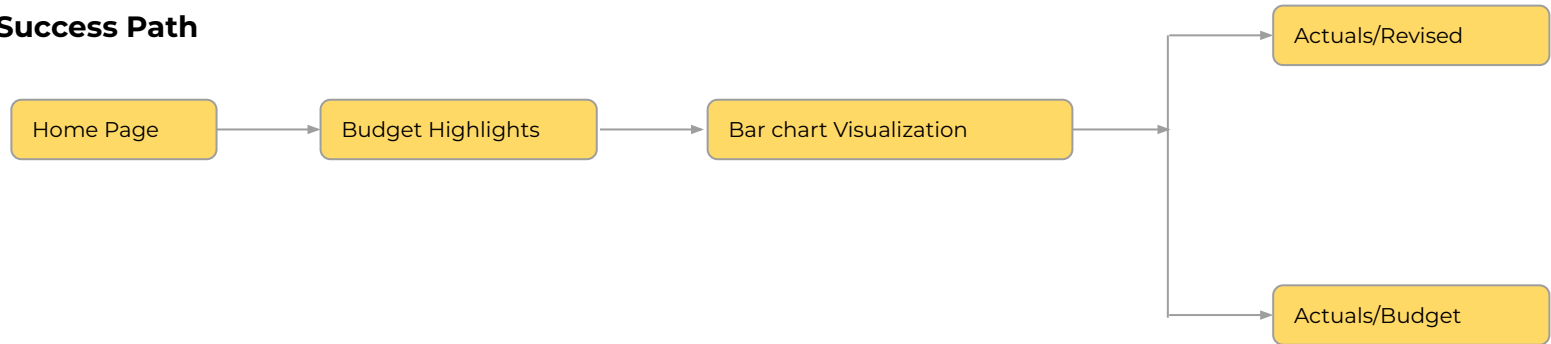
# TASK 4

## TASK 4

What percentage of the estimated expenditure did the Assam govt end up spending in 2017-18?

### Expected Success Path

#### PATH 1





# TASK 4

## TASK 4




**What percentage of the estimated expenditure did the Assam govt end up spending in 2017-18?**

### Planned Observation

- Participants navigation path
- Participants understanding of Visualization
- How easy participants find to associate information placed together

## SUCCESS MATRIX

Participant 1	Participant 2	Participant 3	Participant 4
Participant 5	Participant 6	Participant 7	Participant 8
Participant 9	Participant 10	Participant 11	Participant 12
Participant 13	Participant 14	Participant 15	Participant 16
Participant 17			

	Could process easily
	Could process but were confused in terminology
	Failed to proceed

# PARTICIPANT SUCCESS MATRIX

## OBSERVATION

41%

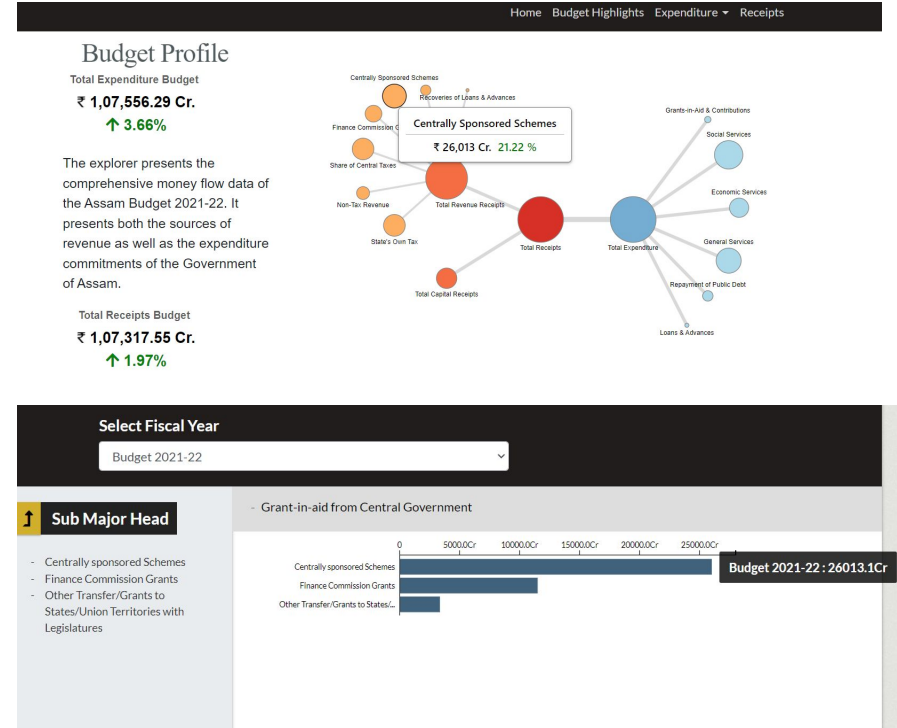
Participants could navigate it right with less efforts

52%

Participants found it difficult to relate to terminology. They explored everything first but not Budget highlights.

52%

Participants found a lack of proper CTA from home page. They needed a clear indication to archival data comparison.

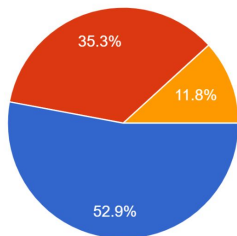


# PARTICIPANT RESPONSES

## Navigation experience

How was the navigation experience?

17 responses



● Easy  
● Difficult  
● Complex

## Suggestions from Participants

Budget Highlights can have a **comparison signage to guide you**

The title '**Budget Highlights**' **doesn't give me a full picture of everything that is on that page.**

Navigation was easy - may be useful to label **Budget Highlights as 2021-22 Budget Highlights.**

Home page graphic can be more **flashy or interactive to engage a user**

Need more specific **menus/titles**

If there was a way to make data more **navigable by year**, that would help. Given that a section of the intended audience for this platform is also **curious citizens.**

More instructions on how the **platform operates / salience on the instructions more definitions or a budget 101 tab**

I didn't immediately know as a user where to go or what to click on. **Some tooltips/information element would be appreciated**

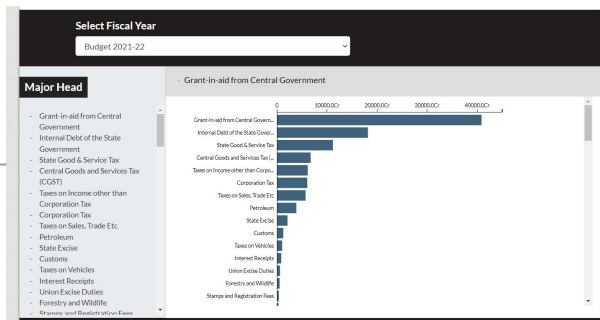
Often times in research, we aren't sure of the questions that we should search for. **Maybe providing more prompts to the user to look for updated and interesting information**

It would be nice to have a **navigation tutorial** that starts when a user enters for the first time, like in the Explore Heads section. **Preferably triggered automatically. If there could be a sitemap at the bottom that would be great.**

Budget Highlights, Summary and Budget Expenditure summary (these are kind of similar words used) I saw X piece of information and end up looking at multiple pages. **Maybe a clear demarcation which avoids this confusion?**

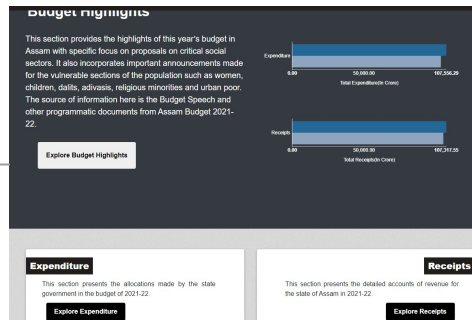
While navigating through all grants, if I select a grant, I go to the visualisation page, but if I have to select another grant, I have to go back as **I don't have the possibility of moving to another grant like moving to another year.**

# OBSERVATION



Not intuitive enough for users that this information is clickable and they can explore further

Listing layouts are not very catchable as user has to scroll a lot to understand



Home Page CTA is not self explanatory on giving que to users to explore further to her section

Home page need promptores for users to explore certain amount of information

Note - Figures are in Crores

Search:

Grant Number	Actuals 2019-20	Budget Estimates 2020-21	Revised Estimates 2020-21	Budget Estimates 2021-22
Grant No. 1 - State Legislature	1333.65	1391.4	14203.9	14669.58
Grant No. 10 - Other Fiscal Service	178.08	238.34	238.34	282.84
Grant No. 11 - Secretariat and Attached offices	63443.14	107547.61	122021.77	95714.2
Grant No. 12 - District Administration	36154.23	64484.21	65234.15	64467.67
Grant No. 13 - Treasury & Accounts Administration	9144.8	12037.18	12041.18	11823.95
Grant No. 14 - Police	411807.3	476326.65	520205.92	518107.86
Grant No. 15 - Jails	9802.64	11563	11641.24	13586.36
Grant No. 16 - Printing & Stationery	2644.36	3533.79	4091.34	4189.69
Grant No. 17 - Administrative and functional Buildings	22121.85	50186.61	52834.6	61641.02
Grant No. 18 - Fire Services	17124.16	21275.51	23636.51	28753.56

Showing 1 to 18 of 62 entries

Previous 1 2 3 4 5 6 7 8 9 Next

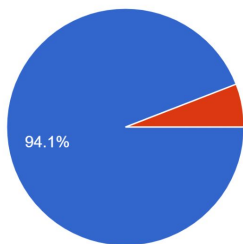
Search bar are underutilized everywhere which is making navigation experience less user friendly

# PARTICIPANT RESPONSES

## Visualization experience

Is the visualization clearly indicating the information?

17 responses



● Yes  
● No

## Suggestions from Participants

The visualizations **need a title and how to interpret it better**

Basic graphs look clean, **but the additional information with the graphs does not jump out; instinctively**, I hovered over the terms for definitions

Home page graphic **can be more flashy or interactive to engage a user**

Except for a couple of places where I thought **bubbles were clickable**, I think the visualization was great!

On Budget Highlights percentage can be added **with graphics, which can show the ups and downs on the budget, revised and actual**

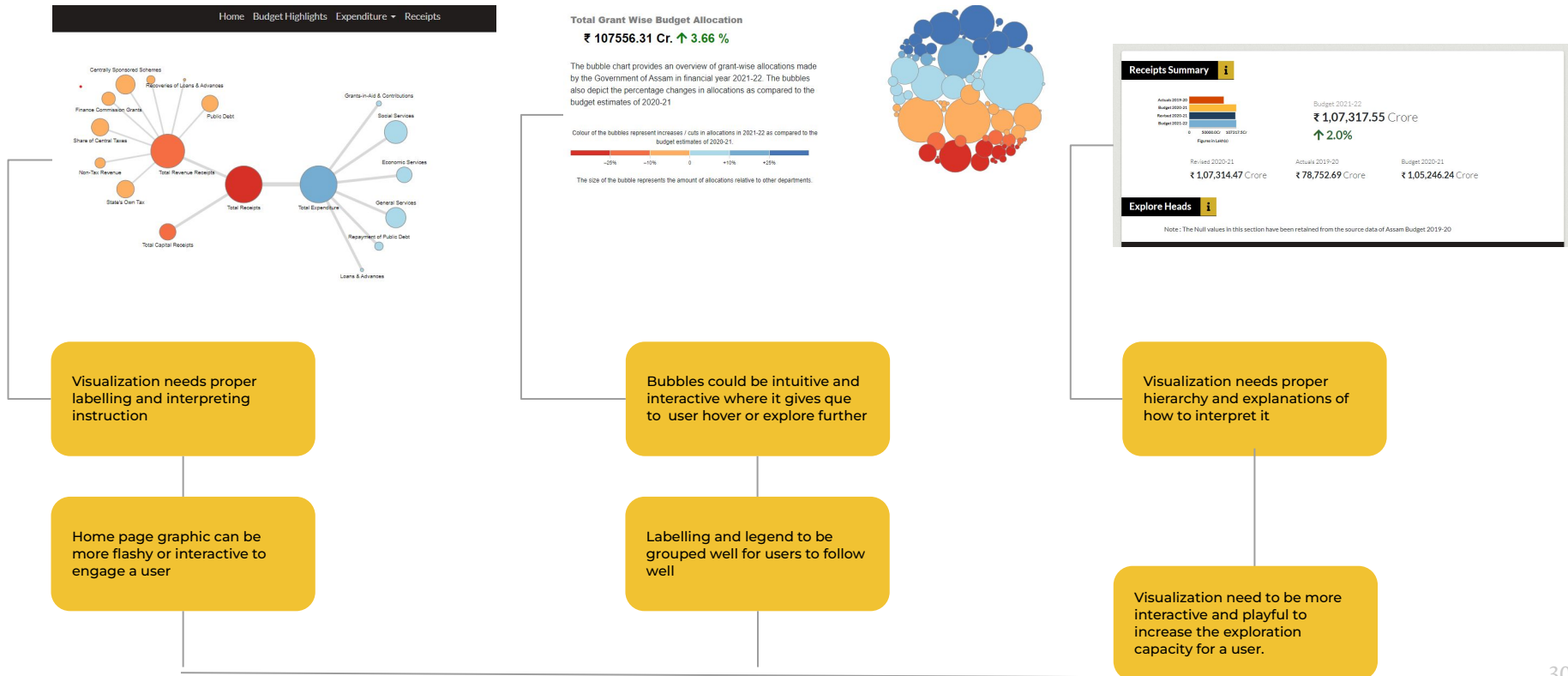
Color scale is quite interesting **but can there be consistency for increase and decrease percentage**

It could be made clear that the percentage increase that is given (on the each grant section) is **the increase from the revised/actual/budget expenditure from the previous year.**

One potential suggestion would be **to pop up data points where necessary in the graphs where multiple indicators are compared.** Also, a bit of design changes in **highlighting the main numbers would help.**

A key would be handy, **green for increase and red for decrease** (for eg). I already recommended a glossary page or mastersheet for jargon or terminology (or alternatively a Wikipedia-esque floating text box thingy).

# OBSERVATION

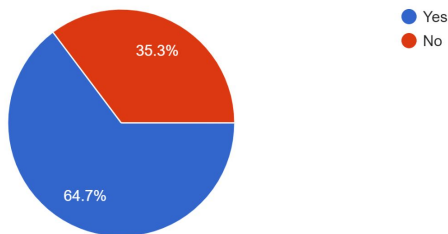


# PARTICIPANT RESPONSES

## Information experience

Is the terminology clearly understandable to you while exploring?

17 responses



## Suggestions from Participants

One potential suggestion would be tabs to guide towards financial year wise data.

Adequate surrounding information is provided. It could be spaced out a bit more evenly so that important information is not lost to the viewer.

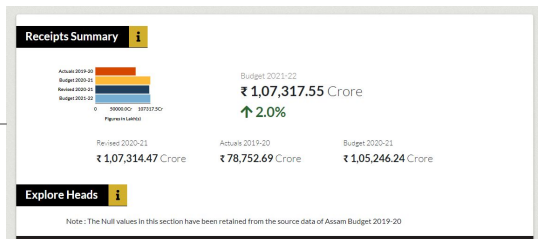
**Clearer labels might make it easier on the user.** Maybe a tooltip with definitions around terminology

I think if there can be changes in the **menu - and the wording for summary/highlights**, I think that will help navigating the information on the explorer

Given some tasks needed data across years, etc. **I do think there could have been more clarity on layouts by timeline as well.**

For the bubble chart - a good and easy feature (if possible) would be **if I could press the bubble and that will take me to that grants' summary + tables**

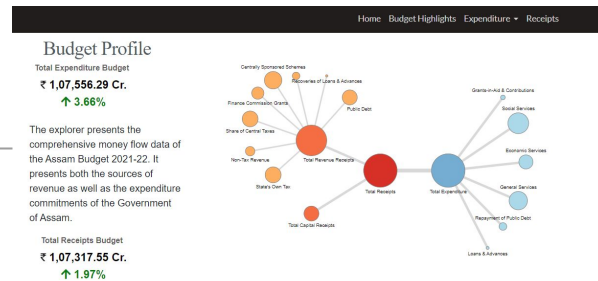
# OBSERVATION



Context setting to be provided to users on terminologies and data interpretation



Budget highlights the title and information users found a mismatch to relate the information



Information to have certain visual hierarchy for users to follow and interpret the information



# CONSIDERATIONS



Proper Context Setting of the Platform/ Dashboard



Curiosity Element for users to be interested to explore further



Provide high level information at a glance (Metadata for the state budgets)

## STANDARDIZED HOMEPAGE

State budgets are points of curiosity and excitement after the Union budget is released. Every individual state is eager to know interesting announcements from their individual state budgets.

Curious generalist

Researchers

Media Orgs

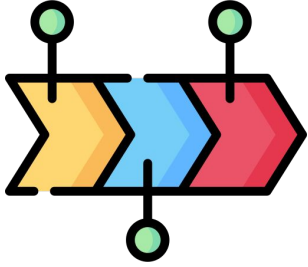
Students

Bureaucrats

Elected Representatives

- Need proper **context setting to the landing /Home page for the state and budget overview**
- Clear indication of the **geography of the state considered**
- Clear indication of the year for which the state budget dashboard is updated
- Certain sense of **hierarchy to be maintained for the home page**
- Visualizations can **hook users better but they need to be flashy and interactive for context setting or quick highlights for the year**
- Major heads or glimpses expected for the year can be customized for the state (Probably having a high level understanding of what the state is looking in the current budgets - Media houses/newspapers data)
- Intuitive CTA to be provided for various informations

# CONSIDERATIONS



**High level and detailed  
Comparator**



**Filter options and well  
labeled information**



**Interactive Element to  
engage users**

## Comparator and Visualization

Budgets are interesting when you can compare its success or failure with previous years data. Users are more intrigued to know what has changed every year by taking a look at previous years data.

Researchers

Media Orgs

Bureaucrats

Elected  
Representatives

- We are calling it State Budget Explorer so users come with an expectation to explore information and build some analysis of data.
- An interesting comparator can be put together for showcasing following things:
  - A wide range of comparison between last five years of total budget estimates, actuals and revised
  - Granular comparison of major heads with possible filters and hierarchy
- Proper labeling to heavy technical jargons or descriptions with a tooltip
- Provide an interactive element to visualization to build capacity for user exploration

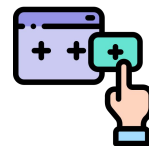
# CONSIDERATIONS



**Context setting for new users**



**Sequential Exploration for users to follow things**



**Intuitive User Experience with proper detailing**

## Hero Sections

Expenditure and receipts are the hero sections of the platform. Expenditure will give an detailed and in depth understanding to users of budget allocations and Receipts will talk about revenue and income of state

Curious  
generalist

Researchers

Media Orgs

Students

Bureaucrats

Elected  
Representatives

- Hierarchy has to be maintained well for both sections
- These sections individually need context setting for users in understanding what is the difference
- Individual pages to clearly indicate definitions to technical jargons
- Explanation of Grants or context to be provided for new users
- Layout and view of the page to be minimalistic and self explanatory
- Sequential exploration to be placed for users to not be overwhelmed with data.
- Functionality of the hero section to be intuitive and less verbose.

# INFORMATION PLACEMENT

