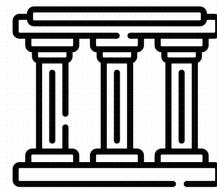


PolElec

WE, THE PEOPLE OF INDIA...



ABSTRACT

PolElec is an application made to improve citizen participation in democracy as well as ensure accountability of the elected officials. The venture was motivated by the lack of clear information and guidance for first time voters. Further, the lack of transparency and accountability in the democratic process compelled the us to create an application that tackles both the above issues as well as provides a medium of communication between the elected officials and the voters.

INTRODUCTION

Motivation:

Youngsters just entering the voting population find it difficult to navigate through the politics and make an informed vote. They don't have the time or the motivation to invest in politics as they are busy with their studies and careers. Our venture was motivated by the aim to simplify the process of political analysis before and after voting. Further, we aim to provide a transparent medium between the public and elected officials.

For example - In a survey conducted by the Association for democratic reforms in India voters below the age of 23 make up more than 12% of the voting population. Since the age group 18-23 make up about 15% of the Indian demographic, we can conclude that young people are enthusiastic about voting, but do not have the right resources to aid them in making an informed voting decision.

Problem definition:

India is the world's largest democracy and has the largest youth population, however, it is the reality of the situation that many young people are disinterested in politics. Even those that may take an interest, are greeted with conflicting, biased information if they are able to find any information at all.

Secondly, democratic systems have had a lack of transparency for far too long, breeding a culture of secrecy and corruption. There is no effective way to directly hold our elected representatives accountable for their actions.

Stakeholders and their roles:

1. Politicians :

- Provide their agendas and promises (manifesto before election)
- Can take polls about policy decisions

2. Young Voters:

- They will get a clear picture about the background of political leaders.

-
- Information about candidates like their criminal antecedents more easily accessible
 - Transparent tracking of election goals achieved/delayed/forgotten
 - News information sorting
 - Communicate their grievances to their elected official directly

Existing challenges:

- Lack of awareness in first time voters
- Widespread misinformation
- Lack of medium for two way communication
- Filtering relevant news information
- No effective way to participate in directly decision making process

Existing solutions:

Current solutions do not offer all the features presented in our solution. Often, they focus only on one aspect and neglect others.

Private solutions are often narrow in their focus and are limited by practical concerns such as funding. On an international scale, many startups have arisen to solve issues related to democracy, such as the Greek startup [Novoville](#), which provides a communication medium between the public and government. It was trialled successfully in Athens in 2016. Another startup, [Polyteia](#) provides data analytics and visualisation solutions. As can be seen, these platforms offer only one aspect of the solution and fail to solve the larger issues plaguing democratic institutions.

On a national level, there does not seem to be any unified interface providing a one stop destination for democracy. The current solutions address the issues partially but fail to completely solve the issues. For example, [Bolsubol](#) only focuses on news and data but does not provide a medium of communication between the elected officials and the public.

Existing government solutions are quite scattered and insufficient. The [Election commission](#) has released a suite of more than 10 apps, which despite being inclusive, are neglected and lack support. The reviews on these apps are negative, as these apps are

filled with bugs and often crash. On top of that they haven't been made with the consumer in mind. The implementation of these apps is severely lacking. Also, these are specific to the voting process hence do not have features to hold the elected leaders accountable or a way to communicate with your local representatives.

Our solution:

Through PolElec, we aim to combine all the above requirements and more into one application. We aim to provide relevant, unbiased news specific to a locality, arming voters with all the necessary information to make their decision. We aim to provide a platform where a voter can find out all the necessary information about their local leaders as well as track the promises made during elections. We would have a ranking system which would rank local political leaders on different aspects based on universally accepted objective criterias. Renowned experts would have power to directly contribute to the news information, and big media houses would be able to publish their articles after a propaganda filtration system.

Further, we provide a transparent two-way communication between the voter and the politician. The voter can ask their representative questions and explain their issues. The politician also benefits from better communication with their constituents and they also have the ability to conduct polls about policy decisions. Since mails are often insufficient to reach even local representatives, we would have a chat system where relevant grievances can be filed and will be brought to the attention of local leaders. Other people can choose to agree with the grievance to add legitimacy to a concern raised.

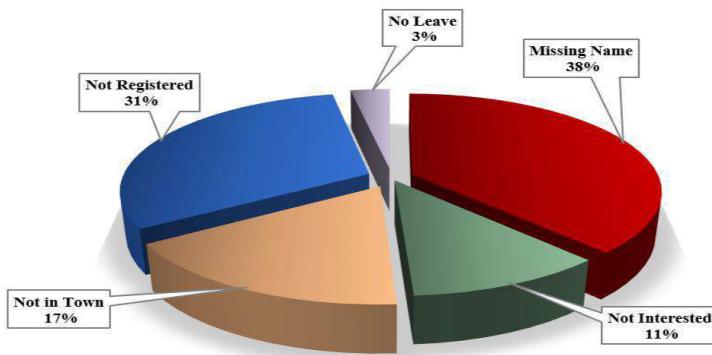
Lastly, we aim to make a fair democracy accessible in any small scale organisation by providing a platform where polls can be conducted. For example, an institute may be able to conduct small student elections with ease. Also the institute would be able to take feedback and make announcements. The local news filter could be used to make an institute specific daily newspaper of sorts.

METHODOLOGY

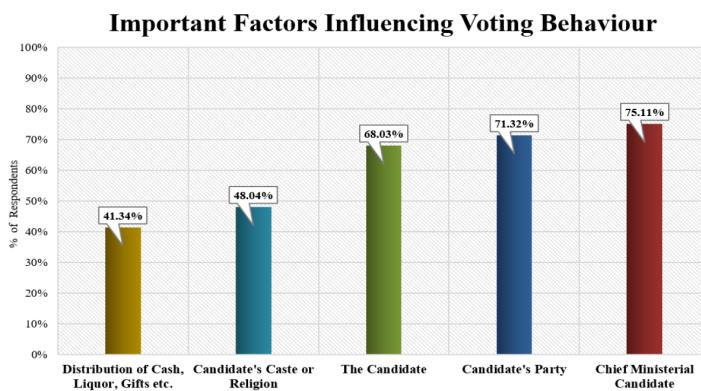
1. Reaching a Problem definition and Identifying target users

We concluded on our initial problem statement after we found a problem we felt strongly about and found that there were no effective existing solutions to it. The All India Survey On Governance Issues and Voting Behaviour 2018 reached astounding conclusions as follows:

1. 38% of voters who hadn't voted in the last election disclosed that the reason was that their name was missing in the voters list, another 31% disclosed that they weren't registered with the Election commission of India.

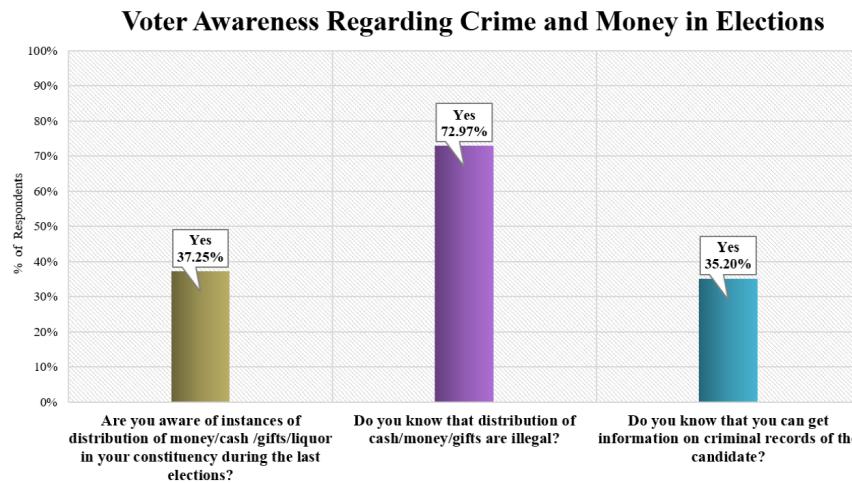


2. The Survey also concluded that most voters are influenced by the Chief Ministerial Candidate followed by the candidate's party. A significant section disclosed that religion, caste and even liquor distributed by candidates influence their behaviour.



3. Most candidates were aware that unfair means such as bribes and gifts just before elections are illegal however only about half of them are aware that their criminal

records are public and accessible.



Given these conclusions, we felt that we might be able to design an app to simplify the process of informed voting. Most students in our age group have just become eligible to vote. With the sudden responsibility to vote, it becomes overwhelming for us to take time out from our lives to be politically aware and make an informed decision while voting. It doesn't help that easily accessible political information is dangerous and reliable news sources are not easily accessible. This is the core problem we try to solve with our venture.

On trying to comprehend the political system further we noticed that the democratic processes could be made a lot more efficient with simple add ons. Democracy allows us to hold our elective representatives accountable for their actions, however existing systems in place for a 2 way communication between people and their representatives are critically insufficient. We believe that in addition to voter awareness we could make our problem statement broader by including a way for communication between people and their representatives. This would also add to our goal of voter awareness while helping to bring much needed transparency to the functioning of the governments on the local level.

Therefore we tried to build a solution with the young voters as our core target users, and politicians and other organisations became our incidental target users.

2. Requirement Gathering and data analysis

We conducted a survey which received about 150 responses. The survey confirmed a lot of our hypotheses and gave us a lot of data to analyse. The data analysis improved our

understanding of the users and their needs. Further, we also conducted multiple interviews and a group discussion, which can be found [here](#). Notes from the interviews are:

User 1:

- Has not voted before
- Will definitely research on the internet before voting
- Does not follow politics, reads major highlights from google and social media
- Believes that it is a “Great initiative”
- Thinks that two-way communication should be ensured
- Will use and recommend the application
- Says that the app should not have privacy issues, should be safe and secure.

User 2:

- Has not voted before
- Follows news intermittently, wants to follow news more often
- Believes that the app is a “Great idea” as it provides neutral information
- Will definitely use such an app
- Says that if it is anonymous, trolls may create havoc on the discussion pages.

User 3:

- Has voted before
- “Kind of” researches before voting
- Does a lot of research
- Will use the app to get useful insights
- Should show what the politician has done throughout their tenure
- Wants good UI, wants it to be simple and add free

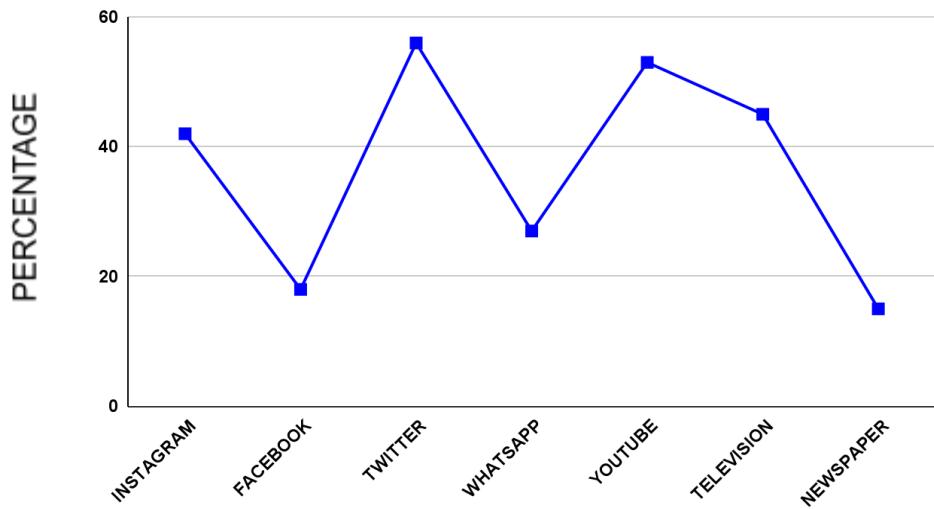
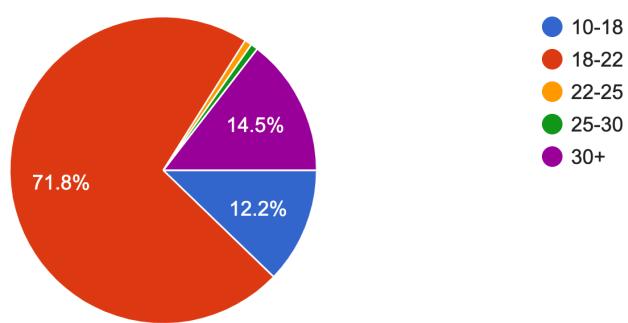
Group interview:

- Both people have not voted before
- Will both do their own research
- Keeps up to date with current affairs, gets political information from college friends
- Will be interested in apps promoting transparency
- Should have discussion posting forums
- Wants anonymity

The following is the data we collected along with our brief analysis of the same.

Which age group do you belong to?

131 responses



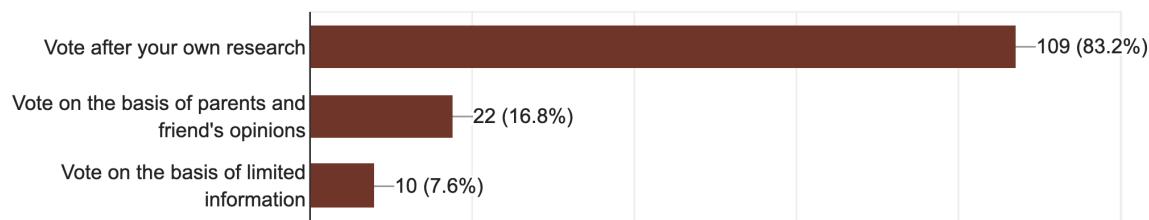
Based on the survey conducted, around 84% of the respondents are under the age of 22. They comprise of young voters and are our major target users. The below bar graph clearly shows that the majority are first time voters and do not have much experience in voting or politics.

According to the graph above, we notice that most people rely on Twitter and other social media platforms for political news. Newspapers which contain dense and direct information (for example - articles written by experts analysing certain policies) don't seem to be a popular choice probably because newspapers require a lot more concentrated effort and time to consume news compared to other sources.

We are familiar with the fact that social media seems to systematically amplify falsehood at the expense of the truth. According to a [study](#), a false story reaches 1,500 people six times quicker, on average, than a true story does. On Twitter in particular, falsehoods were 70 percent more likely to get retweeted than accurate news.

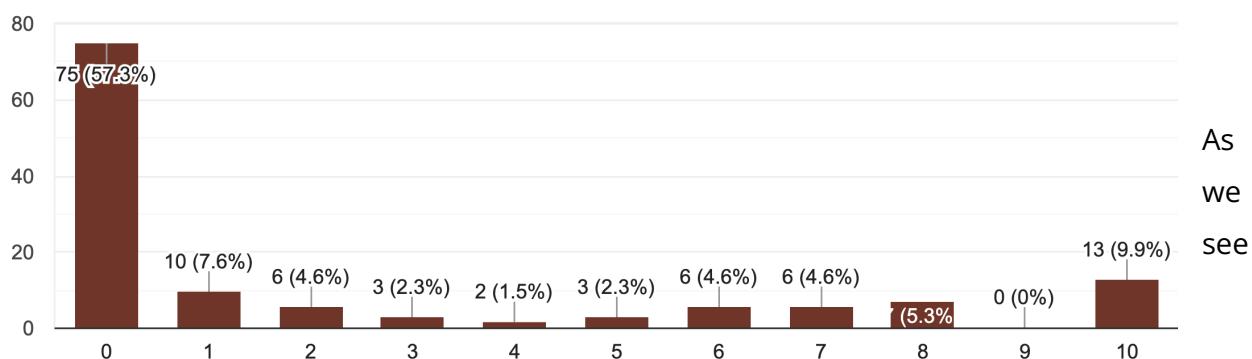
If you are a first-time voter will you?

131 responses



How much voter experience do you have?

131 responses

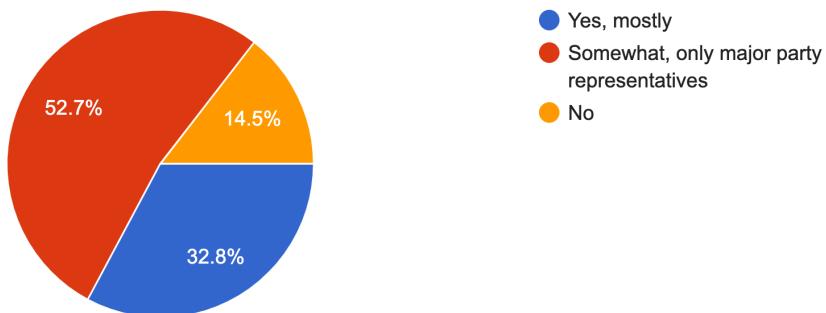


from the above graph, most of the voters prefer to have their own research before taking a major step like voting for the first time. According to the previous data we can conclude that most people refer to social media platforms for this which is obviously quite misleading. Moreover, due to our busy schedule, it is hard to conduct research.

A reliable platform is required, where all kinds of information related to politics will be available on a single page so that it is easier for the user to complete their research, needless to say the information will be completely transparent and unbiased.

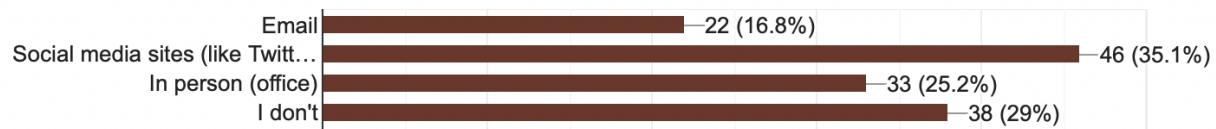
Are you aware of your local/regional political representatives?

131 responses



How do you communicate your issues with your local representative ?

131 responses

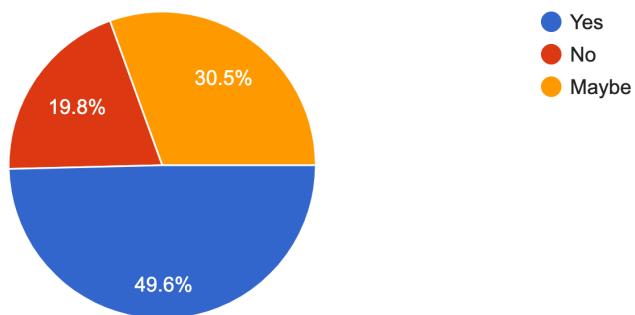


As we can see from the above dataset, the vast majority of people are unaware of their local politicians and know only about the major leaders. Up to 30% of voters were unable to connect with their representatives and communicate their issues. Of the remaining ones, they often resorted to social media where issues may or may not be addressed.

Clearly, a platform is needed to provide effective two way communication between the representatives and the public.

Would you like an application that helps you participate more actively in politics?

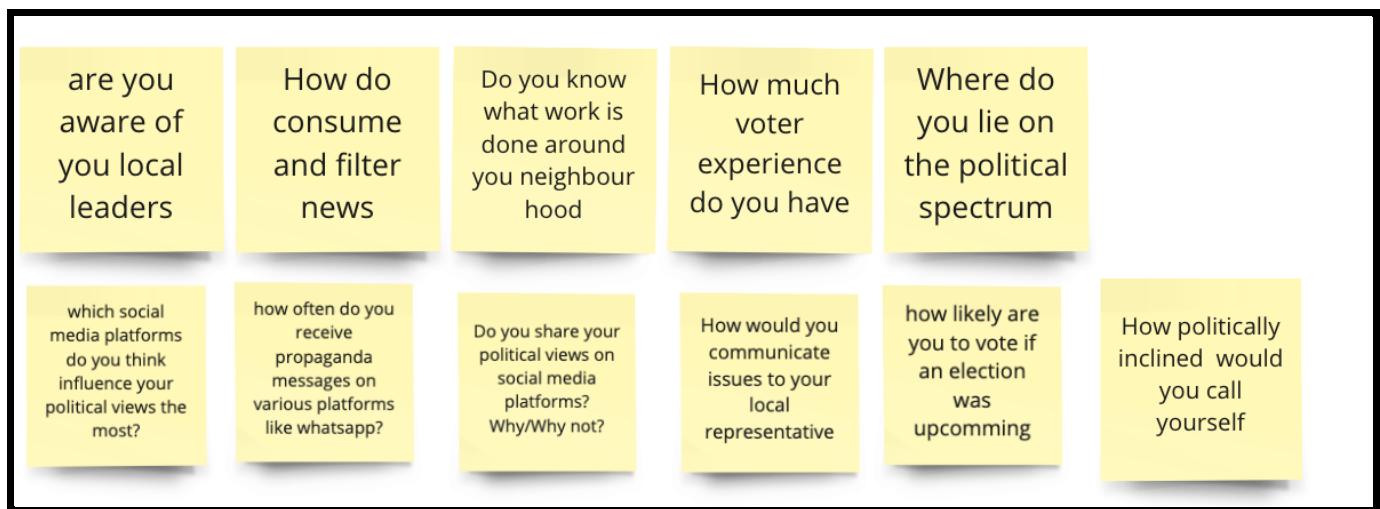
131 responses



We can see that there is a need for such a platform and we aim to provide that through PolElec, an app for the voters.

3. Ideation Process and low Fi Prototyping

Since our main goal was to help young people, we started with an initial problem statement defined by an existing survey as mentioned above. To start exploring further into our specific user base we decided to conduct a survey and consolidate existing findings and get concrete data about our core target users. We decide on questions which would give directions to our project and give us more data to discuss and ideate on. Before releasing the survey we ideated on a fitting name for our project and settled on "**Jannayakam**" which is the Tamil name for democracy, however after unanimous user feedback we changed our name to "**PolElec**" owing to the complicated and spelling and pronunciation of the former.



Miro Screenshot of question ideation frame

Based on data collected and our analysis we decided on what feature to include based on suggestions and ideation. We looked into products that solve similar problems and their drawbacks, we took inspiration from their salient features and learned from their shortcomings.

SIMILAR PRODUCTS

https://www.livemin_t.com/mint-lounge/features/the-apps-to-use-this-election-season-1556861671013.htm !

<https://www.myneta.info>

<http://bolsubol.com/>

<https://www.eu-startups.com/2019/05/govtech-10-european-startups-that-are-making-governments-more-efficient-and-democratic/>

<https://rtionline.gov.in/>

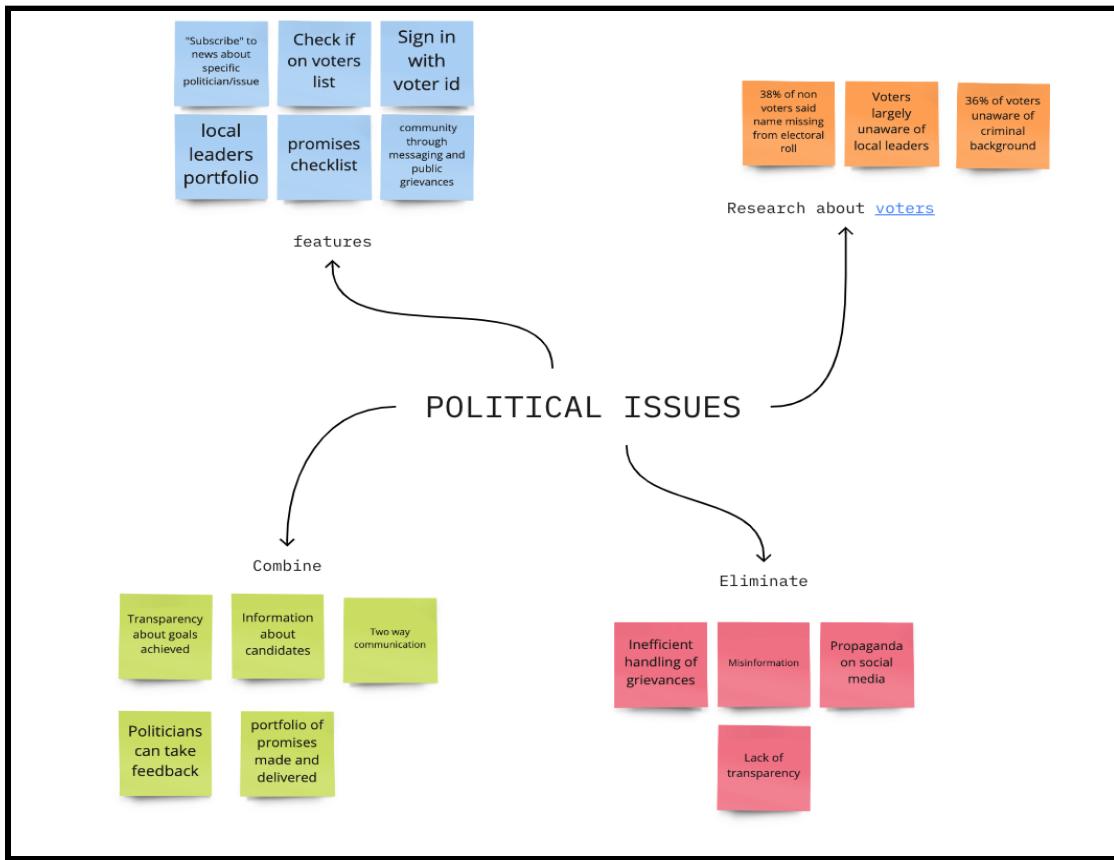
Miro Screen shot of various existing solutions and articles explaining advantages and drawbacks

After deciding on certain basic features based on gathered data and brainstorming we decided on the basic structural design of our app. Making multiple mind maps to go over the structure of our app and finally making the information architecture of the proposed app.

After brainstorming, we identified possible solutions to our problem statements-

1. Making fake news identifiers or applications which post only reliable and verified news.
2. To get the youth's interest we can use memes to present information and get them interested in politics.
3. To combat the lack of transparency we can make a communication portal that can bridge the communication gap between the voters and politicians.

We have tried to incorporate all of these features into one application. There already exists an application specifically for the second point. We made mind maps on Miro and created a low fidelity prototype.



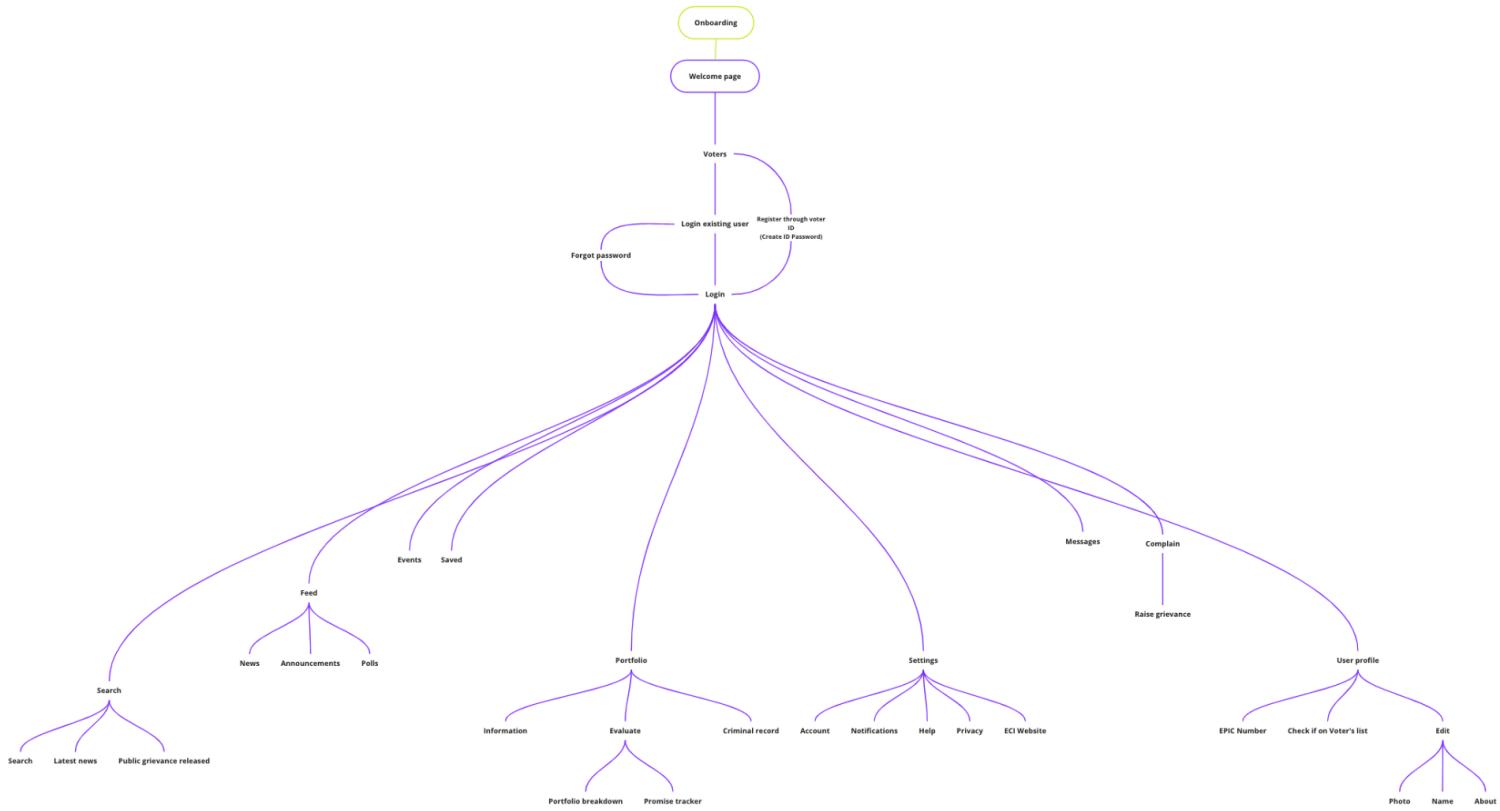
Miro screenshot of mindmap post-survey (deciding features)

After a few iterations, we reached a definitive Information architecture based on which we made an initial low fidelity prototype to get an overview of how our Information Architecture would look on a device. To get a hang of Figma before moving to more concrete prototypes we tried to recreate initial low fidelity prototypes on Figma, this also enabled us to view how we could improve aspects of our prototype to make it better on a mobile device.

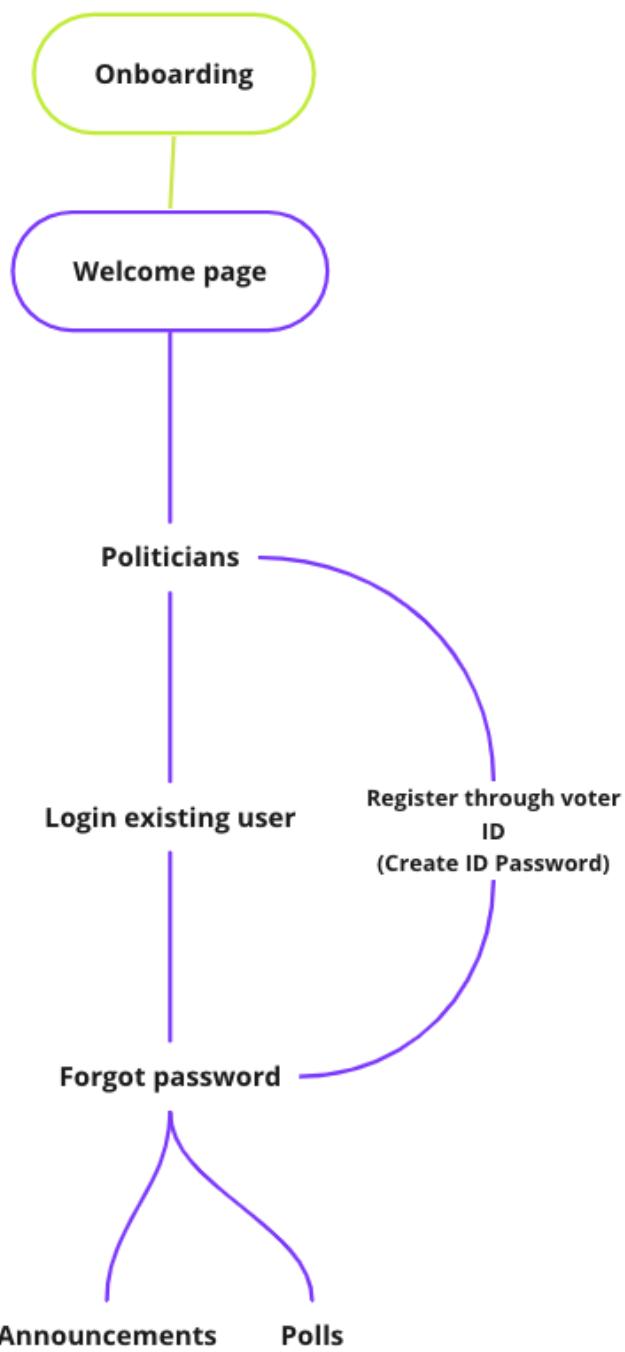
To make our problem statement more specific we removed the institution aspect of our project as we felt it was disconnected from our problem statement. After a not so enthusiastic feedback about the feature from the user, we finally decided to drop the element from the final prototype.

We felt the need for a meaningful logo and a tagline to go with the idea of our project. Since our project solves a crucial political problem, strengthening the democratic process

we decide on a logo with three pillars which is symbolic for the three pillars of democracy: the Legislative, the Executive and the Judiciary. Our tagline upholding democratic value is the iconic first line from the preamble of our constitution.

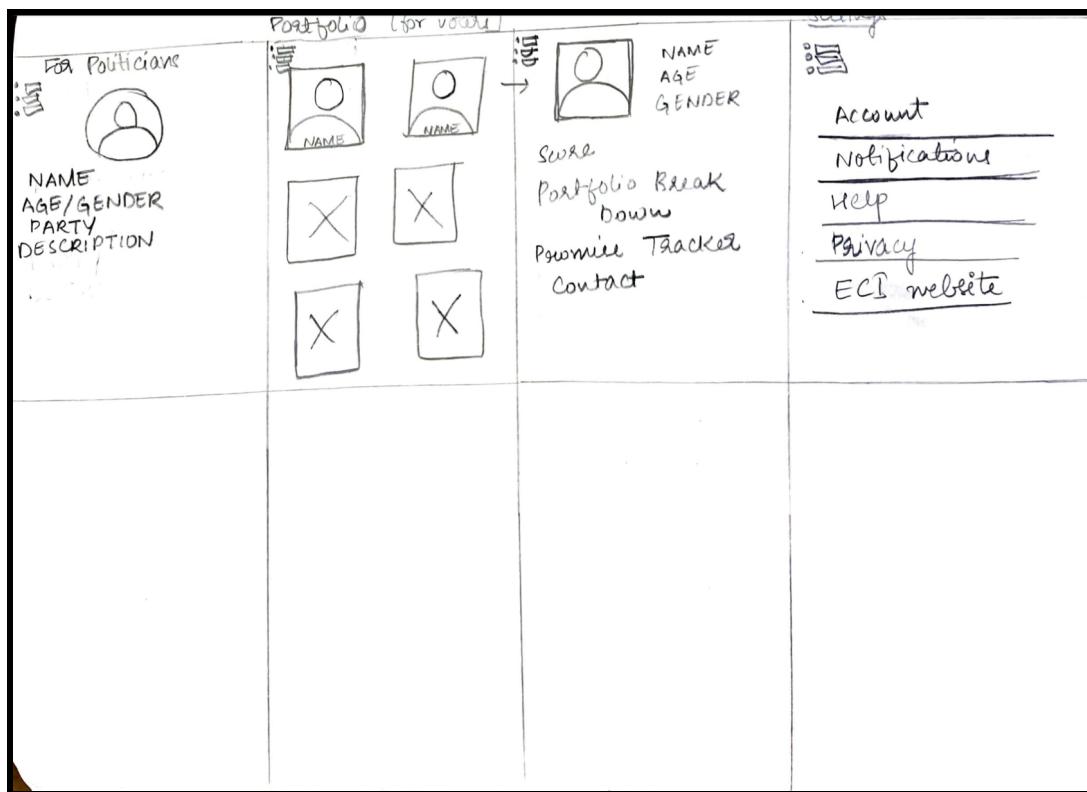
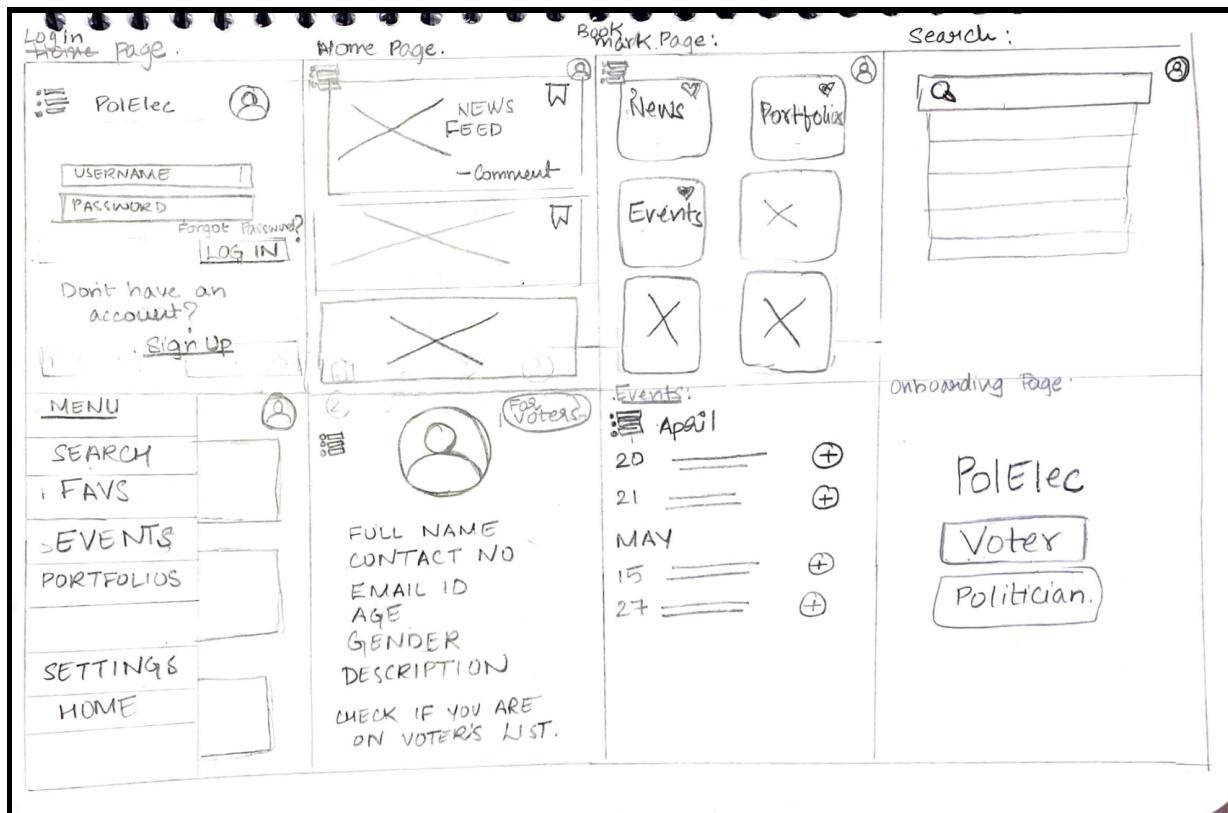


INFORMATION ARCHITECTURE VOTERS PAGE



INFORMATION ARCHITECTURE POLITICIAN PAGE

INITIAL LOW FIDELITY



LOW FIDELITY - ON FIGMA

ON BOARDING

LOGIN PAGE

SIGN UP PAGE

FORGOT PAGE

MENU

SEARCH PAGE

HOME PAGE

USER PAGE

PORTFOLIO

FAVOURITES

EVENTS

SETTINGS

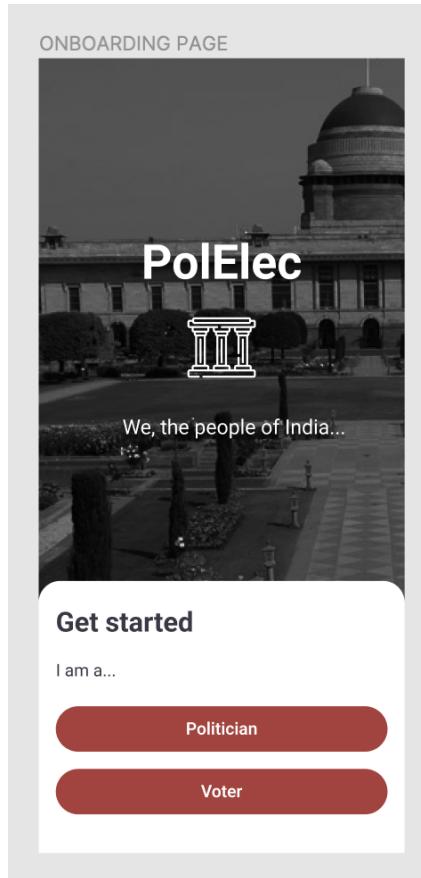
STORYBOARD

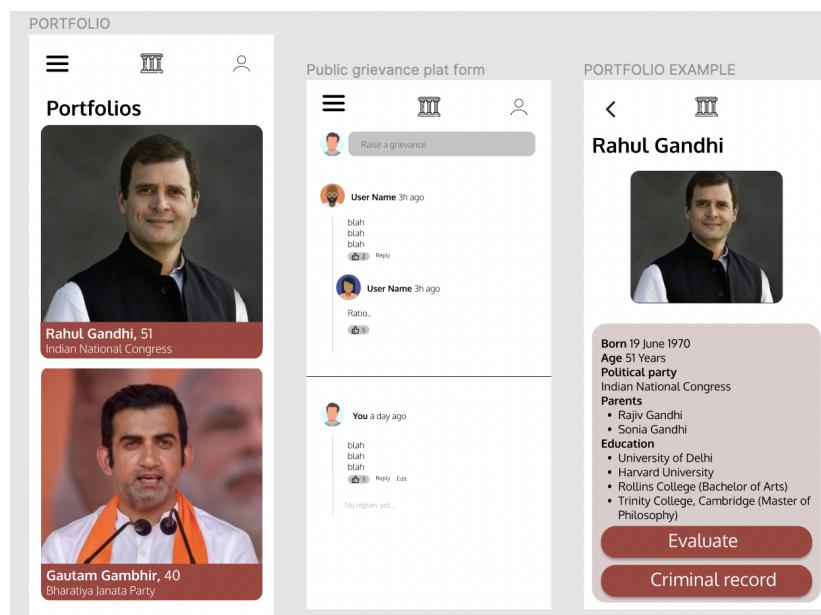
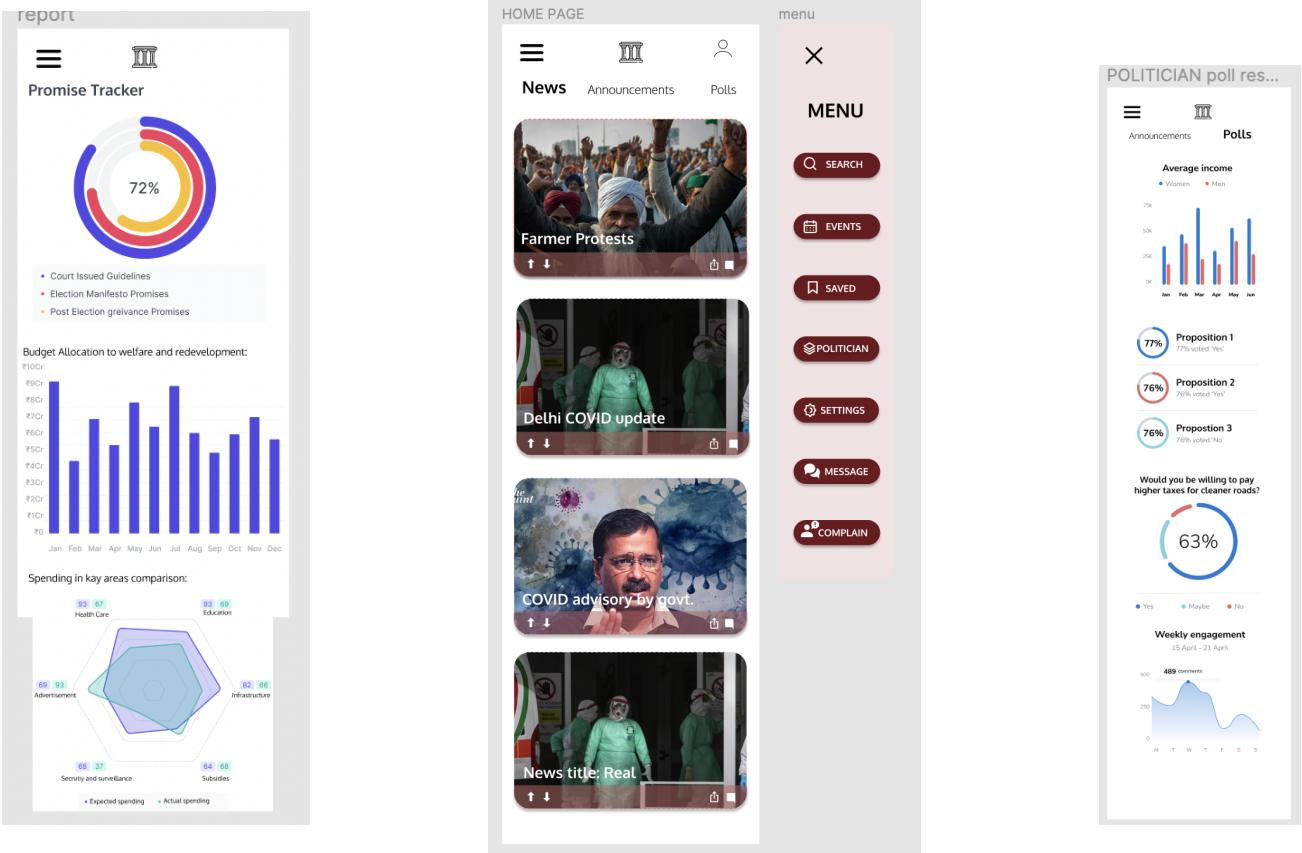


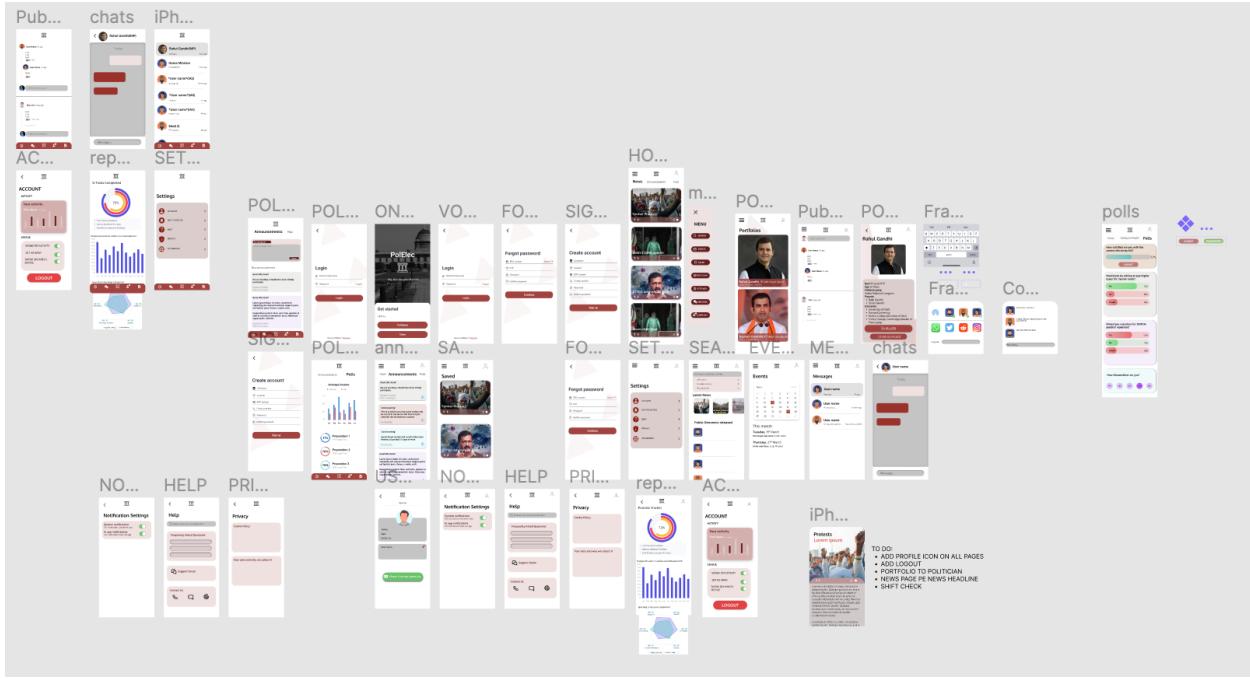
While ideating and formulating the storyboard we were reminded of a situation most of us are going through- We've turned 18 and are confused about whom to vote for. Through the story, we have depicted how PolElec has brought about a change. There is a clear difference between the scenario before and after using our application.

4. Hi-Fi Prototype

We further ideated upon our low fidelity prototype. Essentials like notifications, help page, and privacy page were added. We built upon the login page by adding sign-up and forgot password frames. The events page has been made more intuitive by depicting dates on a calendar. The profile pages, search pages, and menu have undergone an ideation process and new features have been added. Polling options, promise tracker, poll results, messages have been built upon.







5. Evaluation Plan

Evaluation was carried out throughout the design process, however a comprehensive and documented evaluation was carried out after the first iteration of the high fidelity prototype. Since then our high fidelity prototype has changed a lot guided by user feedback and our own analysis of the user.

We used three different evaluation methods at different conveniences to carry out our evaluation. We carried out an exhaustive Guerilla testing where the sample size was limited but the input was constructive. Semi Structured interviews were carried out for quick confirmation of alternatives generated and new solutions included. Google forms were used to carry out Surveys, with the main goal to increase the sample size of our evaluation base.

Guerilla Testing:

We used the following script for our testing.

“Thank you for stopping by.

We’re working on a mobile application. In a minute I’ll show you the application and I’ll ask you some questions about it. It’ll take about 5 minutes.

As you go through the application I want you to think aloud and voice whatever you’re thinking and feeling by looking at it. It’s a test of the app, not you.”

The tasks provided were:

Task1

task2

Task3

Questions specific to each evaluation were asked

We noted how different users completed their tasks and analysed them using various predefined qualitative and quantitative metrics. Voice recording of the Guerilla Test was cumulated for future reference and analysis.

Since such Exhaustive Guerilla testing is time intensive and requires a lot of resources to carry out, hence only a few iterations were carried out with a small sample size(5-6) users each time. Guerilla tests were carried out only at pivotal points in our design process.

Semi-Structured Interview:

Semi- Structured Interviews were carried out to evaluate the low fidelity and the mid fidelity prototypes.

Participants were briefed about the problem statement and the proposed solutions following which they were asked to operate the prototype and give their reviews and suggestions. Few general questions like glitches present, aesthetics of the app and overall general functionality of this application were asked and user reviews were noted.

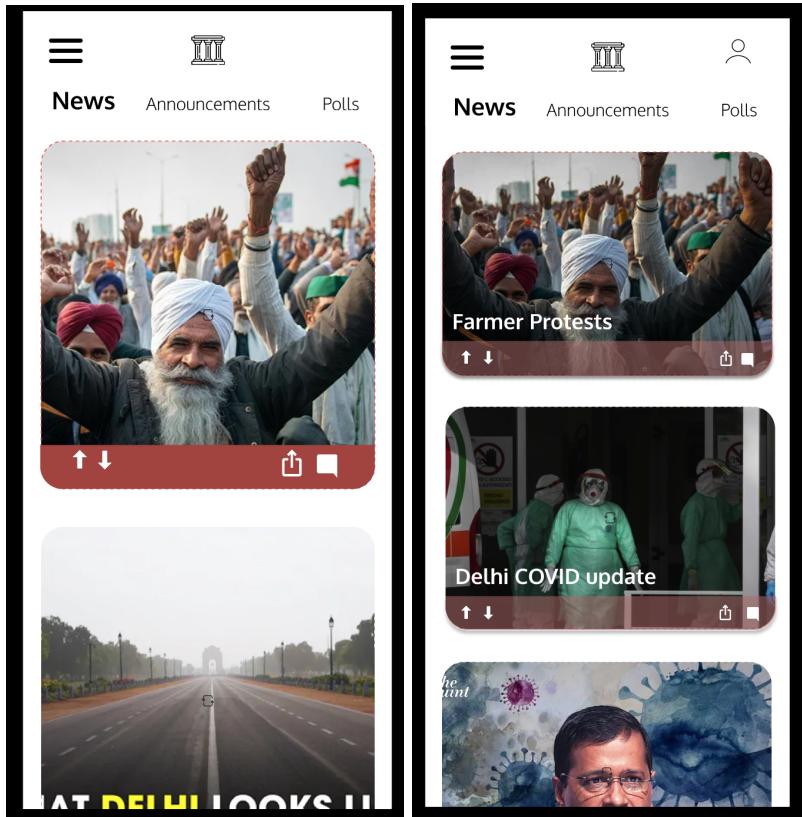
Most of the semi structured interviews were informal and were thus conducted at all stages of evaluation.

Surveys:

Surveys were conducted to get data from a larger sample size. The data was shallow however we were able to identify a broad range of problems to work upon. The surveys also brought in a lot of suggestions for us to include on our application.

Evaluation Feedback:

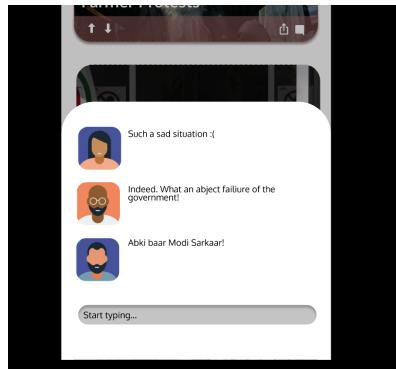
From the various evaluations conducted we analysed and worked on the feedback, thus iterating and reiterating our product. It allowed us to gain a better understanding of the users perspective and how we can improve our product to match the users expectations.



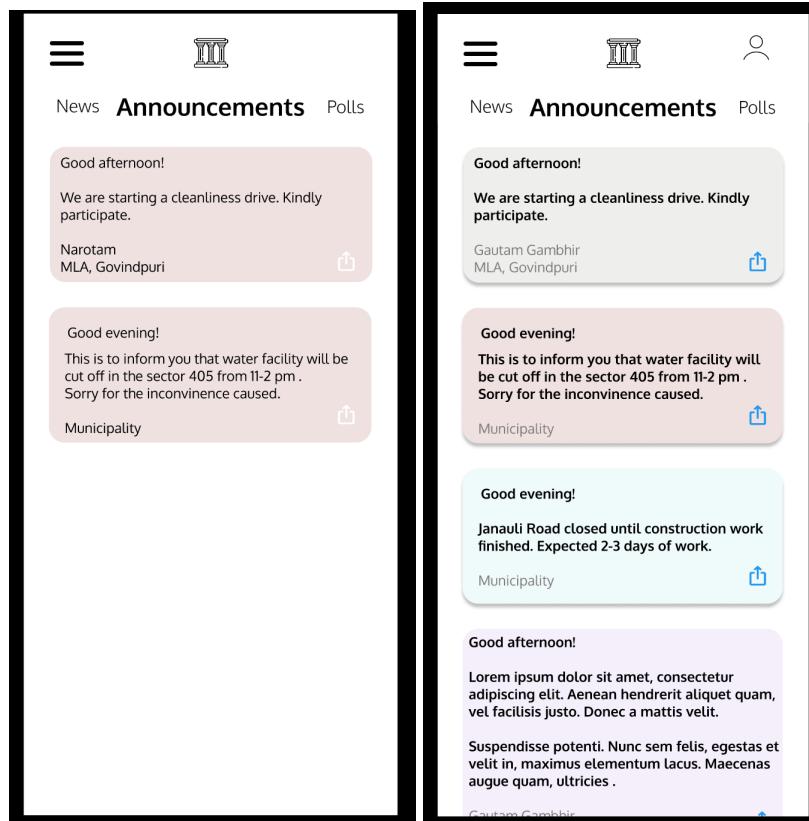
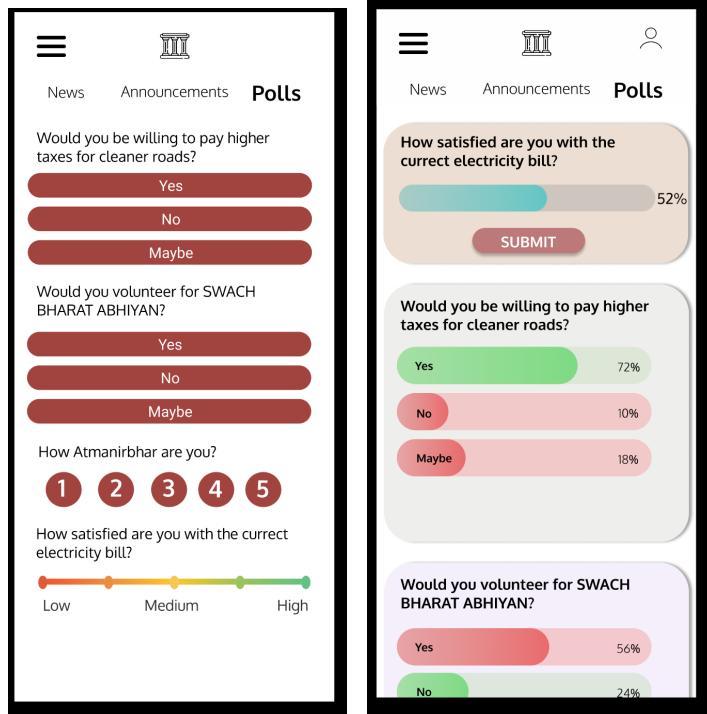
A lot of users felt that our home page news view was very bland and article thumbnails were not very informative, hence after various iterations we improved the design aesthetics and added a title to the thumbnail. We also added the feature of *expanded view*, which enabled users to preview the articles once clicking on it, instead of redirecting them to the original news source.



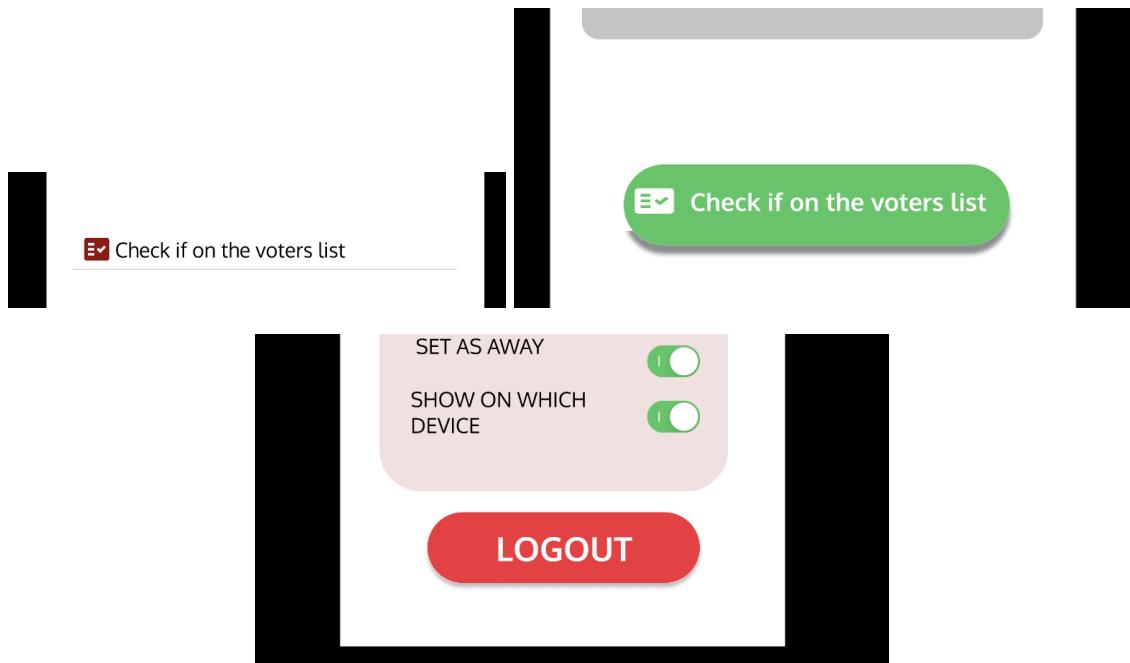
We had initially missed the comment feature hence we added another frame for comments, for users to interact and share their views about a certain article.



Users Felt that our application that our announcement and polls page were monotonous and boring, more colours were needed. A few users pointed out the lack of visibility of the share button on announcements. The following were the before and after results

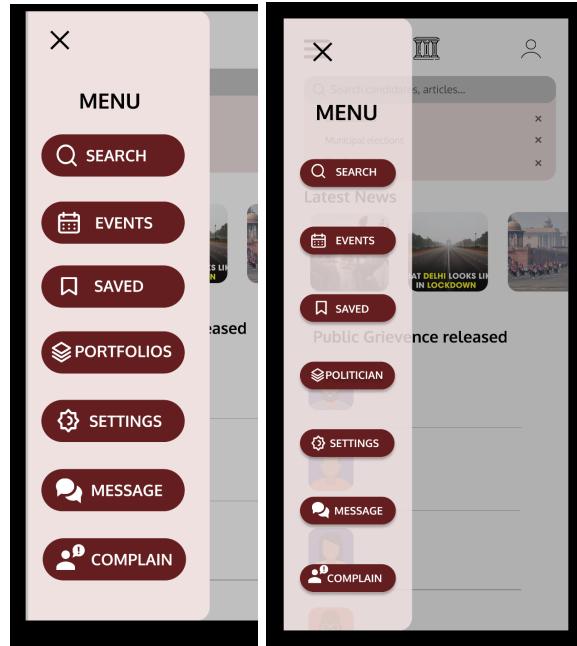


Other general suggestions included crucial things missed during our design process, such as lack of a logout button and poor visibility and affordance of the check voters list button.



A lot of our tasks involved going to the profile page of the user, hence realising its utility we shifted its position from inside the settings menu to the top right corner of almost all pages.

Users felt our menu was unnecessarily large, and the aesthetics could be improved. The following is a comparison between the hamburger menu during the initial and final phases of our prototype.

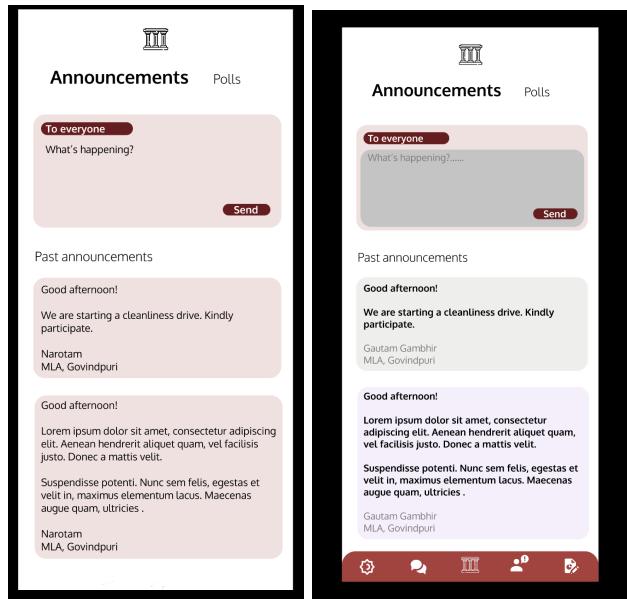


A lot of the users complained that the terminology Portfolio was complicated and not accessible. Hence Portfolio was renamed to Politician as visible above.

We were not able to find users to test the politician profile hence we had to make do with general users not specific to the target user group.

A lot of users felt that our politician profile was limited and a lot more features were necessary to fulfil our problem statement and make the politician profile more usable.

We had to rethink the information architecture for the politician profile and redesigned a lot of the politician profile.



ACCOUNT

ACTIVITY

Your activity

Time Spent

STATUS

BASED ON ACTIVITY

SET AS AWAY

SHOW ON WHICH DEVICE

LOGOUT

report

% Tasks Completed

72%

Court Based Guidelines

Election Manifesto Promises

Post Election grievance Promises

Budget Allocation to welfare and redevelopment:

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
India	100	105	110	115	120	125	130	135	140	145	150	155

Spending in key areas comparison:

SETTINGS

ACCOUNT

NOTIFICATIONS

HELP

PRIVACY

ECI WEBSITE

Analysis and future work

After every stage of evaluation we saw a steady increase in the positive feedback we received. At the later stages of evaluation we noticed a greater user satisfaction with our project, and users easily being able to carry out tasks. Throughout the project we reconsidered our problem statement as we tried to model our project around it.

Our Application will enable users to sort, save news articles along with previewing them. The app also includes details of local politicians(from their affidavit) and detailed reports of their works and spendings. People can raise public grievances using the complaint section, and communicate with other users to discuss issues.

Politicians can take polls and review their own performance using the app. Different government officials can discuss various issues and access poll data for various purposes.

This application highlights lacunae in the democratic system of our country. Information is power, and biassed information is corruption.

Ideally, we would use the application and include coded elements. Further, we would develop a machine learning algorithm to detect bias in news. Also, we would develop a technology to track promises and deliver a score automatically.

Conclusion:

We were able to satisfy most of our original problem statementement, and are satisfied with the final iteration of the high fidelity prototype. Over the iterations we could see the rising user satisfaction, leading to the last iteration where the users were clearly impressed. From Ideation to the last iteration of the high fidelity our project has come a long way and we ourselves are impressed with the final result. Along the way we learned a lot about the design making process and learned to implement various various principles though in class. We also learnt designing products of figma and ideation on Miro which are skills we are proud of picking up and polishing in the duration of this project

In the end we hope this idea is picked up and successfully implemented, and if done so we believe will definitely bring a positive and much needed impact on local democratic systems wherever implemented.

Project Contributions

Group members:

1. N Narotam - 2021477
2. Chehak Malhotra - 2021141
3. Alhad Sethi - 2021445
4. Simran Choudhary - 2021205 (**Leader**)
5. Kanishk Kevin (Inactive)

Ideation and Lo Fi - Alhad Sethi, Simran Choudhary, N Narotam

Storyboard, Information Architecture: Chehak Malhotra, Alhad Sethi

Hi Fi - N Narotam, Chehak Malhotra, Alhad Sethi, Simran Choudhary

LINK TO HIGH FIDELITY:

<https://www.figma.com/proto/Wn23VJn1u063fEMUG9aKh4/PolElec-Hifi?node-id=24%3A413&scaling=scale-down&page-id=0%3A1&starting-point-node-id=24%3A413&showproto-sidebar=1>

Google Forms:

Evaluation:

https://docs.google.com/forms/d/1ElxqaJvBii3g6G7HepdrXUH_PEtRKiIUO2q3NG6PGE4/edit

Consent form for evaluation:

<https://forms.gle/CiexpZmTmquZdonB9>

Data gathering:

<https://forms.gle/1j64oPkZc24ppNA6>

Google Drive: All interviews and guerilla testing

<https://drive.google.com/drive/folders/1ucNDodvQYXEwwk7-xzCly-hhpn1JN97p?usp=sharing>

Video presentation:

<https://drive.google.com/drive/folders/1SAtRs1dNr3bGlJ5WVI36e9k6OtDgambk?usp=sharing>

References:

1. <https://www.theatlantic.com/technology/archive/2018/03/largest-study-ever-fake-news-mit-twitter/555104/>
2. <https://eci.gov.in/divisions-of-eci/ict-apps/>
3. <http://evote.co.in>
4. <http://bolsubol.com/#>
5. <https://www.polyteia.com/>
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