

Smart Voting

Project Vision

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REVISION HISTORY

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1 INTRODUCTION

1.1 PURPOSE

The purpose of this document is to assemble all information, features, needs, and wants of the Smart Voting in one complete document. It defines the system requirements for both stakeholders and users, as well as details problems, use-cases and other supplementary specifications.

1.2 SCOPE

The Smart Voting platform is a web application that would allow elections to be held digitally. The system would be responsible for maintaining the integrity of the election while also allowing users to cast their votes in a faster and more efficient manner.

1.2.1 IN SCOPE

Because the system is a web application, it would be available to use on any device from anywhere, as long as the user has an internet connection, their identification, and voter card. In addition to this, all end users of the system would be able to view analytics of the elections as well as gather information on candidates, ridings, and statuses.

1.2.2 OUT OF SCOPE

While identification and registration would be needed for users to access the system to vote, the system has no part in the distribution of these cards. That would hypothetically be the responsibility of the government, in which this Capstone Project has no affiliation. Although the system would carry the capabilities for candidates and parties to enter information about promises, beliefs, and themselves, it would be the duty of those parties and candidates to fill out said information. To add, it is the responsibility of election officials to set riding boundaries, election date & times, and other related information.

1.3 DEFINITIONS, ACRONYMS, and ABBREVIATIONS

No Definitions, Acronyms or Abbreviations.

1.4 REFERENCES

No References Used.

2 POSITIONING

2.1 BUSINESS OPPORTUNITY

With the continuation of a global pandemic, the rise in demand of online services has increased tremendously, yet one extremely important event has been overlooked; elections. With a switch to an online system, the major complication of time spent both voting and counting is solved. While fast, the system is also safe and secure through the use of ledger databases which can be written to, but not changed. Users are able to view information on their sections, ridings, and candidates to make their decision or confirm their choice. To add to this, users can cast their vote whenever they want from the comfort of their own house; there is no planning involved. Once all votes are cast and counted, electors can view polls and watch results as they are updated.

2.2 PROBLEM STATEMENT

The Problem of	Paper and mail-in ballots.
Affects	All levels of government (federal, state/provincial and municipal), political parties, and the general public.
The impact of which is	An inefficient, time and money consuming voting system that is still prone to uncertainty in accuracy, and can be easily disrupted due to global issues and disasters.
A successful solution would be	An online voting system that allows users to cast ballots through a secure web application. The use of a ledger database would keep the validity of the election. Users can vote wherever and whenever they want assuming they have authentication material. Polls and analytics can be more easily obtained by both officials and the general public. Overall, this would result in a more efficient, accurate, secure, and less costly system, while also eliminating the various obstacles that can interfere with an election.

Table 1 Problem Statement

2.3 PROJECT POSITION STATEMENT

For	The general public.
Who	Are able to vote in elections (i.e Canadian citizens over the age of 18).
The <product name>	Is an online voting system.
That	Provides the ability to vote from anywhere through a secure online platform, which results in less expense on voters and the government, better election accuracy, and convenience and efficiency for the user and election.
Unlike	Current in-person and mail-in voting systems that discourage the speed at which voting can be completed.
Our product	Is a fully online alternative that can be accessed from any device, anywhere. On top of phasing out the use of paper, the system increases productivity with little to no waiting time, no lines, and no human screening for both voters and ballots. All votes can be counted electronically in real time.

Table 2 Position Statement

3 STAKEHOLDER AND USER DESCRIPTIONS

3.1 STAKEHOLDER SUMMARY

Stakeholder Name	Represents	Role
Political Parties	Self	An end user. It is the duty of political parties to list their policies and candidates as well as manage accounts for their candidates.
Political Candidates	Candidate's parties and themselves.	An end user. It is their responsibility to list their personal commitments and post social updates to their various accounts.
Election Officials	Government, House of Representatives, House of Commons	An end user. Creates and manages the elections as well as the settings around them (i.e voting times, and other info). At the end of elections, they verify and post the results publically. They are also in the creation and distribution of voter cards.
Voters	Self	An end user. They are the main users of the program as they are the ones who cast votes through the system.
System Developer	Self	In charge of all of the backend of the system. It is their main responsibility to maintain the database and secure the application.
System UI Designer	Self	Leads in the design and overall look of the web application. Works alongside the developers to make the site as easy to navigate as possible.

Table 3 Stakeholder Summary

3.2 USER SUMMARY

User Name	Represents	Role	Stakeholder
Political Parties	End user.	<ul style="list-style-type: none">- Lists official party policies.- Displays a complete list of candidates for the party.- Create and manage candidate accounts.	Self
Political Candidates	End user.	<ul style="list-style-type: none">- Lists personal commitments to the people of their riding- Post social updates on what they are doing	Candidate's parties and themselves.
Election Officials	System Administrator	<ul style="list-style-type: none">- Create and manage elections- Set voting times based on time zone- Verify and post official results- Generate voter id cards- Create and manage party accounts	Government, House of Representatives, House of Commons

Table 4 User Summary

4 STAKEHOLDER REQUIREMENTS

ID	Stakeholder	Requirement
1	Political Parties	<ul style="list-style-type: none">- Manage policies and candidates' accounts- View analysis and polls
2	Political Candidates	<ul style="list-style-type: none">- Edit and update account- View analysis and polls
3	Election Officials	<ul style="list-style-type: none">- Manage elections and ridings- Finalize and post results- View analysis and polls
4	Voters	<ul style="list-style-type: none">- Verify identity easily- Cast vote easily- View analysis and polls- Navigate web portal easily

Table 5 Stakeholder Requirements

5 SYSTEM FEATURES

ID	Feature	Stakeholder Requirement ID
1	- Use of a ledger database to store user votes.	2
2	- Ability for users to cast their votes.	1
3	- Use of two / three factor authentication to register and vote in order to uphold the integrity of the election.	3
4	- Ability for users to view analytics of elections for users to see results.	4
5	- Ability to view information on who they're voting for and their various political parties.	5

Table 6 System Features

6 ASSUMPTIONS

It is assumed that all users who use this product would have access to an internet connection and device that they are able to use. This product is meant as an alternative to voting, and by no means implies that it will completely replace current voting systems if implemented. The system is simply an extra option for citizens, especially those who have little time, or health issues. All of this also assumes that a government would approve of the system being used across their countries. The plans and goals set out in this document and others attached are the desired outcomes and by no means represent the final product.

7 CONSTRAINTS

We are not in charge or control of Canada Post or other courier services that may cause delays delivering voter registration cards.