

**ADVANCED  
ONLINE  
VOTER  
REGISTRATION**

*A toolkit for  
paperless voter  
registration in  
the field*

By Pennsylvania Voice | November 2021

# About

# Pennsylvania

# Voice

**Pennsylvania Voice is a statewide network of more than 35 organizations.**

Partners share a vision of full participation and representation in our democracy of the New American Majority—historically underrepresented and marginalized communities, such as young people (under 34), single women, and people of color—in Pennsylvania. This work requires vision and long-form campaign planning. The full participation by the New American Majority cannot be achieved through one election cycle, one legislative fight, or one campaign. Together partners build the power needed to break down barriers to civic participation, restore confidence in government, and bring historically marginalized populations—and their issues—to the center of public discourse.

Pennsylvania Voice is part of the State Voices network, which connects states and is a model for coordination among nonpartisan 501(c)(3) advocacy, community, and grassroots organizations.

Pennsylvania Voice convenes and facilitates a voting reform and election administration work group (VREA). This group—which includes field practitioners, organizers, and leading Pennsylvania-based and national voting advocates and election administration experts—played an integral role in the expansion of online voter registration in Pennsylvania. It also provides leadership to the Keystone Votes coalition.

Keystone Votes is a nonpartisan coalition of advocacy and community organizations joined together to launch a coordinated campaign to update Pennsylvania's election system. Its members represent communities across Pennsylvania from seniors and working people to immigrants, people with disabilities, and faith leaders. For more information, visit [www.keystonevotes.org](http://www.keystonevotes.org).

In addition to its work making sure that every eligible Pennsylvanian can have their voice heard on Election Day, the Pennsylvania Voice partnership also works to:

- Increase **voter registration** and **election participation** through community organizing and engagement from trusted messengers;
- Guarantee a fair and accurate count in the **2020 US census**;
- Make sure that **2021 redistricting** efforts are fully inclusive of communities of color; and
- Strengthen **leadership ladders** that help more people of color become leaders in the progressive movement and/or candidates for office.

|           |  |
|-----------|--|
| <b>3</b>  | <b>INTRODUCTION</b>                                      |
| <b>5</b>  | <b>WHY MOVE FROM PAPER TO TABLET-BASED REGISTRATION?</b> |
| <b>7</b>  | <b>STEP 1: GETTING THE STATE INVOLVED</b>                |
| <b>8</b>  | ADVOCACY PHASE 1: GETTING THE COMMITMENT                 |
| <b>14</b> | ADVOCACY PHASE 2: MANAGING IMPLEMENTATION                |
| <b>18</b> | <b>STEP 2: DEVELOPING THE SOFTWARE</b>                   |
| <b>22</b> | <b>USE BEYOND THE FIELD</b>                              |
| <b>26</b> | <b>APPENDIX A</b>  |
| <b>27</b> | <b>APPENDIX B</b>  |
| <b>28</b> | <b>ACKNOWLEDGMENTS</b>                                   |

# Introduction

*Pennsylvania currently has the best online voter registration system in the country for third-party integration. This guide will explain the improvements we won and show you how to advocate for those improvements in your state.*

In the spring of 2015, the Pennsylvania Department of State started engaging stakeholders in its plan to launch online voter registration in August 2015, making Pennsylvania the 29th state to enact online voter registration.

Following a similar process to most other state online voter registration systems, a Pennsylvania voter would be able to go to the Department of State's website and register to vote. If they had a state-issued ID (like a driver's license), the process could happen completely online. If they didn't, they could get started online, but they would have to wait for the state to mail a postcard, which they'd have to sign and return before being added to the voter rolls.

As members of the Pennsylvania Voice partnership began asking how to integrate the new online voter registration system into their work registering voters in person, we realized something strange.

Even though dozens of states had online voter registration (OVR) systems, nobody used OVR in the field. Field practitioners were sticking to paper rather than upgrading to tablets to register voters in the field. That seemed like a missed opportunity.

After a lot of research and conversations with experts around the country, **we identified three commonalities across states that prevented voter registration field practitioners from moving off paper:**

**Data Collection:** Field practitioners need to capture non-sensitive information from the voter registration application that does not require double entry or filling out two separate forms.

**Connectivity:** People identified connectivity issues that could lead to loss of applications. Systems have to work without internet access.

**Signature:** There has to be a way for people without state-issued IDs to provide a signature.

To solve these issues and be able to recommend to our partners that they use online voter registration in the field, **we needed the state to make technical enhancements to its online voter registration system, and the field practitioners needed software that could address the three issues listed above.**

## STEP 1: GETTING THE STATE INVOLVED

Before we could design our new software, we needed the state to commit to implementing two technical enhancements—**API** and **signature upload**—to its online voter registration system.

## STEP 2: BUILDING SOFTWARE

At the same time we asked the state to make enhancements to its OVR system, we also identified a software developer and began to think through what we needed an app to do and how it should function.

*After looking at a number of options, we chose to work with Rock the Vote and OSET to develop an app that relies on the existing Rock the Vote online voter registration portal.*

Pennsylvania Voice decided to invest months in advocating for changes at the state level along with investing money to build software because moving voter registration off paper and onto tablets is clearly the future for third-party voter registration drives.

Our success in winning technical enhancements to the PA OVR system has allowed us to replicate on tablets all the best practices that have been standard in paper-based voter registration for years. Ultimately this means the groups that are part of the Pennsylvania Voice partnership—and other organizations—are continuing to help voters register who would not have otherwise done so on their own.

The following sections detail the process in hopes that it will help you modernize your state's voter registration process and begin using OVR in the field and beyond.

*An **API** is a technical enhancement that allows one database to talk to another. APIs are very common and long-standing forms of software that are all over the internet, though not as common in state government. With an API, field organizations would be able to build custom software that allowed them to simultaneously pass voter registration applications to the state AND retain any critical contact information for Get Out The Vote. APIs allow batch uploads, so we could collect voter registrations and store them on a tablet until internet access was established and then upload them all at once.*

***Signature upload** means that we needed the state—independently of the API—to build a method for voters without state-issued IDs to either upload an image of their signature or input it directly using a stylus.*

“  
**Moving voter registration off paper and onto tablets is clearly the future for third-party voter registration drives.**

# Why move from paper to tablet-based registration?



Everything a third-party voter registration group does on paper can be done on tablets. And several features make tablet-based voter registration a better choice than paper.

Since online voter registration (OVR) was first introduced in Arizona in 2002, the benefits of this upgrade have been well-proven. OVR saves valuable taxpayer dollars, increases the accuracy of voter rolls, and is more convenient for voters to register for the first time or update their registrations after moving.

In Pennsylvania, the response to OVR was tremendous. According to data provided by the Department of State, by the end of 2016, 800,000 more citizens filled out a voter registration application than in 2012. This increase was entirely attributed to the introduction of online voter registration.

Everything a third-party voter registration group does on paper can be done on tablets with key technical enhancements to the online voter registration system. **And several features make tablet-based voter registration a better choice than paper:**

**Submit only complete applications.** Online voter registration software can be designed to prohibit any incomplete applications from being submitted. This reduces human error in filling out the application.

**Eliminate data entry.** After a voter enters their application information on a tablet, the data can be sent simultaneously to the state and to a server under your control. This allows you to save all the appropriate information in one data file. You don't need to scan or photocopy the paper forms, and there is no data entry of handwritten information. This saves both the state/county and field groups databasing costs!

**Get more contact info.** Using a tablet allows you to collect information from a registrant that is not included on a state's voter registration form, like phone and SMS numbers (including cell and text opt-ins), email addresses, or survey questions.

**Run more efficient quality control.** Quality control is always a necessity when running a large voter registration drive. However, it's simplified when reviewing a single data file instead of reviewing each hand-written paper form individually. For instance, you can sort your data file by address and easily see if the same

address is being used multiple times by unique voters. Similarly, on the individual canvasser level, you can track rates—anything from percent of forms submitted without a driver’s license number to rate of registrations per shift—with just a few clicks of a button.

**Improve accuracy of data.** Because there is no handwriting to interpret, data from tablets is cleaner. Generally, this means your match rate to the voter file will increase, and even more critically, it means that more registrants will be added to the rolls.

**Automatically redact sensitive information.** Once information is entered by a voter and sent to the state, a voter’s sensitive information, such as driver’s license or Social Security number, is automatically redacted. No need for locked filing cabinets, manual redaction, or big paper shredding jobs.

**Track the approval or rejection of the application.** Depending on how voter registration software is designed, it is possible to track in real time an applicant’s progress toward being added to the rolls, at the state, county, or local level if need be.

In addition to the benefits field organizations will see, the more voters who register online, the more money counties and states save on data entry, postage, printing, and other costs associated with paper. Saving counties and states money and time processing forms generated by third-party voter registration drives is also a real boost to the relationship between advocates and government.

*Election officials are some of the best messengers for voting modernization, and the fact that Pennsylvania Voice advocated for changes that would make their lives easier has strengthened our relationship with them. This will come in handy as we concurrently seek legislative changes to our voting systems in PA.*

# Step 1:

## Getting the state involved

Once you've decided to advocate for your state to modernize its voter registration process, the first step requires working directly with state officials. **Within this first step, there are two distinct phases of advocacy toward getting your state to make the necessary technical enhancements:**

### ADVOCACY PHASE 1:

### Getting the commitment from the state

This means securing a commitment from the state to build an API to allow third-party users to electronically transfer voter registration data. Depending on the political and budget situation in your state, you will need to identify the decision-makers and convince them of the value of registering lots of voters online instead of using costly and error-prone paper.

### ADVOCACY PHASE 2:

### State implementation

Once the political commitment is made, a different cast of characters comes into play: the operations and tech people.

The tech folks could include those who exclusively work on election matters, other state IT staff, or outside contractors. On the operations side, state-level election administration staff and key local election administrators could be pulled in as well. Even if you have a specific directive from a top decision-maker, this group's buy-in and willingness to implement the changes make a big difference in how long it will take to begin using online voter registration in the field.

### **HOW IT WORKED IN PA:** **Getting the State Involved**

*A month or two before the Pennsylvania Department of State launched its basic online voter registration system, officials had already expressed interest in providing a signature upload option. We became very vocal in articulating the reasons why that enhancement made sense.*

*We also raised the concept of a web API. Our argument was that our group represented the largest collection of nonpartisan third-party voter registration organizations in the state. We could declare—with certainty—that none of those groups would use the online voter registration system in the field without the ability to design software that could replicate best practices used on paper.*

*This was a motivating talking point in the second half of 2015. A presidential election was coming, and third-party voter registration can account for up to half of all voter registration activity in the state in a presidential year. Essentially, the time and money savings that OVR promised wouldn't be possible without giving third parties an API.*

*In January 2016, the state rolled out plans to introduce signature upload by March and made the agreement to introduce a web API in time for use in the fall of 2016.*



# ADVOCACY PHASE 1: GETTING THE COMMITMENT



There are two technical enhancements required to be able to use online voter registration in the field: an API and signature upload.

## **WHAT TO ASK YOUR STATE FOR**

As of August 2017, thirty-four states offer voters the opportunity to register online (and four more are in the process of implementing OVR). Of these, only six allow third-party voter registration groups to utilize online voter registration in the field. And only Pennsylvania, California, and Virginia offer enough functionality to enable third parties to follow most, if not all, voter registration best practices.

If you're concerned about opposition having a copy of the toolkit, they may question why PA organizations have upload capabilities when so many other states do not.

Whether you are advocating for your state to build online voter registration from scratch, or if you are in one of the 35 states that offer a version that isn't optimized for the field, **there are two technical enhancements required to be able to use online voter registration in the field:**

- 1. An API**
- 2. Signature upload**

### WHAT EXACTLY IS AN API?

API stands for “application programming interface.” Some people call it a “web service.” Essentially it is a piece of software that allows one computer application to talk to another computer application.

It’s easy to understand what an API is if you have ever ordered food in a restaurant.

If you are seeking food, you pick a place you want to eat, go in, and sit down. A waiter comes to your table to take your order, communicates it to the cook in the kitchen, and brings your meal to your table when it’s ready.

An API does the same thing as a waiter. When one website wants the information that is contained in another website’s database, it talks to an API. The API finds out exactly what information the website wants and goes to the other website’s database to retrieve that information.

In the case of online voter registration, an API would allow the state’s online voter registration database to receive information from your customized voter registration app.

Without an API, you could still go out with a tablet and a data plan, pull up the state’s voter registration website or a third-party option like Rock the Vote’s web platform, and collect voter registrations. The problem is, any data the voter enters will go straight to the state, and you won’t be able to keep any of it—most critically the voter’s name and phone number. If you wanted to collect that information, a voter would have to fill out a separate form for you.

The API allows you to capture the appropriate data on each registrant for follow-up GOTV and long-term engagement AND simultaneously send that data to the state to get the person registered.

Don’t get hung up on knowing exactly what an API does or even the terminology used to describe one. You don’t need to be a technology expert to advocate for an upgraded OVR system.

#### **All you really need to know about an API before you talk to your state is:**

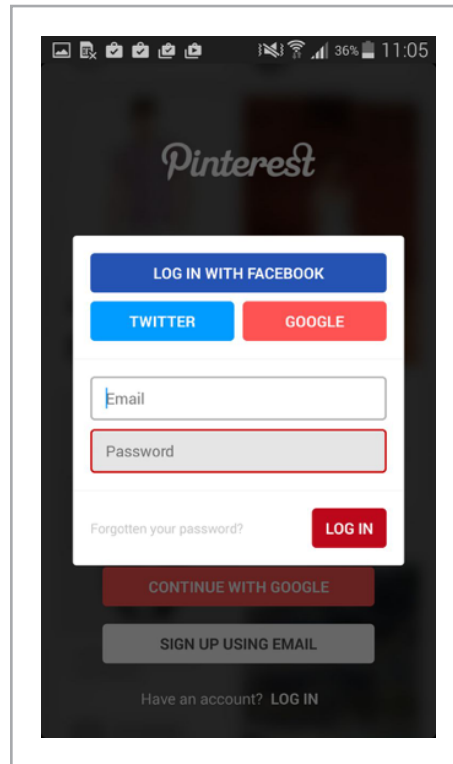
- It is the best way for your state to allow third parties to transmit voter registration applications directly to the state’s online voter registration portal.
- It’s a pretty low-cost project.
- It will save the state and counties money by eliminating data-entry from paper voter registration forms.

## SOME COMMON API USES:

### Log-in APIs

Lots of websites, like Pinterest, use an API to let you access their site using your Facebook or Google login.

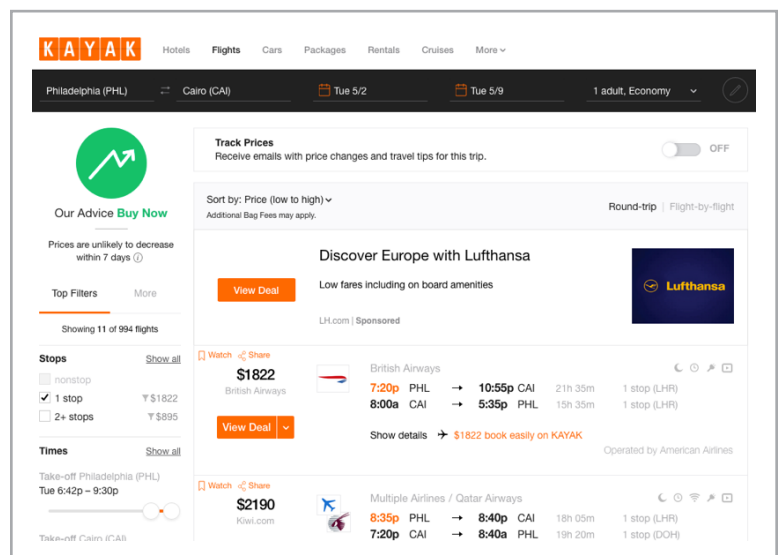
In this case, Facebook and Google both built an API that allows a third party—in this case Pinterest—to talk to its database program and say, “Hey, this person wants to access my website using the login from your site. Are they really ‘Facebookuser1’ and is their password really ‘123ABC’?” Facebook’s database replies, “Yep, they are a real person,” and the API tells that to Pinterest. Voila! You are now logged in.



### Search engine APIs

Search engines all use APIs. A very common example of this is a flight search engine like Kayak.

Basically, each airline built an API that allows its own flight database to be accessed by third parties. In this case, you enter the date and time of a flight you would like to take. Kayak then communicates that information to each airline’s API so you can search ALL airlines at once rather than going to each individual website.



## WHAT YOUR API SHOULD LOOK LIKE

There are many options for what type of API to build, but you are looking for one that is the most flexible. **Specifically, you want the state to build an API that would:**

- 1 Require only the legally required fields on a voter registration form.** Additional check boxes that some state forms have like “volunteer to be a poll worker” should not be included.
- 2 Accept both one-at-a-time submissions in real time AND batch uploads.** Canvassers in the field with data access could submit a voter’s application as soon as they fill it out OR they could wait to get back to the office and check in with their lead before sending off all the applications they collected that day.
- 3 Send a confirmation back to your software.** This would show that the application was received and, ideally, if it was approved or not.

## IF YOUR STATE SAYS NO TO AN API

An API allows you to build the best possible voter registration process for third parties. However, without an API it is still possible to utilize OVR in the field. It will just require constant internet access and some challenges in data capture.

For example, states can modify their websites to accept information from third parties via URL. You would need to create a website and database to capture appropriate voter data, such as opt-ins and contact information, and then pass the registrant to the state website using a URL that includes some of that information. That information would then be pre-populated for the registrant on the state website, limiting some of the data duplication.

The registrant would then need to review their data and complete the application on the state’s voter registration website. On the back-end, you would still have access to that registrant’s information for follow-up, because it was collected before the registrant was passed to the state, and the state would have what it needs to process the application.

This method is not as secure as transfer via API, since the state has less control over designated partners and data quality. The states that offer this option currently allow third parties to pass on only full names and either zip code or date of birth.

### A NOTE ABOUT CONNECTIVITY

Getting a commitment from a state to build an API is about the only way to guarantee that an app for your state can accept voter registrations from tablets that are NOT connected to the internet.

There are a few reasons to consider working offline in a way that allows for batch upload of voter registrations:

**Network connections get disconnected.** The average site-based voter registration canvasser gets 1 to 3 voter registration applications per hour. That’s a narrow margin. Imagine that one of those three people is filling out an application when—suddenly—the tablet loses access to the internet or the state’s website goes down. You will want to build software that protects the registrant’s application and allows it to be submitted to the state later.

**Data plans cost money.** If the state allows voter registration applications to be submitted in batches, you may not need to pay for and manage data plans for individual tablets.

## 2. SIGNATURE UPLOAD

State voter registration laws require applicants to provide a signature. Sometimes they even specify that this signature can come only from the driver's license bureau. This signature ends up attached to a voter registration record and is printed in the poll book. The primary purpose of the signature is to provide a tool to verify the voter's identity.

Signature requirements can create barriers for seamless online voter registration.

Many states have created online voter registration systems that ask for a state ID number (either from a driver's license or non-driver ID) to get a signature attached to an electronic voter registration application.

This means a voter must have a state-issued ID if they would like to have a totally paperless voter registration experience. Low-income people, senior citizens, and college students are particularly likely to not have a state-issued ID.

### **How can a state allow people without state-issued IDs to register to vote online without printing and signing something?**

**1 Create a signature upload feature in the state OVR system.** You could simply add a field to the state's existing online voter registration form that allows a voter without state-issued ID to upload a signature.

For this to work well, the state needs to invest in the kind of software banks use for mobile deposits that forces the image file to be of a certain quality and constrained to a certain size. If the state doesn't do this, the signature files could end up too large or too small to be printed in a poll book. You should also encourage the state to review whether any other state agencies are currently implementing electronic signature software that could be used for these purposes.

A voter could then simply take a picture of their signature on a phone and upload the file to the online voter registration system. If you are successful in getting the state to agree to build an API, you could make this even simpler by allowing your software to accept signatures via a stylus on a tablet.

**2 Change statute.** Another simpler solution is to ask for a change to state laws that narrowly define what a signature is and where it must come from to allow electronic signatures or unique identifiers in lieu of what is often too strictly defined in statute. This, however, is a heavy lift.

You could also look for other databases—like county, municipal, or even private institutions like colleges—that collect and retain copies of signature files in your state. If you can find one, suggest that the state online voter registration system also collect signatures from that database, broadening the options for citizens without state-issued ID.

**3 Collect signatures later.** The state could take on responsibility for collecting signatures from voters. This means they would process voter registration applications without signatures and hold the voter in "pending" status until a signature is provided. Ideally, the state would proactively follow-up with voters by mail or email to remind them to send in their signatures. Or the state could simply wait and collect a physical signature on Election Day at a polling site.

The simpler you can make the process for a voter filling out a registration application, the more successful your online voter registration program will be in the field.

# HOW TO SELL IT TO YOUR STATE

To run an effective field program that registers voters online rather than using paper, you need to advocate with the people who administer elections in your state to make some changes to the existing online voter registration platform.

Your frame should start with a simple description of what you want: a simple, technical enhancement to the state's online voter registration system.

It's a broad and very durable concept that communicates that **allowing third parties to transmit voter registration applications directly to the state's online voter registration portal is not a big deal, it's a win-win for all involved, and it does not necessarily need the Legislature to get involved.**

Once you have laid out that broad and durable talking point, there are additional reasons why it makes sense for the state to say yes:

## The upfront cost is low and the potential savings is high.

- A recent national study by Doug Chapin, who is the director of the University of Minnesota election director certification program, found that on average it costs \$3.54 to process a paper voter registration application. This cost is virtually erased when voters register online.
- Many agencies, including driver's license bureaus and public benefit agencies, are required by the federal motor voter law to offer citizens the chance to register to vote. There would be a huge cost savings if the paper voter registrations generated by these agencies were replaced by electronic versions.
- The cost of building an API to allow third-party organizations (and other state agencies) to transmit data would be less than \$100,000.

## It reduces the volume—and headaches—that come with paper voter registration drives.

- Third-party field organizations can be responsible for significant increases in the number of paper voter registrations states receive, especially in presidential years.
- Online applications not only cost less to process (saving labor, postage, etc.), but they also contain far fewer errors.
- Online voter applications don't require election officials to interpret people's handwriting.
- But no field organization is going to stop using paper if they can't replicate the best practices they follow on paper.

## It improves security and data quality.

- Fraud is almost impossible when using an online system, especially when application forms link to driver's license records.
- Offering voters more opportunities and more convenience when registering means they are likely to keep their records more up to date.
- Without the clerical errors possible on paper, online voter registrations tend to be more accurate.
- Copies of applications are stored on servers, which can be backed up, so it is significantly harder to lose track of an applicant than with paper.
- The state can set up the API so it tracks the activity of distinct third-party groups. This increases accountability, allowing officials to catch and fix errors by third-party field efforts.

## It's good government.

- The more opportunities a voter has to register to vote, the more likely they will submit or update an application.
- Making government paperless is cost saving and good for the environment.

## ADVOCACY PHASE 2: MANAGING IMPLEMENTATION

Once your state has committed to enhancing its online voter registration system to accept data from third parties, your attention can turn to implementation. No matter what your level of technical expertise is, you need to participate in the actual design and build of software.

At this stage, it's important to define your role as an expert. Your experience and understanding of best practices and standards for nonpartisan voter registration drives allows you to be a useful resource to the state.

After all, if enhancements to a state's online voter registration system are not implemented properly, third-party groups will simply keep using paper. That means the state will miss out on any cost-savings or greater efficiency. It's your job to remind the state of this fact at every step along the way.



If enhancements to a state's online voter registration are not implemented properly, third-party groups will simply keep using paper.

### HOW IT WORKED IN PA:

#### Implementation

##### Signature upload

*It was relatively easy to secure a commitment from the Department of State to implement electronic signature upload. In addition to members of the advocacy community calling for this feature, the association of the state's election directors had also asked for it. They saw seamless electronic voter registration as a means to reduce the volume of paper applications they must process, which is particularly large in presidential years.*

*To implement this improvement, the state worked with a vendor called Kofax, which had already built technology that allows individuals to photograph checks for mobile deposit. Pennsylvania applied this technology to the online voter registration system largely because election officials wanted the image files to be uniform in size and shape for easy publication in paper poll books.*

##### API

*Implementation of the web API took significantly more advocacy time, which was largely on the shoulders of Pennsylvania Voice staff. Our biggest challenge was that no one at the Department of State (or really anyone else in state government) had ever built a web API before. Our advocacy work focused largely on "how" to implement a web API because by and large the "why" had already been agreed to.*

# KEY ITEMS TO ASK FOR IN THE IMPLEMENTATION PROCESS

**1 User agreements.** To accept OVR from the field, the state has to allow third parties to connect to its database. Individual organizations could build software to register voters and transmit that information to the state, but it would be even better if one organization per state built a software program for all to access. In that case, multiple users from multiple organizations could be using the same software. What if one user did something improper or illegal? You will want to make sure the state outlines a user agreement that allows third parties who wish to transmit voter registration applications directly to the state's online voter registration portal. Ideally, you and the state will agree to shut down individual bad actors/organizations rather than allowing one bad apple to threaten everyone who uses the software you design.

**2 Useful status updates.** Every time you use the software program to register voters in the field, and it submits data to the state's electronic voter registration database, you will want some kind of receipt. At a minimum, the state should send back a confirmation code that you and the individual voter can use to track the application's progress toward getting the voter added to the rolls. Even better, the state's API should send you information every step of the way until you know whether the voter registration application was approved or rejected.

**3 Batch and real-time submissions.** When your state decides how to accept data from third parties, it has a choice: it can allow just one submission at a time, or it can accept a batch of applications at any time. The latter option offers third parties much more flexibility in how they design their voter registration software. If your state will accept batch uploads, you don't need to have internet connectivity in the field. Instead, canvassers can collect a bunch of voter registrations and then upload them all simultaneously at the end of their shifts.

*The Pennsylvania User Agreement can be found online at:*

<http://www.dos.pa.gov/VotingElections/OtherServicesEvents/Pages/PA-Online-Voter-Registration-Web-API--RFC.aspx>

**4 Legally required fields only.** Carefully review the existing voter registration form your state uses. Work with a lawyer who has election law expertise in your state to determine which data fields are legally required. Then advocate for only those fields to be necessary when transferring data to the state to register a voter. You can always decide when you design your own software whether you want to limit yourself to only the legally required fields or add more. However, it's important to have the option to create the shortest possible voter registration application.

**5 Language access.** Ideally, the state's API should be able to receive applications that come from your software in any—or at least multiple—languages. Ask the state for as many details as possible about the implications of accepting voter registration applications on the software you design. For example, how will the state treat submissions from a non-English keyboard?



**The best way to make sure all of these key items are addressed by your state is to get a commitment to some specific deadlines and events:**

**1 A design meeting.** Very early in the implementation process, request that the state set up a meeting among key stakeholders. This is fairly standard practice when designing any new kind of software. A simple meeting like this makes sure that the state's developers start off on the right track, anticipate the kind of challenges that could occur in the field, and design from the outset a means to address them. You can include national entities like Rock the Vote that has already created voter registration software in most states. It is critically important that you get any significant groups in your state that do voter registration programming to participate in the design meeting.

The flow of this meeting should be that the state presents generally what it plans to do, and then you and your group ask clarifying questions and flag any obvious problems. Many of the specific negotiation points listed above can be discussed here.

**2 Publication of specs.** In order for a software developer to build an app, they will need to know what the state's API is going to look like. The state does not have to actually build its API in order to come up with these parameters. You want to request that the state publish these specs as soon as possible so you can concurrently begin working with a software engineer to build your app. Ideally, the state should be soliciting feedback on the specs from stakeholders to identify any issues or gaps. The federal government has developed a number of APIs and encourages federal agencies to expand their technology. 18F is an office within the General Services Administration (GSA) which may serve as a resource to state governments building APIs.

These specs need to include what is known as the "final API call." This is the exact technical language that allows your software to connect to the state's online voter registration database. Your software designer is going to want to look at this "call" as it instructs them on exactly how to connect the new software to the state's servers.

Your state should also specify the formal testing process: how will you test every possible scenario and response to make sure that your software is working with the

## HOW IT WORKED IN PA: Design Meeting / Tech Specs

*The state held a meeting with interested stakeholders early in the implementation process that gave Pennsylvania Voice and our partners an opportunity to dive into the details of how the API would function. Prior to establishing the software specifications, there was a lot of discussion among advocates, software developers, and allies with relationships in the Governor's office on topics like:*

- **What data the state would pass back to the third-party software after a voter registration application was accepted.** *The state sent back a unique identifier per voter signifying the application was received by the state and was complete enough to be sent on to the county, where it was ultimately approved or denied. We did not think to ask at that time, but are now advocating for and have secured a commitment for a second communication that would tell us whether the application was added to the rolls at the county level, and if not, why.*
- **The ability of the web API to accept data in real-time and in batches.** *The batches allowed us to create software that could work without an internet connection.*
- **What data needed to be passed on to the state and what was optional.**
- **How it interacted with languages other than English.** *Essentially, the PA web API can accept submissions that are collected in any language. However, it does not recognize characters other than English. It became our responsibility to develop software that translates any characters unique to that language group.*
- **Guidelines from the state regarding signature creation.** *Did it matter whether a signature was ink or digital? The state's online voter registration software only accepted uploads of signature image files, which seemed too complicated to address in the field. We requested that they also accept signatures from a stylus.*
- **Identifying and establishing a clear process for any issues with individual users or organizations.** *We needed to ensure that one bad apple didn't impact everyone, if multiple groups were using the same app.*

state's OVR system? You will want to get exact dates and rules for this testing process so you can plan how long it will take and have a sense of when you can begin using your software with the public.

**3 User terms and agreement.** The state is likely going to want to codify in writing a user agreement that allows third parties who wish to transmit voter registration applications directly to the state's online voter registration portal. What is defined in this document can have an impact on the software you design, and it will also impact how field staff work in the field. The user agreement should outline these rules, including a notification timeline for any changes the state decides to make after the first launch of the API.

**4 Establish a testing environment.** Once an API call is fully available, you will want to make sure your software designer can begin testing the software with the state servers. This testing environment must allow your software designer to use placeholder data, not real voter information.

**5 Start date.** At a minimum, you want your state to define the exact date when you can start using your online voter registration software in the field.

## **HOW IT WORKED IN PA:**

### **Testing / Start Date**

*The state of Pennsylvania required all third parties that wanted access to the web API to test their software using dummy voter data.*

*Because we were the first third party to build this type of software, our testing process ended up also testing the web API software itself. This process revealed bugs on both our end and the state side that needed to be fixed.*

*We were required to submit complete voter registration applications and also incomplete applications such as one without a birthdate, one without an address, one without a legal declaration, etc. The state also required us to test submissions where the signature was pulled from a state-issued ID and submissions where the signature came from a stylus.*

*The testing process took us much longer than we had planned, which delayed the approval of our software and our ability to use it in the field.*

Okay, so you got the state to build an API. Now what?

To use OVR in the field, the state has to allow third parties to connect to its database. But a third party—whether it's you, a non-profit, or a vendor—needs to actually build the software that a voter can interact with on a tablet in the field.

### CHOOSING YOUR DEVELOPER

Although anyone could help build an app to register voters for your state, there is additional value in finding a developer that possesses these qualities:

**Proven integrity.** Seek a developer who is known for honest pricing and quality products.

**Willingness to listen to the people on the ground.** The ideal developer will want to spend a lot of time understanding why you want the app and what the product needs to deliver. Look for someone who is more interested in hearing what you think than telling you what to do.

**Experience.** Look for someone who has developed voter registration applications—or at least has experience working with an API offered by state government.

The best way to find a developer is to consult colleagues in your state and elsewhere who have experience developing new technology or with online voter registration. However, before you start talking to a developer, you will need to be very clear about what it is you want them to do.

*Although APIs are common—pretty much any software developer could have built us one for Pennsylvania—we sought out developers who also had expertise and experience in voter registration. The consequences for losing or in any other way making a mistake around a voter's registration are serious both legally and perceptually. It was important to us to work with software developers who understood this.*

## HOW IT WORKED IN PA: Software Development

*Pennsylvania Voice worked with Rock the Vote and OSET's TrustTheVote Project to build a first-of-its-kind app that feeds registrations directly into Pennsylvania's innovative online voter registration system, developed by the Pennsylvania Department of State.*

*Rock the Vote is not a vendor and typically does not develop custom software. However, because what Pennsylvania's Department of State was offering was so game-changing, they wanted to be involved and lend their expertise at providing voter registration tools. They already had a partner infrastructure setup through their white-label online voter registration platform, which meant they were not starting from scratch like other vendors. This expertise was most valuable in the implementation phase. Thanks to Rock the Vote's reputation, the state's IT and policy staff felt they could trust the advice they were being offered on how to manage implementation.*

*Because we knew that very few of our partners were using tablets in the field, we were able to research and select a tablet that would work for our requirements. In fact, we bought them for our partners! We chose tablets that cost about \$130 each and seemed to provide all of the features we needed. These tablets operated on the Google Android operating system, and currently our app is only available on this OS. Eventually we would like to make it Apple compatible too, as some of our partners are now investing in Apple tablets.*

*We had an incredibly useful partner in Rock the Vote. They helped us think through how to create an app that would meet our needs as organizers, offered alternative ways to achieve our goals that were within our budget, and coordinated with us when we faced challenges with the state.*

*The PA Voter Registration App cost was divided between Pennsylvania Voice and Rock the Vote, with Pennsylvania Voice paying for most of it. As a result, the contract between the two organizations for this work names Pennsylvania Voice as the owner of the data collected and leaves the responsibility of approving new users of the app to us.*

## DEFINING FOR A DEVELOPER WHAT YOU NEED AN APP TO DO

Drafting an RFP or even a simple memo defining what you need from an app is the most important first step. Your RFP should very clearly delineate what the app absolutely must do and what would be very useful additions.

There are six key functions an app needs that you should consider including in an RFP:

- 1 Track all user activity.** You'll likely need one software program that multiple users can access. In some cases, multiple users from multiple organizations could be using the same app. What if one user did something improper or illegal?  
  
Your state's app needs to allow its owner to track all user activity, especially bad actors/organizations. Their mistakes could otherwise threaten everyone who will ultimately use the app.
- 2 Work online and offline.** If your state will accept batch uploads, you don't need to have internet connectivity in the field. Your state's app needs to be able to either send voter registration applications one at a time when connected to the internet or have the capacity to allow a bunch of registrations to be uploaded at the same time.
- 3 Provide all user interfaces in multiple languages.** Ideally the state's API should be able to receive applications that come from your software in any—or at least multiple—languages. Even if the API can't do that, a software developer could work around this on the back-end. Either way, a state-based app must guarantee multiple language access. The language and the design used in the app should also be accessible to people along a wide range of literacy levels.

**4 Return a useful status.** Your state must send some sort of unique identifier that constitutes a receipt for anyone whose software registers someone to vote. The receipt basically says, “Yes, we got the voter registration application you submitted.” Any app that is developed must be able to keep track of and store this unique identifier.

Ideally, the state’s API should also be able to send a second message either from the state or county that says, “The application you submitted was APPROVED (or REJECTED)” and the reason why.

**5 Minimally, collect all the data required for an upload to the Voter Activation Network (VAN) voter registration tool:**

- First Name
- Middle Name (if the person has one)
- Last Name
- Suffix
- Address
- City
- State
- Zip
- County
- Date of Birth

Anyone developing software to register voters should be able to incorporate fields beyond what the state requires, especially cell/SMS numbers, emails, and any legally required opt-ins. The biggest opportunity offered by a voter registration app is the ability to collect this additional information for GOTV efforts while registering a voter.

**6 Field management tool.** The app should be able to create an electronic canvasser batch sheet and the same kind of nightly reporting you use for paper applications.

**Some key benefits of the PA app:**

- *Applications are completed on the app and passed directly to the Pennsylvania Department of State for approval, saving county and state election officials both time and money.*
- *Electronic signatures are accepted via a stylus, allowing all eligible voters—even those without a PennDOT ID—to get registered.*
- *All digital applications submitted to the Department of State’s office are complete, significantly lowering the possibility of rejected applications.*
- *Non-sensitive registrant information is automatically captured and immediately made available to partners through Rock the Vote’s partner portal.*
- *Constant data or internet connectivity is not required to electronically register voters.*
- *English and Spanish speaking voters can use the app. We have the capacity on our end to add many more languages if/when the Department of State approves that language. We are eagerly awaiting the state’s addition of Chinese and Vietnamese language applications so we can add them to our app as well.*

## OTHER CONSIDERATIONS

**Operating system and tablets.** Ideally your software should work on both Apple and Android (Google) products. Apple products are typically more expensive and the process for getting an app approved in their store is much longer than Google's. If you are designing software for organizations that are already using tablets in the field, it's important that you find out what operating system they are using and make sure your app is fluent in that.

**Updates.** You will want to talk to your developer about a process for making updates or changes to the app, especially when you start using it in the field. You will want the option of rolling out updates to fix bugs later, but keep in mind that the perfect can be the enemy of the good. You'll create a different set of problems if you expect multiple field staff to go to an app store and download a new version. And any time you update software, you open the possibility of new bugs emerging.

**Security.** You want to make sure all the data you pass to the state is stored on a secure server. In the case of the Pennsylvania Voter Registration App, no sensitive information (such as driver's license number, signature, or the last four digits of a Social Security number) is stored on a server at all and is instead passed directly to the state. This eliminates the need to redact sensitive information.

## DECIDE WHO OWNS THE APP AND WHO CAN USE IT

Typically, there isn't a single group in a state that does enough voter registration to justify the development of an app by themselves. It makes the most sense for multiple groups in a state to share access to the same app. A well-designed app could allow portioned access, meaning that multiple user groups can use the same software but each keep their data private.

The downside to a multi-user app is that one bad apple could spoil the bunch. However, a well-crafted user agreement with the state allows each user or user group to be treated individually. As long as the app provides portioned access, bad apples can be contained.

That said, someone needs to actually own the app. Whether this is one organization in the state or even the app developer themselves, you will want to think about who owns it and define the owner's role.

Once an app is developed, the simplest way to get it out on multiple tablets is to make it available in the Google Play and/or Apple stores. Access can be public or private in these stores, but placing it in the store will raise the question of ownership and access.

Especially if the ultimate owner of the app is a 501(c)3 organization, it's worth consulting a lawyer to determine what limits exist for public access and what obligations the owner of the app has.

## TIMELINE FOR APP DEVELOPMENT

The length of time it takes to develop an app depends on many factors. At a minimum, app development will take three months. Here are some things to keep in mind as you determine the timeline for app development in your state:

**Your software developer cannot start building an app until the state releases basic API specifications.** If possible, try to get your state to list everything a developer needs to know, even if the state isn't able to make the API live right away.

**When the state API goes live, your developer will want at least a month to connect the app they have built to the state's API.** When they do, there will likely be bugs and problems. Make sure your software developer is budgeting time to address these.

**Your state should require testing, but even if they don't, you will want to spend some time testing the app.** This process may uncover more bugs. You should talk to your developer in advance of field testing to decide what to do when new problems arise.

**Both Google and Apple's app stores have approval processes.** Google's process is short—around several hours. Apple, however, could take weeks to approve.

Once your state builds an API, new voters could be added to the polls in a variety of ways—and not just by the traditional third-party voter registration groups. For instance, a state API can be impactful by:

**1 Allowing third parties to create voter registration web forms.**

Social media offers tremendous opportunity to register new voters. Anyone with a large number of followers—whether on email, Facebook, Twitter, Instagram, or any other platform—could have a major impact on voter registration efforts.

**2 Connecting to other government databases, especially agencies.**

If a state creates an API or otherwise allows voter registration applications to come into its system in batch uploads, a form of de facto automatic voter registration is possible.

Many non-government entities ask for the same information as a typical voter registration application: name, address, and birthdate. Public or private, essentially anyone who collects this information from people on the internet and stores it in an online database could offer voter registration opportunities.

Why not automatically register eligible voters who fill out a state's human services application, file state taxes online, or apply online for hunting/fishing permits? Similarly, towns, cities, counties, libraries, and school districts also already collect some of this same information. In most cases, a few extra data fields could be added to their forms to encourage citizens to register to vote in all kinds of new ways.

With the way API software works, it is possible for state and county databases, colleges, hospitals, and even corporations to transmit voter registration applications directly to the state's online voter registration portal.



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## OVR THROUGH STATE AGENCIES

There is a whole class of state agencies that are already required by federal law to offer citizens an opportunity to register to vote. With a few tweaks to the system, many more registrations could be captured through these agencies.

### Driver's License Bureau

The one that is most familiar is the state's driver's license bureau.

Every state is obligated to offer driver's license center users the opportunity to register to vote and/or update a registration. However, those states where this process is electronic tend to show much higher voter registration conversion rates. In fact, recent Automatic Voter Registration laws have an impact partly because these laws force states to create electronic record transfer between the driver's license database and the state voter file, not to mention forcing users to opt-out versus opt-in.

If your state stores driver's license and non-driver state ID information in an electronic database, and you are successful in getting your state's online voter registration system to accept submissions from third party databases, your first priority should be integrating the electronic license/ID system with online voter registration.

The impact of this improvement alone would probably net more voter registrations than any other remedy, including the development of voter registration software for the field.

### HOW IT WORKED IN PA:

#### Expanding Use to Local Agencies

*At press time, we are working to take advantage of the state's web API beyond field use.*

*Pennsylvania's driver's license centers are already electronically linked to the state's voter registration database. As a result, about 1 in 3 driver's license center customers also registers to vote. This puts Pennsylvania in the top-five states across the country.*

*We want to replicate the "motor voter" experience for Pennsylvania public benefits applicants. There is one common application—available both online and on paper—that allows a Pennsylvanian to apply for dozens of benefits at once, most notably Medicaid, food stamps, and cash assistance. We have gotten a commitment from the state to integrate this common application with online voter registration.*

*As of 2018, the Department of State will use benefit applicants' already provided information to also process voter registrations.*

*The only technical enhancement this requires is a back-end connection between the benefits and voter registration database. Additionally, the state needs to add a few fields to the benefit application (party affiliation choice, citizenship, and age affirmation) to be able to send the Department of State everything it needs.*

*Since federal law already requires that benefit application and renewal processes offer voter registration opportunities, this is going to save the state money it currently spends sending paper voter registration forms to benefits applicants. It will also drastically improve the quality of the voter registrant data.*

*We estimate that this could add up to 1 million more voters to the rolls per year.*



## Agencies that must offer voter registration

The 1993 National Voter Registration Act (AKA “motor voter”) also requires “any office that provides public assistance, as well as state-funded programs primarily engaged in providing services to persons with disabilities, to also provide voter registration services.”

Here are some of the benefit programs that your state is likely required to integrate with voter registration opportunities and assistance:

- Family Planning Services and family planning-related services
- Children’s Health Insurance Program (CHIP)
- The Health Insurance Marketplace
- Medicaid
- Cash Assistance (TANF)
- Supplemental Nutrition Assistance Program (SNAP) Benefits
- Special Supplemental Nutrition Program for Women, Infants and Children (WIC)
- Home and Community-Based Programs for people with disabilities
- Energy Assistance programs
- School meals programs
- Child care subsidies

Of these many agencies and benefits programs, Medicaid is likely the one that serves the most voting eligible citizens.

Some states combine the application for one or all of these programs into one database program. If this is the case, you will want to advocate for integration for all. In general, remember that each distinct database you seek to connect to your state’s voter registration system will require its own software. Even if the state is taking responsibility for this software, the cost mounts, and it will take longer for full integration to occur.

It could be useful to do a survey of the current cost and

time spent on offering voter registration at human services agencies (as required by federal law). In states where there is little to no compliance with the law, some litigation has been successful in getting better compliance. Even the states that are fully compliant have a large ratio of consumers to individuals who register to vote.

Think about it: the applications for most state-administered, federally funded human service programs are long, personal, and invasive. They are completed by individuals who may have a lot of other pressing concerns, including emotional or physical pain. At the end of the process of applying for benefits, the likelihood that someone would want to fill out a separate paper voter registration form—which asks for almost all the same information required for a human services application—is low.

Federal law requires that many agencies mail paperwork to applicants for and/or consumers of human services, including a voter registration form. The more that registration obligations can be moved to an electronic form, the more postage and printing costs that can be saved.

Of course, eliminating any paper voter registrations also saves money on the election administration side. Again, a new national study found an average national cost of about \$3.54 to process a paper voter registration form. Eliminating paper registrations from the programs that are legally obligated to offer voter registration would save a lot of money for the state, but even more for counties.

For these reasons, switching to electronic registrations can also improve states’ compliance with the requirements of the Motor Voter law. Improved compliance reduces the risk of costly litigation.

## Other agencies

Beyond federally-mandated state agencies that must offer voter registration opportunities, there are many other opportunities for expanding voter registration. Deciding what to prioritize next will depend on the political landscape in your state.

As discussed earlier, software is required for each distinct

database that is connected to the state's online voter registration system. Therefore, you should focus on databases—public or private—that have the largest number of records, and where you could successfully have an impact with an advocacy campaign. Some ideas:

- Tax databases—municipal, county, or state
- Unemployment benefit agency
- Community colleges / universities
- State or local corrections
- County human services
- School districts
- Libraries
- Hospitals/health centers
- Additional state agencies: utilities, recreation, hunting, fishing, law enforcement
- Publicly-subsidized stadiums or concert venues
- Privately controlled databases, such as an entity that is a large employer; has a large customer base in the state; is headquartered in the state; etc.

Keep in mind that some users of the agencies listed above are also going to be consumers of human services that require—by federal law—voter registration opportunities. Multiple opportunities to register to vote are by no means a bad thing; however, if reducing cost is a goal, try to identify agencies that overlap.

Protecting non-citizens who interact with any of the entities listed above is very important too. If a non-citizen registers to vote, they risk being deported from the US. When designing any software that a non-citizen may end up using, think carefully about how to prevent accidental registration.

A small number of databases likely reach the vast majority of eligible citizens in your state. If successfully integrated, your state can enact a form of de facto automatic voter registration.

## **HOW IT WORKED IN PA:**

### **Testing the Effectiveness / Making Improvements**

*Our software launched on Labor Day, 2016. We partnered with the Analyst Institute and two of our partner organizations—Make the Road PA and CASA—to test the effectiveness of tablet versus paper voter registration.*

*The experiment found that the rate of registrations per hour was slightly lower on the tablet than paper. However, the rate of tablet applications that made it onto the rolls was higher than paper. And the rate difference decreased as canvassers became more practiced with the tablets. And, of course, all the tablet-based voter registrations came without the need for any data entry and a slightly more streamlined quality control process.*

*Looking ahead, we plan to continue to build and expand best practices on registering people on tablets to provide guidelines and lessons as more states implement these technical enhancements.*

*Our next advocacy goal is to add a significant feature to the existing web API: the ability to do real-time checks of a voter's status. Imagine collecting a name and birthdate from a potential registrant in the field on a tablet and being able to determine before they go any further whether they are already on the rolls. Our hope is that this can significantly improve the rate of registrants captured per hour by almost completely eliminating duplicate applications.*

*Last, but not least, we want to integrate the Pennsylvania Voter Registration App with the State Voices VAN API. Currently, voter registration data must be exported via CSV from the Rock the Vote partner portal and then imported into the Voter Registration Tool in VAN. Making the State Voice's VAN API and Rock the Vote API talk to each other would allow us to automate this process.*

**Rock the Vote: Online Registration and Third Parties**

<https://rebrand.ly/OVR-and-Third-Parties>

**Rock the Vote: Connected OVR: A Simple, Durable Approach to Online Voter Registration**

<http://rtvote.com/1kZD8Z2>

**Voter Registration App Field Definitions**

<https://rebrand.ly/Field-Definitions>

**PA Department of State OVR Web API Frequently Asked Questions**

<https://rebrand.ly/Frequently-Asked-Questions>

**PA Department of State OVR Web API Specification**

<https://rebrand.ly/Specifications>

**PA OVR Web API Terms of Use**

<https://rebrand.ly/Terms-of-Use>

**PA Web Project Timeline**

<https://rebrand.ly/PA-Department-of-State-Sample-Timeline>

**PA Voice and Rock the Vote Voter Registration Application Press Release**

<https://rebrand.ly/Press-Release>

**Accelerating the Vote: How States Are Improving Motor-Voter Registration Under the National Voter Registration Act**

[http://www.demos.org/sites/default/files/publications/Accelerating%20the%20Vote%20\(4\).pdf](http://www.demos.org/sites/default/files/publications/Accelerating%20the%20Vote%20(4).pdf)

**National Council of State Legislatures: Online Voter Registration**

<http://www.ncsl.org/research/elections-and-campaigns/electronic-or-online-voter-registration.aspx>

**Online Voter Registration: Trends in Development and Implementation**

<http://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2015/05/online-voter-registration>

# Appendix B

## A look inside the PA Voice Voter Registration App

LANGUAGE

1 Name 2 Address 3 Personal 4 Assistance 5 Review

Name

First Name Title

Middle Name

Last Name Suffix

I have changed my name

Eligibility

Birthday

I am a U.S. Citizen

I will be 18 or older by the next election

PREVIOUS NEXT

App appearance and features

LANGUAGE

1 Name 2 Address 3 Personal 4 Assistance 5 Review

Name

First Name Title

This field is required This field is required

Middle Name

Last Name Suffix

This field is required

I have changed my name

Eligibility

Birthday

This field is required

I am a U.S. Citizen

I will be 18 or older by the next election

PREVIOUS NEXT

The app will only send completed applications

LANGUAGE

1 Name 2 Address 3 Personal 4 Assistance 5 Review

If you have a PA driver's license or PennDOT ID card number, you must use it

PennDOT number

I do not know my PennDOT number

If you do not have a PennDOT number please enter the last 4 digits of your Social Security number

SSN Last Four

I do not know the last four of my SSN

Contact Info

Submit your e-mail address to allow the PA Department of State to send you a message confirming the receipt of your voter registration application:

\* Please note that this email may take up to 24 hours to get to you.

Email Address

I give permission to OSET Org to send me news and updates

Phone Number Mobile

I agree that OSET Org/Pennsylvania Voice/State Voices may call and text me with important updates and reminders

PREVIOUS NEXT

Email and SMS collection example

LANGUAGE

1 Name 2 Address 3 Personal 4 Assistance 5 Review

Mobile 459-525

Registration Address

Hhh Hhh  
A  
Test, PA 15001

Race Decline to state

Political Party Independent

Please use stylus for signature capture

sign here

I have reviewed the above information, and it is true and accurate to the best of my knowledge.

REGISTER

PREVIOUS NEXT

Signature upload example

# Acknowledgments

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