

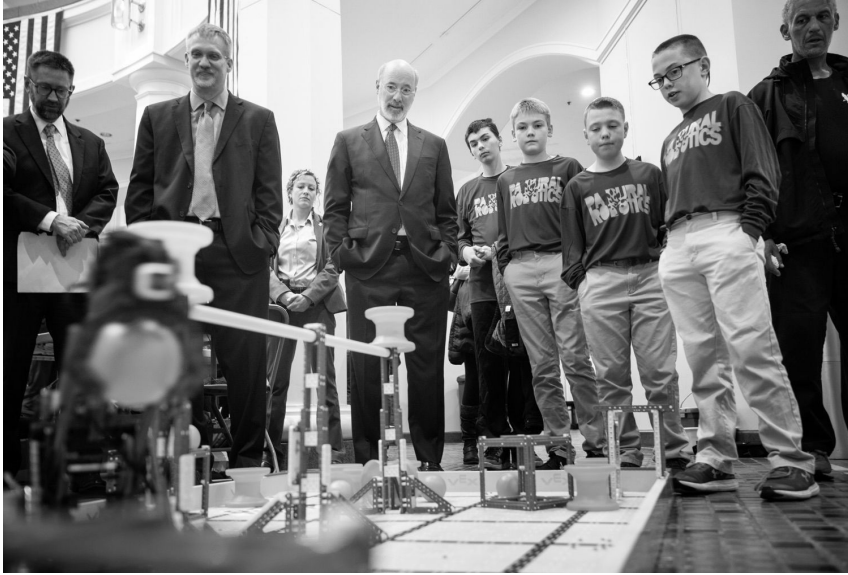


carnegie mellon university | policy innovation lab | spring 2020  
jennifer sciullo | sharleen devjani | anna gipsov | katherina konst

**mvp**

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  - Implementation Strategy
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# value proposition

- Sustainable uniqueness
- Stakeholder insights
- Unmet needs



# value proposition



**FREE CLIMATE SCIENCE WORKSHOPS**

Give your students the tools and knowledge to create a healthier future by signing up for a workshop

LEARN the Science behind climate change  
UNDERSTAND local impacts  
CREATE real solutions


WORKSHOPS PRESENTED JAN - MAY, 2019  
YOU PICK A DATE, WE COME TO YOU


All workshops are aligned to standards, utilize multi-modality best practices, include student workbooks, follow-up lesson plans, and are designed to take place during one class period. Perfect for a science class.

For more details or to schedule your workshop contact  
Communitopia's Staff Educator Katie Modic  
katie@communitopia.org


**Summer STEM Camp**


Promoting STEM careers and industry in our region...


 **PENNSYLVANIA**  
RURAL ROBOTICS INITIATIVE

**FOUR DAYS**   
of  
Coding  
Drones  
Design Thinking  
Robotics

**50:50 RATIO OF FEMALES TO MALES**

 **EDUCATION PARTNERS**  
Carnegie Mellon University  
Clarion University  
Clarion U. Small Business Development Center  
FTW Robotics  
REC Foundation  
Riverview IU6

**COLLEGE AND CAREER READINESS**   
Entrepreneurship  
&  
CMU trip exploring Autonomous  
Vehicles, Drones, &  
Robotics

 Adobe Spark

PA Rural Robotics and Communitopia have identified their niche in programming for schools and students with regard to STEM and climate action education. They have effectively leveraged partnerships with several regional stakeholders that have allowed both organizations to continue to grow. Since the state of PA does not have a standardized curriculum for STEM or climate action subject matter, there is a wide variance in the nature of education provided to students. Both organizations are in a position to help lead and make an impact on how our region educates this generation and generations to come about critical issues related to workforce development, sustainable business practices, and eco-conscious solutions in their backyard and beyond.

User research findings identified an appreciation for the accomplishments, aspirations, and challenges of both organizations, and provided insight into opportunities for continued relationship building, as well suggestions for addressing potential roadblocks to success.

Both partners identified a shared unmet need for their organizations - resource management. They work with others to meet and exceed their promised deliverables, but from an operational standpoint they are one-person shows.

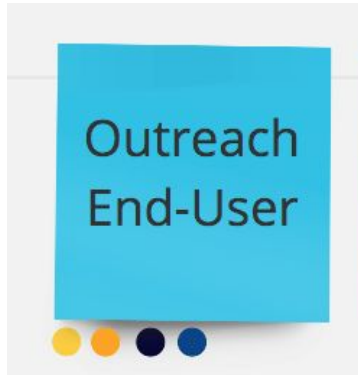
# understanding the focus

Insights from conversations with our partners led us to affinity map high-level challenges that helped us organize our thoughts and prepare to prototype. These were the top 6 focus areas.

Engagement and scalability were the main areas that Katie and Tim said they wanted solutions for, and we thought that these tied in with having strong outreach potential to engage with stakeholders. At the same time, scalability and managing platforms is heavily tied into utilization of manpower, having people to update all of the platforms currently in use would have the strongest impact on all of the other focus areas.



# existing & potential resources



**Existing:**

Website,  
Facebook,  
WOM

**Potential:**

Instagram  
(stories, live,  
etc)



**Existing:**

Emailing,  
Facebook

**Potential:**

Google Forms,  
MailChimp,  
NGO  
Management  
Platforms



**Existing:**

Facebook,  
WOM

**Potential:**

Social Media,  
Additional Site  
Features

Our group then began to brainstorm and organize a potential Minimum Viable Product solution targeting these three focus areas. For the product requirements, we compiled insights and suggestions from our user research. Primarily, the MVP would need to be a management tool to help keep track of volunteers, their availability and tasks, and updated statuses on progress.

Additionally, we recognize the potential challenges posed by adopting a new resource management platform and have outlined the pros and cons of using an integrated approach into the existing website(s) vs. a new platform.

# existing & potential resources

## Option 1: Integrating a Resource Management Tool into the Existing Websites

### pros

- Stakeholder websites already exist, therefore only a little additional time and cost is required to integrate new resource management tools
- Minimal learning curve as stakeholders are already used to managing their own websites
- One platform = less integration issues

### cons

- Upkeep of the website is the stakeholders responsibility
- Cloud/data storage is also the stakeholders responsibility
- Stakeholder must keep an eye out for when certain features of the website are not working as well as intended and develop a new solution

## Option 2: Adopting a Ready-Made (New) Resource Management Tool

### pros

- Already built-in resource management platform for the stakeholders to use
- Less upkeep required as it is managed by the chosen company
- Tried and tested by various organizations

### cons

- Potentially steep learning curve for the stakeholders, as they would need to learn a new software in addition to managing their existing websites
- Possible integration difficulties with existing websites, would need to troubleshoot a lot to make sure the two platforms blend seamlessly



# user research summary

carnegie mellon university | policy innovation lab | spring 2020  
jennifer sciullo | sharleen devjani | anna gipsov | katherina konst



pa rural robotics | communitopia



The process of conducting user research helped our group refine our MVP. As part of our final deliverable to our partners are sharing additional information about the user research process and findings.

[https://docs.google.com/presentation/d/1B4iHqWGR0ba-4\\_lhfJ40IXsVuMw5z\\_wsZn-geVJFDRY/edit#slide=id.g8425f13f28\\_11\\_0](https://docs.google.com/presentation/d/1B4iHqWGR0ba-4_lhfJ40IXsVuMw5z_wsZn-geVJFDRY/edit#slide=id.g8425f13f28_11_0)



# mvp precedent

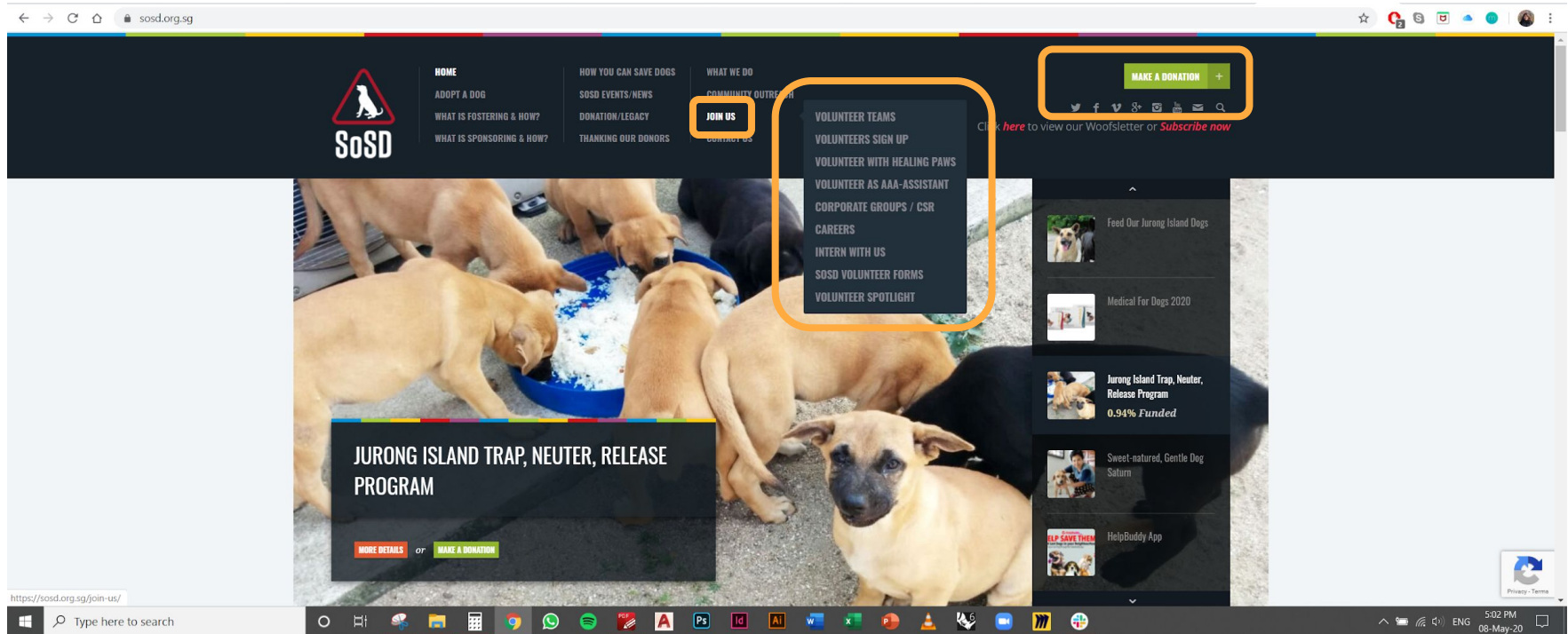
We looked back at the organizations that we have chosen to volunteer with in the past, to understand why they appealed to us and what the experience of signing-up with them was like. Our teammate's experience with volunteering with SOSD (Save Our Street Dogs) in Singapore was used as reference. She recalls it being a pleasant experience due to the following factors:-

- As a full-time employee, she was looking for volunteering options where the time commitment was clearly indicated beforehand
- The volunteer sign-up form obtained a lot of information in the beginning, thus reducing the need for excessive correspondence for both herself and the organization
- She could easily see what the responsibilities of each volunteer team was, and shortlist the areas that she could contribute to


Additionally, we referenced websites such as the UN Volunteer site. Similarly, it also provides a very detailed breakdown of the opportunities available, along with the position requirements and time commitment. This helps cater to people with differing amounts of time available for volunteer work.

SOSD Website: <https://sosd.org.sg/>

UN Volunteers Website: <https://www.unv.org/>



Shown above is a screenshot of SOSDs website indicating how stakeholders might highlight openings for volunteers. At the top of the page, there are multiple fields for different kinds of volunteers, showing that people with varying availability can join the group. This flexibility is inviting for people to want to help out, and potentially feel like a part of the organization.



[HOME](#)  
[ADOPT A DOG](#)  
[WHAT IS FOSTERING & HOW?](#)  
[WHAT IS SPONSORING & HOW?](#)

[HOW YOU CAN SAVE DOGS](#)  
[SOSD EVENTS/NEWS](#)  
[DONATION/LEGACY](#)  
[THANKING OUR DONORS](#)

[WHAT WE DO](#)  
[COMMUNITY OUTREACH](#)  
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[CONTACT US](#)

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Click [here](#) to view our Woofsletter or [Subscribe now](#)

[VOLUNTEER TEAMS](#)
[VOLUNTEERS SIGN UP](#)
[VOLUNTEER WITH HEALING PAWS](#)
[VOLUNTEER AS AAA-ASSISTANT](#)
[CORPORATE GROUPS / CSR](#)
[CAREERS](#)
[INTERNSHIP WITH US](#)


[PROTECTED: SOSD VOLUNTEER FORMS](#)

## Join Us

Here are a few areas that we seek volunteering for. We have volunteers who do help out in more than one area, so if anything piques your interest, do sign up anyway! Help is never enough, and all support is greatly appreciated!

- [Team Kennel](#)
- [Team Rehoming](#)
- [Team Transport](#)
- [Team Digital](#)
- [Team Fundraising](#)
- [Team Photographers](#)
- [Team Outreach](#)
- [Team Writers](#)
- [Team Adoption Drive](#)
- [Team Video](#)
- [Team Clean](#)
- [Team TNR \(Trap, Neuter, Release\)](#)

## Our Causes



### Feed Our Jurong Island Dogs

Thank you for helping to feed our Jurong Island shelter and stray dogs for the first quarter of 2020! Because of you, we managed to hit our target and reach out to all the shelter AND stray doggos in Jurong Island (JI). We hope you can help us again, this April – June. Other than [...]

The options for teams to join are broken up by many smaller tasks people can sign up for. This may also be more inviting since people will know what exactly their tasks are, and they can effectively share what they are interested in doing.



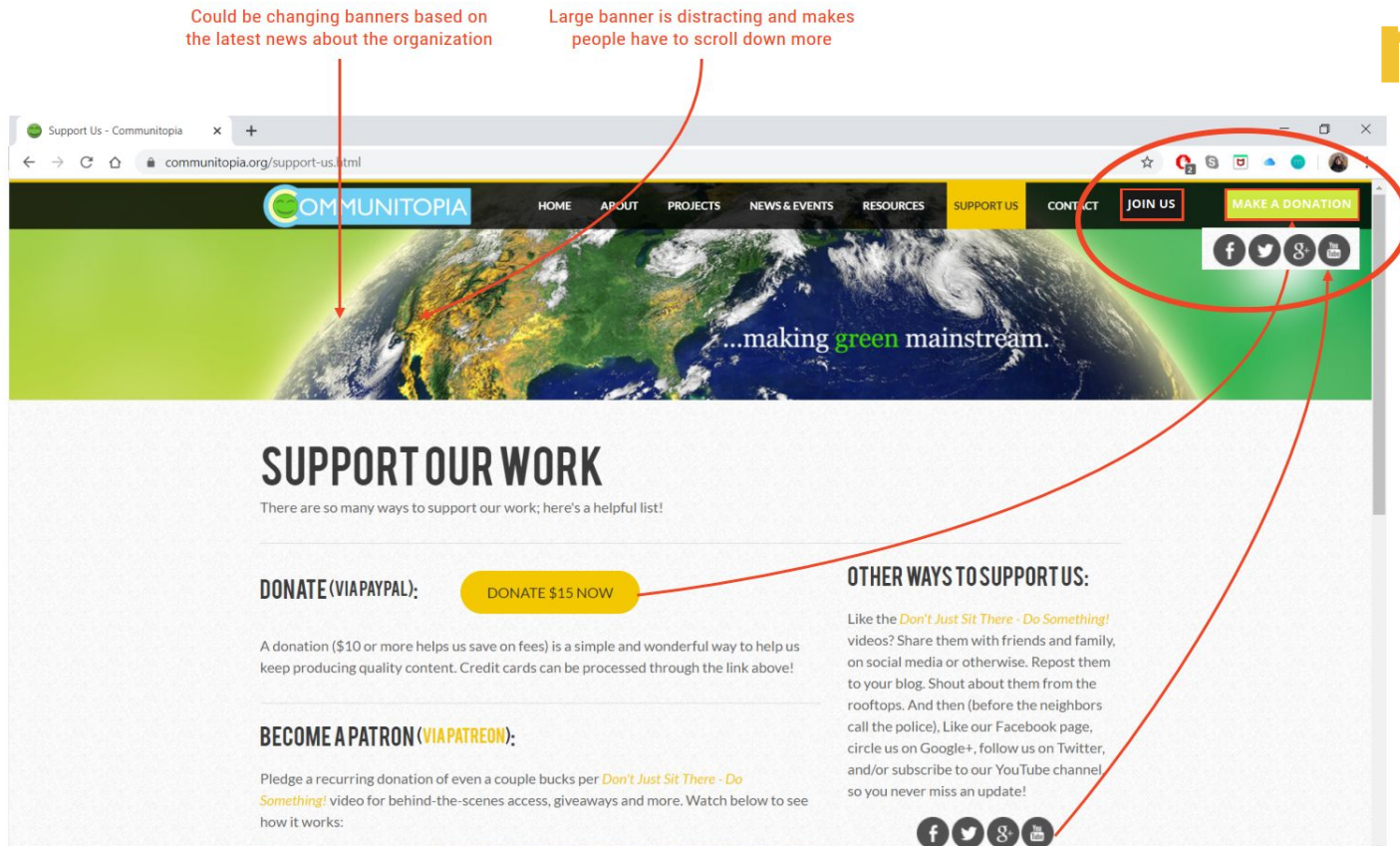
**mvp** proposed

# mvp features

## communitopia

- Make the banner dynamic. Link to latest news or stories related to the organization
  - We recommend reducing the current banner size to prevent obstructing information on the page.
- Put a Donation button in the navigation bar
- Put Social media buttons in the navigation bar
- Page for Community and Corporate partners
- Page for volunteering and Internship opportunities
  - Including a form for someone to submit an application to intern. This form should interact with a suitable backend. this could be quite variable (site's database, Google form + Google sheet combo, Mailchimp), and one should choose something both convenient and provide accessible notification upon receipt.
- Careers Page
  - For paid positions, a place to post descriptions and instructions for applying (usually more formal and initiated via email, so no form needed here)
- Consider soliciting suggestions and feedback. Might be a natural extension to existing Contact Us page

mvp



The availability of a donation button is an option the groups may choose to implement. It will be straightforward to receive funding with this, and make it easier for visitors to support the group online through the other platforms.

JOIN US

## COMMUNITY / CORPORATE PARTNERS

INFORMATION

CSR OPPORTUNITIES

OUR CURRENT PARTNERS

INQUIRIES

## VOLUNTEERING / INTERNSHIPS

OUR VOLUNTEER TEAMS

VOLUNTEERS SIGN-UP

THE INTERNSHIP EXPERIENCE

INTERN WITH US

CONTRIBUTE EXPERTISE

## CAREERS

*LIST THE AVAILABLE POSITIONS HERE*



- Team Teaching
- Team Tech
- Team Admin
- Team Outreach & Fundraising
- Team Event
- Team Social Media

- Time commitment
- Briefing sessions (date/times)
- Duties
- Requirements

Your Name (required)

Your Email Address (required)

Your Contact Number (required)

Your Age / D.O.B (required)

I want to sign up for (required)

- ☐ Team Teaching
- ☐ Team Tech
- ☐ Team Admin
- ☐ Team Outreach & Fundraising
- ☐ Team Event
- ☐ Team Social Media

How often can you volunteer?

- ☐ Daily
- ☐ Weekly
- ☐ Fortnightly
- ☐ Monthly

Your occupation

Tell us more about yourself!

**SIGN UP NOW!**

Providing up-front information about the volunteering tasks will have the impact of being more inviting, as potential visitors can see themselves doing the tasks and will know exactly what they are signing up for.

One example would be someone signing up to host an online lecture [Team Teaching, or Team Event]. After filling this form, you would see their entry, and send a follow-up telling them the format (length of presentation, templates) and dates available. They could send a copy of their presentation for review before this date.

Social media interns could be given responsibility to create 1-2 posts at a time (graphics would be reviewed by Communitopia), and they would be in charge of responses and further engagement on the posts. With access to the account, they can also like and repost content from the community for higher outreach and engagement. Features such as "Stories" or "Pinned" can be used to make strings of informative/educational graphics for student followers.

# mvp features

## pa rural robotics

- Put a 'Join Us' button in the navigation bar
- Put a Donation button in the navigation bar
- Page for Community and Corporate Partners
- Page for Volunteering and Internship Opportunities
  - Broken down into teams & tasks
  - Including a form for someone to submit an application to intern. This form should interact with a suitable backend. this could be quite variable (site's database, google form + google sheet combo, Mailchimp), and one should choose something both convenient and provide accessible notification upon receipt.
- Careers Page
  - For paid positions, a place to post descriptions and instructions for applying (usually more formal and initiated via email, so no form needed here)
- Consider soliciting suggestions and feedback. Might be a natural extension to existing Contact Us page

Robotics Education | PA Rural Robotics Initiative

paruralroboticsinitiative.com

PENNSYLVANIA RURAL ROBOTICS INITIATIVE

About Us Events Partners Contact Us Gallery More [Join Us](#) [Log In](#) [Make a Donation](#)

**Robotics Education That's Changing Lives**  
25 school sites from 5 counties with 180 teams and over 1,400 students in Western Pennsylvania participating in activities and competitions

## About Us

The Pennsylvania Rural Robotics Initiative was created in the spring of 2018 with the goal of developing sustainable world-class educational robotics programming for the children of our communities.

We have created an educational model that when partnered with the competitive robotics platform from

Type here to search

3:39 AM 29-Apr-20

[About Us](#)[Events](#)[Partners](#)[Contact Us](#)[Gallery](#)[More](#)[Join Us](#)[Log In](#)

## COMMUNITY / CORPORATE PARTNERS

[INFORMATION](#)[CSR OPPORTUNITIES](#)[OUR CURRENT PARTNERS](#)[INQUIRIES](#)

## VOLUNTEERING / INTERNSHIPS

[OUR VOLUNTEER TEAMS](#)[VOLUNTEERS SIGN-UP](#)[THE INTERNSHIP EXPERIENCE](#)[INTERN WITH US](#)[CONTRIBUTE EXPERTISE](#)

## CAREERS

[LIST THE AVAILABLE POSITIONS HERE](#)

- Team Teaching
- Team Green
- Team Admin
- Team Outreach & Fundraising
- Team Event
- Team Social Media

- Time commitment
- Briefing sessions (date/times)
- Duties
- Requirements

Your Name (required)

Your Email Address (required)

Your Contact Number (required)

Your Age / D.O.B (required)

I want to sign up for (required)

☐ Team Teaching  
☐ Team Green  
☐ Team Admin  
☐ Team Outreach & Fundraising  
☐ Team Event  
☐ Team Social Media

How often can you volunteer?

☐ Daily  
☐ Weekly  
☐ Fortnightly  
☐ Monthly

Your occupation

Tell us more about yourself!

**SIGN UP NOW!**

Providing up-front information about the volunteering tasks will have the impact of being more inviting, as potential visitors can see themselves doing the tasks and will know exactly what they are signing up for.

One example could be a drop-down menu under “Events” to show the upcoming events, and parents or other community members could volunteer to come help out at a competition. Professional volunteers could be given options to judge the event or walk around to give consults to students.

The social media interns would be given tasks to update the pages and interact with community members for higher outreach and engagement. They could also continuously share current news and innovation in the field for educating the student followers of the page.

# mvp opportunities & challenges

## Opportunities

- Maximizing the potential of an existing platform
- Reduction in concentrated effort and time by partners (delegation of responsibilities)
- Increased stakeholder outreach
- Establishment of a user feedback loop to encourage engagement and recognize potential areas for further development
- Increased community engagement

## Challenges

- Configuration of website infrastructure
- Need for attracting website visitors
- Maintenance and updating of the website (whose responsibility is it?)
- Communication with new volunteers
- Managing growth & training new volunteers

# mvp implementation strategy

## Website Development

Hire or engage an existing website developer to add new components to the current websites.

This process can also account for any tweaks or changes required by the stakeholders to better suit their specific needs.

## Recruit Volunteers

Clear direction to where visitors can sign up to volunteer, including tasks and roles with different time commitments.

Differentiation for student or adult volunteers.

Links from Facebook and other Social pages

## Data Collection

The form entries can collect to Google Forms, the embedded system of the website, or a third party platform for organizing the entries.

## Data Storage

Data from entries could be organized in a spreadsheet kept by administrators.

Depending on setup and volume, it could be Cloud stored.

## Resource Management

Organizing volunteer tasks through an existing Google Drive system or other platforms.

Allow signup for events, managing social media, volunteering to create content or give talks to students.

**measuring success**



# key performance indicators

## Primary Focus

ROI

Report will provide more detail on ROI based on costs and time required to develop existing resources

Community/  
Corporate  
Partner Growth

# Community partners joining the network and being able to coordinate with the 2 programs

Reduced  
Stakeholder  
Involvement  
(Time)

Katie and Tim spend less time coordinating potential volunteers and their tasks

Website  
Efficiency  
(Communication & UX)

Experience navigating the site and effectiveness of communication; how well can they find what they're looking for?

Volunteer  
Growth

# Volunteers signed up and retained, attending events and contributing content, uploading on social media, etc

# key performance indicators

## Secondary Focus

Web & Social  
Media  
Engagement

Engagement on online media:  
likes, follows, watches,  
comments, page visits

Use of Data  
Collected

Does the data from the form  
entries correspond to actual  
attendance and efficiency of  
tasks done by volunteers?

Outreach  
Growth

Student attendance at events,  
length of sessions and  
discussions, number of events  
held

Sustained  
Community/Co  
rporate Partner  
Relationships

Consistent and quality  
partnerships, connected  
community within these fields

General  
Attitude

Students' general attitude toward  
the program topics and the  
meaning they get from it

# return on investment

## cost

**Estimated cost to complete: varies from \$750 - \$1,500**

- Web Designer - \$75-100 per hour (approx.)  
(depends on the experience level of the designer)
- Cost of Cloud or other data storage - depends on data quantity.

## time

**Estimated time to complete: 10-20 hours**

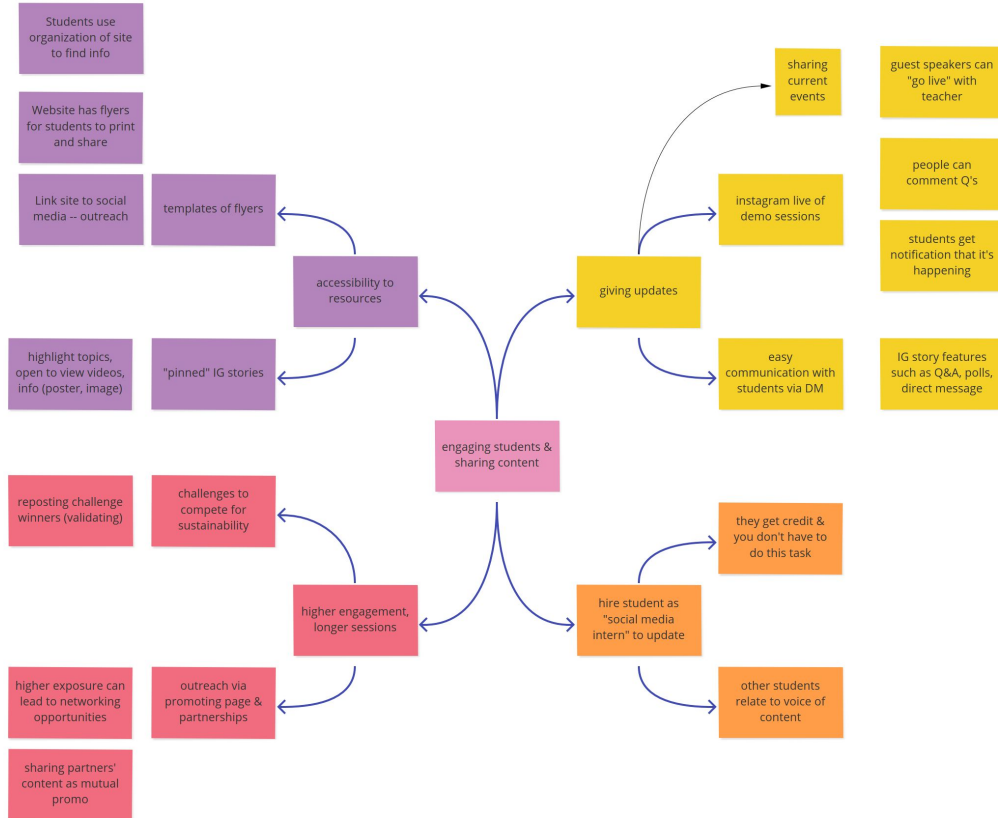
This is variable, and subject to:

- Quality of hire. Experience in solving similar problems.
- Familiarity with systems involved.
- Pre-existing knowledge of tools.
- Preparation of content and clear expression of the job to be done. Reduce the amount of back and forth iteration.

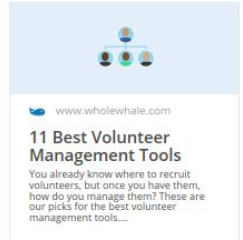
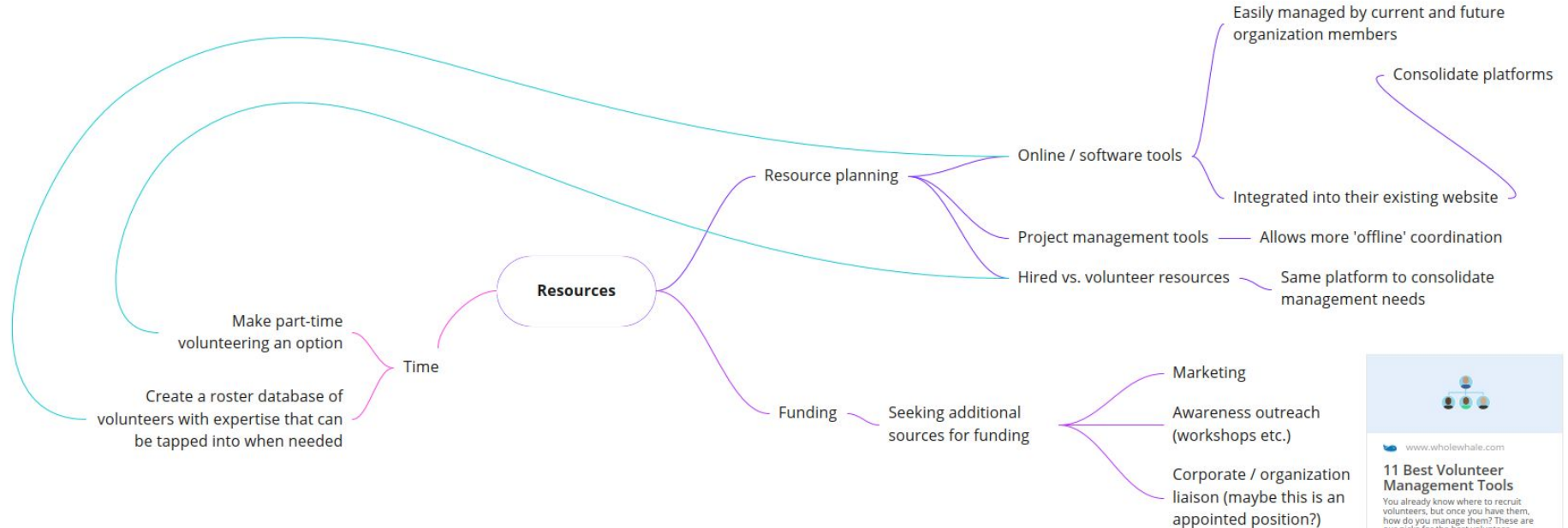
# **appendix**

## brainstorming

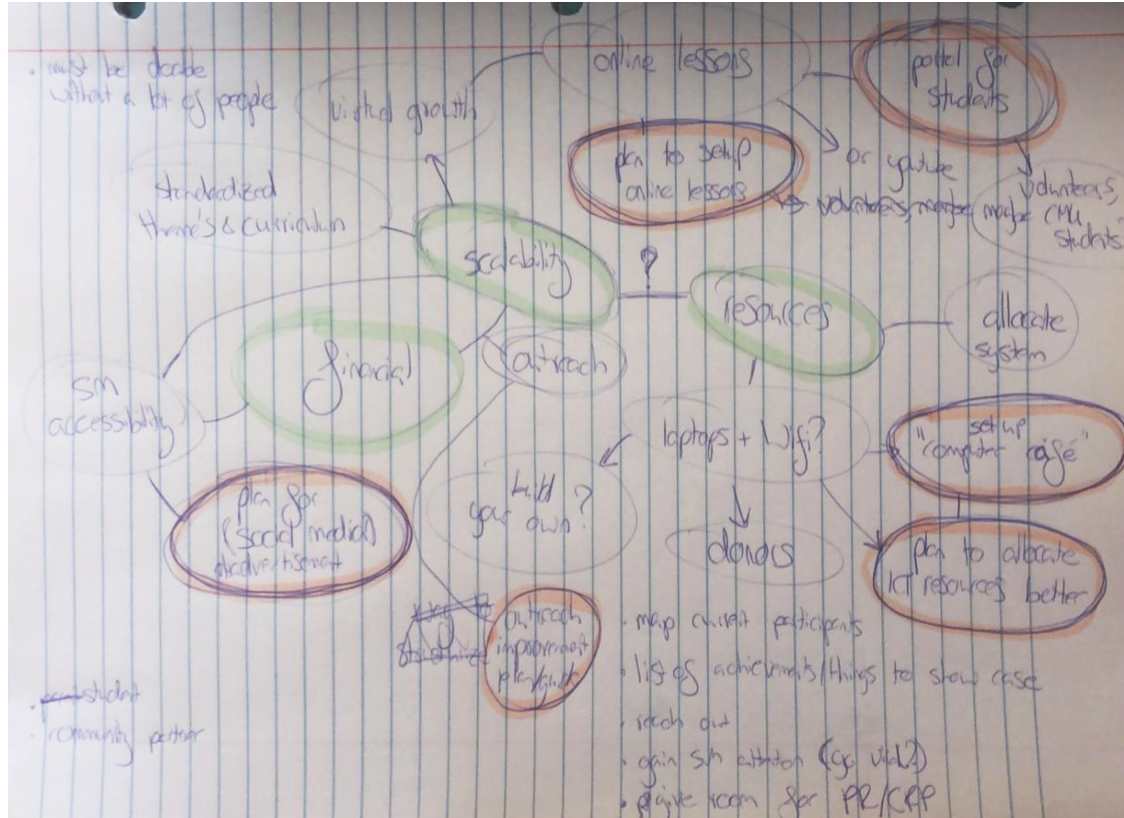
# brainstorming



# brainstorming



# brainstorming





A Carnegie Mellon University Project,  
Heinz College of Information Systems and Public Policy

For Policy Innovation Lab: Climate Resiliency Futures - Spring 2020,  
taught by Christopher Goranson, Smita Satiani & Sean Cuff (TA)

Stakeholders: Communitopia (Katie Modic) & PA Rural Robotics Initiative (Timothy Heffernan)

Team Members: Jennifer Sciuillo, Sharleen Devjani, Anna Gipsov & Katherina Konst