

Dev Derby 2010:

Developer Challenge

This document describes a need in the non-profit community that should be addressed in some way by the application you submit at 3p on Saturday, September 11, 2010. Except for the Mandatory Requirements listed below, this information should be used as a suggested guide for the application you create to address the identified need.

The Challenge

"Group Match" Build a system to allow groups to offer services to non-profits and manage feedback on prior volunteer efforts, initiating the flow of quality human resources to the organizations that need them.

Stakeholders

- VNO** **Volunteer Network Organization**
an entity whose primary purpose is to facilitate the donation of human resources to other organizations in need
- NPO** **Non-Profit Organization**
an organization that does not distribute its surplus funds to owners or shareholders, but instead uses them to help pursue its goals
- VG** **Volunteer Group**
a group of people willing to volunteer time and experience to support the goals of another person, group, or organization

Ex: churches, classes, families, clubs, companies

Problem Space

A VNO offers NPOs the ability to publish volunteer opportunities into a central location. This information is searchable by individuals and groups seeking ways to donate their time and skills to help others. Each search is typically based on the availability and interests of the individual.

Volunteers from Bloomington are evenly divided between Indiana University students and the local community. Currently, there are more than 650 student organizations on IU campus, and a significant number of groups within the community, including:

- workplace volunteer forces;
- community organizations like Girl Scout, Boy Scout, or 4-H clubs;
- families, groups of friends; churches; and,
- service learning classes.

At this time, there is no solution available for a group to offer their services to nonprofits as a way of initiating that relationship. Volunteer opportunities are typically defined first, and then presented to the community at large in the hope of finding a willing match.

VGs have much to offer other organizations, but NPOs do not have an easy way to find them. There is no local database of potential volunteers beyond what each individual NPO maintains on their own. With over 200 member NPOs in Bloomington's VNO, it is often difficult for a VG to determine where their services and skills can best be used.

Proposed Solution

The proposed solution is an integrated website or desktop application that will allow a VNO to initiate volunteer opportunities in both directions of the relationship. A VNO could use the system to allow different VGs to register and offer their services as a group. NPOs would then search for volunteer groups that would best match their current needs.

Ideally, NPOs would log-in via existing authentication methods—such as Facebook or (locally) the Bloomington Volunteer Network's Truist system. Distinct log-in accounts would be necessary to customize and protect the experience to fit the VG or NPO accessing the system. This tool could contain profiles for each VG, including skills, areas of interest, and a messaging system for VG-to-NPO communication.

Additionally, both parties can collect reviews of past volunteer experiences, which can be useful for screening future searches. Many additional features could be incorporated to expand its usefulness, such as: awards and badges for VGs, history and graphs of past volunteer efforts, OpenID or OAuth for authentication, a probability metric to show how likely you are to get a reply, and many others.

Research Summary

The following design research informed both the problem space and proposed solution described above:

- Small focus group with stakeholders from the non-profit volunteer community
- Survey sent to the Bloomington Volunteer Network (20 responses)
- Analysis of a snapshot of existing BVN data
- Interview with a volunteer about his experiences
- Review of relevant academic works and Internet services

Among the key insights gleaned from these activities were the absence of any way to say, "contact us when you need us," and the reliance on email to solidify these volunteer-organization connections.

Mandatory Requirements

The following elements MUST be part of your submitted application:

- **Integrate your system with some existing API.**

Suggested resources include:

<http://www.programmableweb.com/apis/directory>

<http://apigee.com/>

- **New profile creation for both VGs and NPOs.**

Suggested profile information:

- Name
- Contact information (name, e-mail, phone number)
- Skills / Needs (quantifiable and qualifiable)
- Interest Areas
- Availability (range of dates, standard week)

- **Match NPO to VG**

This could be a manual search or automated opportunistic matching, but the end result must be the ability to create a match of human resources and organizational need.

- **Design to integrate with Bloomington Volunteer Network**

Whether web-based or desktop-based, embedded or stand-alone, your tool should be able to fit into the work flow of our local VNO.

To be an eligible submission, your application must address the above four requirements.

Recommended Features

The following features are strongly recommended to be part of your system, but are not required for submission in Dev Derby 2010:

- Secure log-in accounts (OAuth, OpenID, Facebook Connect, CAS)
- Allow for self-service registration
- Add additional profile information:
 - Log-in and password
 - Ages
 - Genders
 - Travel ability
 - Location (if scaled)
 - Certification
 - What kind of group (list categories: family, workplace, student group, etc)
 - Communication options: How often do you want to be contacted and by whom?
- Messaging system
 - within individual VGs and NPOs
 - between VGs and NPOs
- Rating system for VGs and NPOs
- Moderated feedback for review system
- Filter and Search
- Push notification of matches (to screen, to devices)
- Show matches immediately after registration of a new VG or NPO
- Opt-in / Opt-out of system notifications and communications
- Update-your-information reminders

There is not enough time in our Dev Derby coding session to be able to complete all of the above feature recommendations. Decide which feature improvements to pursue and be prepared to explain your choices.

Submission

You will be given from 9a until 3p to develop the following:

- **Your code base** uploaded to the humanetrix GitHub account as a new repository.
We can take care of putting the code up on GitHub. We just need a copy of the files by the time the Demo Panel begins.
- A **working demonstration** of the application.
You will have no more than 5 minutes to show your application and explain what it does. This presentation may be used as part of the criteria for judging your submission, so be clear and concise when explaining your system.
- **Documentation**
This document should include both installation instructions and a user guide. Inline code documentation, in the form of comments and architecture, are also considered.

You are also expected to provide one representative from your team to speak in the Developers Panel at 4p about your process, as well as general topics in programming. During this time, your demo version will need to be made available to the Design Team to allow them to conduct limited user testing on your system. This, too, will be considered when judging your submission.

Judging

Each submission will be considered from four perspectives:

- **Design:** considers feature selection and UI choices made.
"Were the decisions made in shaping this application sound?"
- **Technical:** code efficiency and performance
"Does the application perform its function effectively?"
- **Communication:** documentation and presentation
"How easily can people understand how to use the application?"
- **Practical:** value of use, adoption, and maintenance
"How likely is it that this application will be used?"

Judges will focus on their own perspective separately when evaluating the submissions before conferring as a group to determine the winner. In addition, special prizes may be distributed to reward achievement.