**Summary**

Below is an outline for a proposal to use a community-based hackathon to develop prototypes for a Vision Zero dashboard. This hackathon would be held by the Chicago R User Group (CRUG), a local meetup with a large following of data scientists, web developers, and citizen scientists. CRUG has been a frequent host for city-based topics, and Gene Leynes (Data Scientist in DoIT) is an organizer and regular presenter.

This hackathon would likely be promoted with another hackathon currently being planned with the Cook County Assessor’s Office.

CRUG Meetups are frequently sponsored by corporations who provide space, funding for space, and limited funding for food. CRUG Meetups are usually lecture style events, and occasionally they workshop focused. CRUG Meetup Page: <https://www.meetup.com/Chicago-R-User-Group/>

Saturday Nov 16 is the target for the event, with an announcement by **Friday** **October 25th**.

**Background on Vision Zero**

Vision Zero Chicago (VZC) is the commitment and approach to eliminating fatalities and serious injuries from traffic crashes.

Much more information is available in the [Action Plan](https://visionzerochicago.org/wp-content/uploads/2016/05/17_0612-VZ-Action-Plan_FOR-WEB.pdf), and the City’s website:

<https://www.chicago.gov/city/en/depts/cdot/supp_info/vision-zero-chicago.html>

The plan emphasizes reporting and accountability in an transparent manner. To this end, the VZ committee has requested a public facing dashboard that communicates our progress toward Vision Zero goals, which can be referenced internally and externally.

**The Vision Zero Dashboard**

The purpose of the proposed dashboard is to help Vision Zero Chicago achieve its mission, and increase transparency and accountability.

There are a wide variety of ways this information could be communicated, and technologies that could be used.  We feel that it would be best to begin with open source software and open data. The most relevant data that we would want to communicate is already publicly available on the open data portal: <https://data.cityofchicago.org/Transportation/Traffic-Crashes-Crashes/85ca-t3if>

The data sets include crash, vehicle, and person information reported into our eCrash system.  These data sets are updated on a daily basis.

We are also working with IDOT to determine how we can incorporate data for prior years so that we can accurately measure progress toward goals, and identify trends.

Elements of the dashboard:

* Progress toward Vision Zero goals
* Cause of crash
* Was the crash in a High Crash Corridor
* Demographics impacted by crashes
* Summaries by time of day, day of week, season
* Anything that would provide insight to help prevent crashes

Examples of dashboards from other cities, and Illinois:

* [Illinois IDOT](http://apps.dot.illinois.gov/fatalcrash/snapshot.html)
* [Seattle](https://sdotblog.seattle.gov/2016/06/10/new-vision-zero-dashboard-now-online/)
* [Denver](https://public.tableau.com/profile/kmay#!/vizhome/DenverVisionZeroDashboard/OverviewofDenverCrashes)
* [Portland](https://pdx.maps.arcgis.com/apps/MapSeries/index.html?appid=47c2153a3fa84636bb63e25b451372d0)
* [Washington DC](https://www.dcvisionzero.com/maps-data)
* [San Francisco](https://www.visionzerosf.org/maps-data/)
* [Los Angeles](http://visionzero.geohub.lacity.org/)
* [New York](http://crashmapper.org/#/?cfat=true&cinj=true&endDate=2019-02&geo=citywide&identifier=&lat=40.696518118094616&lng=-73.91738891601562&lngLats=%255B%255D&mfat=true&minj=true&noInjFat=false&pfat=true&pinj=true&startDate=2019-02&zoom=11) (citizen created)
* [New York](http://www.nycvzv.info/) (official)
* [Toronto](https://www.toronto.ca/services-payments/streets-parking-transportation/road-safety/vision-zero/safety-measures-and-mapping/)

**Technical and Security Considerations**

The CRUG Organization is focused on R, which is an open source language with broad application and compatibility with other technology. The open source software company R Studio has developed a library that works with R to create modern, secure, websites.

You can learn more about the web development software, and view examples here:

<https://shiny.rstudio.com>

<https://shiny.rstudio.com/gallery/>

All of the software needed to develop a website is entirely open source and freely available. However, the software needed to deploy the website may require additional funding. The intention of this hackathon is to develop viable prototypes for a dashboard.  This would assist in the intellectual design and development and could become the basis for a production website / dashboard.

Within the Data Science Office, we have extensive experience in engaging volunteers and partners in a variety of capacities. I’m confident that we have the right agreements and tools in place to conduct a public event, and I have more detail available about these considerations.

In brief, we would manage the work through our existing account on Github, which allows granular, secure user management as well as code management. This can be thought of as a sandbox environment, with no connection to any city systems. Using Github for code contribution is a very common and well-established practice, and (as previously mentioned) something we have done in the past and something for which we have agreements in place.