

Applicant Organization: Atlanta University Center Robert W. Woodruff Library	Amount: [REDACTED]
Proposal Title: Using Linked Open Data for Georgia's Natural, Cultural and Historic Organizations' Disaster Response	
Project Goal: This one year project will create a publicly editable directory of Georgia's Natural, Cultural and Historical Organizations (NCHs), allowing for quick retrieval of location and contact information for disaster response. Directory information will be compiled, updated, and uploaded to Wikidata, the linked open data database from the Wikimedia Foundation. Directory information will then be delivered via a website, allowing emergency responders to quickly search for NCHs in disaster areas. A website will be created that can display embedded subsets of the directory for emergency responders.	

Project Description:

Describe the problem, need, issue or challenge that your project will address, why your project is innovative, and how it could help others or advance knowledge or practice for the field.

As the largest state east of the Mississippi River with 159 counties, Georgia has extensive and diverse natural, cultural and historic sites that preserve and document the unique history and culture of the state. Including libraries, museums, archives, historical societies, historic sites, state parks, and performing arts organizations, these Natural, Cultural, and Historical organizations (NCH) sites are critical to cultural tourism. The most recent slate of natural disasters -- including Hurricanes Matthew, Irma and Michael as well as regional flooding, and a very active tornado season -- has resulted in damage to historic structures, important documentary and artifact collections and valued cultural resources. These natural disasters have also significantly impacted -- sometimes closed -- community organizations important to citizens coping with disasters, such as public libraries and local archives. A rapid response is critical to successfully salvaging NCH organizations and collections that are important to our citizens and economy.

Georgia, however, does not have a means for quickly identifying NCH sites in areas impacted by disasters, thus impeding response. Having an up-to-date and comprehensive inventory of existing NCH sites is essential to preventing loss of important NCH resources and limiting the financial impact of a disaster. Only with accurate geographic locations of these resources will emergency responders and cultural heritage managers be able to work together to expedite the recovery process. The Georgia Emergency Management & Homeland Security Agency (GEMA/HS) has said that they will integrate this database in their crisis management software to identify locations that have been impacted during an event and in facilitating response recommendations.

In 2018, the Atlanta University Center Robert W. Woodruff Library (AUC RWWL) conducted a pilot project to test the feasibility of updating an existing but out of date NCH data set. The Georgia Archives' *Directory of Historical and Cultural Organizations* was web-scraped and placed into a table. The data was enhanced using free web tools to include geospatial coordinates and county information. A subset of ten records was reconciled against Wikidata using OpenRefine, a free data cleaning tool. This subset was then uploaded to Wikidata (<https://tools.wmflabs.org/editgroups/b/OR/96014bf/>), enabling us to query the data and display the results using Wikidata's Query tool. Two example displays were created and published online using the Wikidata Query Service (http://clifflandis.net/WikiData_GA-CHO-DR_test.html). These examples show 1) an auto-generated list of contact information for NCHs in an area (City/County/State), and 2) an auto-generated map of all NCHs in a geographic area.

This project's innovative approach leverages linked open data to not only solve an existing problem for NCHs in Georgia, but also provides a model for other states. Project benefits include:

- Flexible structure -- Wikidata is able to represent many relationships in repeatable fields; records are easily enhanced with additional data
- Decentralized updates -- Simple edits can be done manually by anyone; no need for an institution or individual "owner" to grant access to the data for regular updates, thus removing bottlenecks
- Open license -- Facts represented in Wikidata are public domain
- Sourced information -- Reference links will be included for each statement, for verification and to provide direction for future updates
- Broad access and free implementation -- The project will be completed using free software
- Model for other states -- By documenting and presenting on the processes used, the project aims to provide other states with a model that can be easily reproduced
- Graduate student paid internship -- This project aims to provide a graduate student in Library and Information Science, Archival Studies or related field with practical experience working with linked open data.

Because Wikidata has a flexible schema, it can be used to store and retrieve a variety of other facts about Georgia's NCHs, including their collection sizes, overall budgets, photographs of institutions, and relationships between institutions. Moreover, partners have expressed interest in reusing this data for training, outreach, and conducting surveys.

Describe your project plan, including activities, timeframe, resource requirements and collaborators if relevant.

Work on the project will use the following process:

1. **Compile (Jul – Sep, 2019).** Graduate Student Assistant (GSA) will use existing data lists (such as the *Directory of Historical and Cultural Organizations*) as a starting point. Data will be reformatted into a spreadsheet.
2. **Update (Oct – Dec, 2019).** GSA will use web, email, and phone research to confirm that the data is correct and add any updates as necessary.
3. **Source (Oct – Dec, 2019).** Each item will be sourced with references to allow for verification of the updates.
4. **Reconcile (Jan, 2020).** Using OpenRefine, the spreadsheet will be reconciled against Wikidata's schema.
5. **Upload (Feb, 2020).** Updates will be uploaded to Wikidata.
6. **Access (Feb - Apr, 2020).** Web Developer will create a website to display results at the City, County, and State level.
7. **Maintain (Mar – May, 2020).** Web Developer will create an automated process to email NCHs annually to request updates. Partner organizations (see below) will assist in annual updates.
8. **Promote (Apr – Jun, 2020).** Partner organizations have expressed an interest in providing outreach to NCHs.

Priority will be given to updating the *Directory of Historical Organizations* and lists provided by partner organizations, however the process can be broadened to enhance the data, as time allows. Project partners will serve on an advisory committee that will meet periodically to review progress and help with dissemination. Upon completion, the website will be promoted widely via social media outlets and listservs. Project staff will submit articles to professional publications and present on the project at the LYRASIS Summit. Documentation and code developed will be made publically available on the project website. GALILEO, a statewide consortium, will host the website after the completion of the one-year project, and they, along with HomePLACE – another statewide consortium – will support updating the data. We have also made initial contact with additional organizations who may join as project partners at a later date (e.g., ArtsReady, LYRASIS, other performing arts collaborative organizations).

Partner Organizations:

GHRAC (Georgia Historical Records Advisory Council)	GEMA/HS (Georgia Emergency Management & Homeland Security Agency)
Georgia HomePLACE, a project of the Georgia Public Library Service	HERA (Heritage Emergency Response Alliance)
GALILEO (Georgia Library Learning Online)	GAMG (Georgia Association of Museums and Galleries)

Provide names and titles for the principal investigator(s) and other key participants in the project.

- Christine Wiseman, AUC RWWL Digital Services Department Head – Co-Principal Investigator
- Cliff Landis, AUC RWWL Digital Initiatives Librarian – Co-Principal Investigator
- Andrea Jackson, AUC RWWL Grant Writer & Primary Contact – ajackson@auctr.edu, (404) 978-2047
- Matthew Stephens – Contract Web Developer

Budget. Add/remove and complete rows as needed in the table below

Line	Basis	Cost
Travel to the LYRASIS Member Summit	As provided by LYRASIS	
Graduate Student Assistant	15 hours/week for 52 weeks @ \$12/hour	
Fringe benefits	SS, Medicaid, taxes	
Web Developer	20 hours @\$100/hour	
OptiPlex 7460 AIO Computer & 24" Monitor	Quote from Dell	
Total Budget Request		