Albany Housing Data Analytics and Visualization Initiative for the City of Albany, Georgia

Georgia Smart Communities Challenge 2018
Proposal ID: YKHSQY

Proposal Lead
Albany
A Georgia Community

In Collaboration With
The Department of Community and Economic Development (DCED)
Dougherty County, Georgia
Albany Georgia Initiative for Community Housing (GICH)
Fight Albany Blight (FAB)
Dr. Omar Asensio - Georgia Tech

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1 Project Narrative

According to the United States Census Bureau’s 2016 American Community Survey, the City of Albany’s total housing inventory is 33,398. The Department of Community and Economic Development (DCED) is responsible for the administration of several programs that focus on Albany’s housing market and the maintenance of an accurate and viable housing inventory.

DCED administers the Community Development Block Grant (CDBG) and Housing Investment Partnership Program (HOME) Programs for the City of Albany, Georgia. In partnership with nonprofits, developers, and partnering agencies, DCED annually undertakes eligible activities which must meet one of HUD’s National Objectives: (1) Benefit low and moderate-income persons; (2) Aid in the prevention or elimination of slums and blight; or (3) Address an urgent need such as a serious and immediate threat to the health or welfare of the community.

The Albany Housing Data Analytics and Visualization Initiative seeks to bridge the gap between the available data and the need for a comprehensive, flexible and accurate database that can provide the data and information necessary to manage the Albany housing inventory effectively. The product of the initiative will allow a better measurement of public funds allocated for housing and neighborhood infrastructure repairs and enhancements using an automated data analytics and visualization reporting tool.

1.1 Vision

Establish a property registry that will assess the condition of the City’s housing inventory, thereby supporting Albany’s strategic goal of “…encourage a safe community in which to live work and play…”

Currently, Albany does not have an effective automated database for housing inventory. In order to effectively manage these properties, their attributes, plus their varying stages of repair and occupancy, DCED uses inefficient handwritten inspection sheets that are translated into several spreadsheets which consumes a significant amount of resources to meet the needs of the community. So, while the data is available the practical utilization of the information is marginal, at best.

The Albany Housing Data Analytics and Visualization Initiative seeks to deliver on the following objectives.

- Fulfill the current Priorities of the Mayor and Board of City Commissioners
  - Safe, Sustainable & Business Friendly
  - Economic Development and Jobs
  - Infrastructure and Asset Management
  - Fiscal Responsibility
  - Effective and Excellent Service Delivery
  - Promotion of the City of Albany as a Great Place to Live, Work, and Play
- Enable the City to be responsive to community housing needs as it utilizes technology and innovation for continued growth and development
- Coordinate this initiative with the Albany Georgia Initiative for Community Housing (GICH) and Fight Albany Blight (FAB)
- Become more knowledgeable of the City’s current housing conditions for long-term strategic planning
1.2 Framework

The Albany Housing Data Analytics and Visualization Initiative is a neighborhood-based housing model that enables the City and other collaborative entities to re-engage with citizens and become a part of the solution to address many of the housing issues within our community. The Albany team expects to facilitate this through a series of community education seminars to train a team of assessors that will assist in providing the data necessary to create and maintain the Albany Housing Inventory Assessment and Attribute Database. The research component is designed to ensure the Albany Team is using a scientific, peer reviewed methodology for data collection, data analysis, and data presentation.

1.3 Plan

In this Smart Resilience initiative, the Albany Housing Data Analytics and Visualization Initiative seeks to assess the number and types of housing units within the City. According to the 2016 American Community Survey, the City of Albany’s housing inventory stands at 33,398 and counting. The plan is to assess the infrastructure near each unit (i.e.: roads, sewer capacity, streetscape, etc.). A housing inventory with infrastructure conditions will be of great value when prioritizing resources to better serve the community.

Albany Housing Plus Initiative seeks to build a collaborative team to collect and geocode the following data.

- Tax Data (assessment data to include value, ownership, etc.)
- Code Enforcement Data (citations, violations, etc.)
- Planning Data (zoning data, future uses, food deserts, etc.)
- Transit Data;
- Police Data;
- Utility Usage and Consumption (water, gas, and electricity)
- Amenities (parks, entertainment, health facilities, etc.)
- Data Collection and Gathering;
- Determine the best methodology for data collection
- Property inspection and assessment

Categorize each housing unit (Existing housing condition; Occupancy status; and Planned Use/Reuse)

- Property categorization based on repair needs;
- Establish annual goals of the total inventory by percentages
- Determine existing resources and potential partnerships;
- Train volunteers to assess the housing inventory (code enforcement, construction Students: ATC and TJCC students, and volunteers)
- Bring Health and Wellness to the neighborhood through partnerships (Phoebe Putney Hospital, Albany Area Primary Healthcare, etc.); and
- Identify local, state, and federal assistance/resources in the area
1.4 Research

With an inventory of more than 33,000 assets, the data collection efforts will be an ongoing project. The first research objective will identify the most appropriate data collection methodology.

The Albany Team includes Georgia Tech Researcher, Omar Isaac Asensio, and will depend on his expertise in the following areas:

- Data Collection techniques
- Building a robust and expandable data repository
- Data mining techniques
- Data analysis
- Drawing conclusions
- Utilizing data to shape City policies and the decision-making process

Establishing best business practices early in the process will allow the Albany Team to establish policies and procedures that will sustain the Albany Housing Data Analytics and Visualization Initiative for years to come. The goal for the first-year of research is to create foundational guidelines as the inventory process gains momentum.

This research model will serve as the basis for the other Smart Cities initiatives that the City intends to pursue. The Albany Team understands that a solid foundation is necessary for all Smart Cities initiatives and plans to document this process so that it may be replicated as the City moves forward.

2 Execution Plan

2.1 Cost Plan

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<tr>
<th>ACTIVITY</th>
<th>COST</th>
<th>DESCRIPTION</th>
<th>FUND SOURCE</th>
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<tbody>
<tr>
<td>Software/Hardware for data collection, data storage, data mining and data analysis</td>
<td>$65,000 total investment</td>
<td>Tools for data collection as well as the dedicated hardware and software infrastructure to house the vast amount of data to be collected and analyzed over the life of this initiative.</td>
<td>City of Albany Technology and Communications operating budget</td>
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<td>$10,000 – Aug 2018 for data collection software and tablets.</td>
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<td>$20,000 – Dec 2018 initial investment in Servers and database software</td>
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<td>$20,000 – Jan-Feb 2019 investment in data mining tools.</td>
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<td>$15,000 – Mar – Apr 2019 investment in Business Intelligence (BI) and data analysis software</td>
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2.2 Staffing Plan

The Albany Team – Minimum time expected to be dedicated to this project is 10% of the normal work period.

- **Point of Contact and Project Lead**
  
  Steven Carter
  Chief Information Office
  401 Pine Avenue
  Albany, GA 31701
  carter@albanyga.gov

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<th>PROJECT ROLE</th>
<th>NAME</th>
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<tbody>
<tr>
<td>Team Member &amp; Initiative Lead</td>
<td>Shelena Hawkins</td>
<td>Director, Department of Community and Economic Development (DCED)</td>
<td>10%</td>
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<tr>
<td>Team Member &amp; Community Liaison</td>
<td>Angela Calhoun</td>
<td>Superintendent of Transit Operations</td>
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<td>Dianne Cooper</td>
<td>Applications Manager</td>
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<td>Shuronda Hawkins</td>
<td>System Administrator</td>
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<td>Darrius Hughley</td>
<td>IT Analyst</td>
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<td>Dr. Omar Isaac Asensio</td>
<td>Georgia Tech Researcher</td>
<td>TBD</td>
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<tr>
<td>Team Member &amp; GIS Subject Matter Expert (SME)</td>
<td>Randy Weathersby</td>
<td>GIS Manager</td>
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The members of the Albany Team, exclusive of Dr. Asensio, are also members of our Emerging Technologies Team (ETT).

### 2.3 Schedule

Although there will be many ongoing tasks associated with the Albany Housing Data Analytics and Visualization Initiative, the major milestones for year one include:

- **May 2018** - Georgia Smart Communities Challenge proposal submission
- **July 2018** - Project Plan defined, documented and ready for publication
- **August 2018** – Meet with collaborative partners to determine roles and responsibilities, determine research criteria, assign roles for data collection, and determine the data collection
- **September 2018** – First of four (4) collaborative meetings to garner community involvement, and launch first data collection cohort
- **November 2018** – Evaluate the data collection process
- **December 2018** – Begin data mining and analysis process. Conduct the second of four collaborative meetings to garner community involvement, and launch the second data collection cohort. Make collected data available to limited release groups for feedback on the relevance of data collected. Modify collection procedures as necessary
- **February 2019** – Evaluate the data collection process
- **March 2019** – Continue data mining and analysis process. Conduct the third of four collaborative meetings to garner community involvement, and launch the third data collection cohort. Make collected data available to limited release groups for feedback on the relevance of data collected. Modify collection procedures as necessary
- **May 2019** – Evaluate the data collection process
• June 2019 – Continue data mining and analysis process. Conduct the fourth of four collaborative meetings to garner community involvement, and launch the fourth data collection cohort
• July 2019 – Release data collected to the public with guidance on interpretation

The Albany Team anticipates utilizing the Project Management Institute (PMI) project management methodology with monitoring and project control through a PM package titled EasyProject.
2.4 Collaboration

The Albany team intends to collaborate with the Community Development Block Grant (CDBG) and Housing Investment Partnership Program (HOME) Programs for the City of Albany, Georgia. That collaboration will be facilitated through the Department of Community and Economic Development (DCED), directed by Ms. Sherlena Hawkins.

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Appendix A  Letters of Support
May 1, 2018

Georgia Smart Communities Challenge
Georgia Tech
75th 5th Street NW, Suite 600
Atlanta, Georgia 30308

RE: Letter of Support for the Albany Housing Data Analytics and Visualization

To whom it concerns,

As City Manager for the City of Albany, Georgia, I fully support the Albany Team’s submission of the Albany Housing Plus Initiative as Albany’s, official entry into the 2018 Georgia Smart Communities Challenge.

The proposed work is directly related to one of our City’s six strategic goals and will establish an efficient inventory of key community housing and associated infrastructure conditions. This type of inventory will better serve to provide decision-makers with data driven information for the most efficient allocation of resources within our community.

The City guarantees the availability of the necessary facilities, personnel, and funding as stated in the proposal in order to ensure the project’s success.

Please feel free to call if you have any questions.

Sincerely,

[Signature]

Sharon D. Subadan, MPS, CPM, CPFP
City Manager
Appendix B  Documentation of Financial Support
May 1, 2018

Georgia Smart Communities Challenge
Georgia Tech
75th 5th Street NW, Suite 600
Atlanta, Georgia 30308

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