"Enabling Smart, Inclusive, and Connected Communities: The Role of Public Libraries" is the name of the project submitted by the Center for Technology in Government at the University of Albany in partnership with the American Library Association (ALA)'s Center for the Future of Libraries. The projects aims at exploring and understanding the role of public libraries as community anchors in smart city initiatives that can make a difference by contributing to the community's understanding of and participation in such initiatives. The project, with a total budget of $399,953, will produce an Opportunity Agenda and Roadmap Report and a Smart Cities Communication and Outreach Toolbox for Public Libraries.

Project Overview and Goals

Smart strategies have emerged in many communities as a way to improve government services and overall quality of life for citizens. The majority of these strategies focus on how technology and data can save hard earned taxpayer money, vastly improve government decision making and current services, and enable new types of services only dreamed of before. Examples include "smart" street lights that turn on, dim, and turn off based on the movement of cars and pedestrians. There is "smart" parking that provides citizens with notice of available parking spots in government owned lots and city streets. Another example is "smart" infrastructure where sensors monitor public water and sewer systems for problems and maintenance needs. In addition, there are a growing number of "apps" that allow citizens to interact with their government much more quickly and from virtually anywhere and anytime.

Such smart strategies have become a national priority with increased federal funding encouraging a community of data scientists, technologists, and civic leaders to harness the growing data revolution, low-cost sensors, and research partnerships to unlock new solutions that can benefit society. While acknowledging this broader community partnership, more often than not, these initiatives are industry- and government-driven with much less focus on identifying community demands that are all-inclusive and address that community's ability to benefit from and utilize smart city technologies and services. Moreover, from our research and work with government in this area, it is evident that community focused groups such as public libraries have been largely left out of the ongoing dialogue about smart cities.

As parts of the digital, knowledge and creative infrastructures of smart cities, public libraries could play a critical role in involving the community and in addressing its needs, issues and interests. As in the case of open government (Burke et al, 2013), the traditional and important role of public libraries as trusted information intermediaries provides a powerful platform for public libraries to be key facilitators in smart city initiatives. As a result, public libraries in smart cities may reinforce their role as community anchors and important third places (separate from the two usual social environments of home, "first place," and the workplace, "second place"), that are key for civil society, democracy, civic and cultural engagement, lifelong learning, digital inclusion, and establishing feelings of a sense of place (Oldenburg, 1999).

Becoming part of the smart cities ecosystem requires a new generation of library services that will be integrated with the city infrastructure and that will extend the library's role as community anchor and as an information literacy hub of a smart city, where new technologies will be experimented with and new concepts related to technology grasped (Jerkov et al, 2015). However, still, more knowledge and practical insights are needed on public libraries' strategies, programs, services and tools aimed at engaging communities in smart cities as well as on the challenges, risks, costs, and unintended consequences that public libraries could face by incorporating these into their role as community anchors.

For this proposed research project, CTG will focus on the following questions:
1. How can public libraries, building on their expertise, knowledge, and background, contribute to the community's understanding of and participation in smart city initiatives?
2. What are the existing or potential costs, risks, challenges, and unintended consequences for public libraries increasing their involvement in their community's smart city initiatives?

Proposed Work Plan and Outcomes

We propose the following research activities that would occur over a 30 month timeframe:

1. **Environmental scan and literature review (six months)**. Scientific literature will be reviewed for any relevant recent findings that might inform the data collection, and analysis. In addition, public documents and databases will be analyzed in order to deepen our current knowledge about what public libraries are already doing to engage citizens in smart city initiatives throughout the United States.

2. **Case Studies (eight months).** The most appropriate way to address innovative and underexplored research questions is through a qualitative case study (Marshall & Rossman, 2011). In partnership with the ALA's Center for the Future of Libraries, CTG will identify three public libraries currently involved in helping citizens make sense of and leverage smart city tools and services and will develop in-depth case studies based on interviews with the public library, local government, smart city advocates, and other community partners. Interviews will address: 1) programs/services in the context of smart cities, 2) citizens' reactions to these programs/services, and 3) costs, risks, challenges, and unintended consequences for public libraries. All interviews will be recorded, transcribed, and coded using a set of pre-defined codes from the existing literature on public libraries. If additional codes emerge during the analysis process, they will be categorized and their meaning evaluated by the research team, following a grounded-theory approach (Glaser & Strauss, 2009).

3. **National Survey (six months).** A national survey will be conducted in partnership with ALA's Center for the Future of Libraries. The scan and literature review and, more important, the findings of the in-depth studies will inform the survey. Thus, it will also collect information on programs and services, citizens' reactions, and challenges. Initial piloting and testing of the survey instrument, to make adjustments regarding vocabulary, question order, and scales, among others elements of the design, will involve key participants identified during the case studies. The instrument will be revised and refined accordingly.

4. **Opportunity Agenda and Roadmap Report and a Smart Cities Communication and Outreach Toolbox for Public Libraries (nine months).** Based on our findings from the previous activities, we will produce a report that identifies the areas of opportunity and challenges for public libraries helping enable smarter, more inclusive, and more connected communities. This report also will provide a set of recommendations and next steps to help and prepare public libraries to engage in their communities smart initiatives. In addition, the project will develop a toolbox aimed at helping public libraries understand and communicate the value they can provide as smart city community anchors. The toolbox will include, among other things, techniques, marketing tools, workshop/training ideas, and methodological guides. Both the report and the toolbox will be made available to the three libraries and additional stakeholders of our case studies. A **workshop** will be organized to test the products and get the participants' feedback, which, in turn, will lead to an improved and refined version of both products.

5. **Dissemination (one month)**. Final and definitive results will be disseminated by CTG in partnership with the ALA's Center for Future of Libraries via conferences, press releases, social media, and virtual means, such as webcasts.

Budget Paragraph

Total research project cost is $399,953. The total cost of salary and fringe benefits is $235,288 for two faculty as PI and co-PI Researcher's and SME's, one Graduate Student, Project Manager, Project Assistant to support all research activities of the project, and Communications Manager for outreach. Travel cost of $12,000 for three site visits (6-8 trips) to the case study locations and $20,500 to disseminate findings and results at the American Library Association (ALA) and Smart Cities focused conferences. Final One-day Workshop travel for stakeholders, local participants and speakers $21,000, venue and refreshments/food costs of $4,360, speaker honorarium for 2-4 speakers of $2,000. Supplies and Materials for site visits at $375, printing and mailing of hard copy survey and/or electronic version at $2,500, final webinar on findings for ALA and other distribution at $7,000. Contractor costs for ALA at $7,000 and transcribing interviews at $5,400. University at Albany indirect of 26% on total direct costs at $82,530.