

GEOG 491/591 | ADVANCED GIS | SPRING 2015

Assignment 3 • Submitting an NITC Proposal

DESCRIPTION: The director of your research team would like to submit a proposal for an NITC (National Institute for Transportation and Communities) grant to study how crowdsourcing data collection can assist in the enhancement of sustainable transportation for Lane Transit District's (LTD) bus system in Eugene and Springfield. Your director states that *the goal of the proposal should be to enrich LTD's data collection abilities by introducing a new way to solicit data from transit riders*. However, the funding agency has only \$2000.00 available for equipment purchase for the project. In preliminary discussions with LTD, you learn that you will be given access to LTD's transit system data in the form of Shapefiles, including the EMX bus line that has eleven buses running daily. Furthermore, you will be allowed to install equipment on the buses, but they must not interfere with the driver's ability to conduct his or her daily responsibilities. The data collection process should last no more than three weeks, and include anyone from the university and Eugene/Springfield community. Your task is to write a proposal (including figures and references) following the proposal template.

INSTRUCTIONS: Utilizing the knowledge gained through lectures and Assignments 1 and 2, get in a group of two and write a proposal to NITC using the guideline provided on page 3 (graduate students, however, are required to work individually). Your proposal should not simply represent steps on how you will collect and visualize data, but should address all points stated in the guideline. You are expected to conduct a short literature review.

DELIVERABLE: The Assignment 3 page of your website should include the completed form and the proposal. You can also include any figures or graphics that would enhance your proposal; these will not be counted against your three-page limit. You are advised to develop your proposal in Microsoft Word first, and then copy and paste the materials into your WordPress site.

TOTAL 100 POINTS

This exercise is due on **11:59 pm on Sunday, May 10th, 2015**.

NATIONAL INSTITUTE FOR TRANSPORTATION & COMMUNITIES PROPOSAL FORM

| |
|----------------|
| Project Title: |
|----------------|

PRINCIPAL INVESTIGATOR

| | |
|----------|-------------|
| Name: | Title: |
| Address: | University: |
| Phone: | Email: |

CO-INVESTIGATORS (Add more rows for each additional co-investigator)

| | | | |
|-------------|--------|-------------|--------|
| Name: | | Name: | |
| University: | | University: | |
| Address: | | Address: | |
| Phone: | Email: | Phone: | Email: |

Please pay strict attention to length limitations.

1. ABSTRACT (limit ½ page)

Provide a brief summary of the proposal.

10 POINTS

2. LITERATURE REVIEW (limit ½ page)

What is the current state of the research? What is the research problem, background, motivation, previous and on-going research, and how this proposal will fill or complement any existing research gaps?

20 POINTS

3. THEME (limit ½ page)

How does this proposal fit the NITC theme described in the RFP?

10 POINTS

4. OBJECTIVES (limit ½ page)

What are the specific research questions and anticipated outcomes of this project?

10 POINTS

5. METHODOLOGY (limit 1 page)

What is the methodology/approach by which project objectives will be accomplished?

20 POINTS

6. BROAD IMPACTS (limit ½ page)

What long-lasting impact might this research have? Are there any opportunities for leveraging of the research results for future research or practice? Is the research groundbreaking? Will it advance the state of the art or practice? How might this project distinguish NITC?

20 POINTS

7. REFERENCES (limit ½ page)

List of references cited in this proposal.

10 POINTS

TOTAL 100 POINTS

SUMMARY OF NITC REQUEST FOR PROPOSAL (RFP)

This is a simplified version of the actual RFP. You do not need to exhaustively address every single concept/idea in the RFP to complete the assignment. That being said, just use this as a guide to help you outline and write your proposal. Full version of the RFP can be found [here](#).

The **National Institute for Transportation and Communities**, or NITC, is a program of the Transportation Research and Education Center, or TREC, at Portland State University. NITC is the U.S. Department of Transportation's national center for livable communities and one of five U.S. DOT national university transportation centers.

NITC is focused on contributing to transportation projects that support innovations in:

livability, incorporating safety and environmental sustainability.

Successful research proposals will fit the NITC theme, linking to articulated USDOT priorities, specifically livability, environmental sustainability and safety. Technology transfer proposals should support the application of transportation research to practice, including dissemination of research results, continuing education, and training.

The NITC Advisory Board has allocated funding for research that examines the **economic impact of transportation and livable communities** with a specific focus on urban areas. Priority scoring will be given to meritorious research projects that seek to understand the following questions:

- How can we justify investments in transportation infrastructure that help create livable communities?
- What is the impact of bicycle and pedestrian infrastructure on the larger economy?
- What are the economic benefits to the private sector for transportation infrastructure investments that create livable communities?
- How do transportation infrastructure investments for livable communities translate to job creation; and what are the short and long-term costs to our communities if we do not make investments in livable communities?
- What needs to be included in transportation and land use changes specifically as it relates to economic development?

The NITC theme connects directly with the U.S. DOT strategic goal of livability, incorporating safety and environmental sustainability. All proposals must be consistent with this theme, as defined below:

- **Improve health and safety for all users:** Research should address both a key outcome of a livable community—improved physical and mental health—and an essential input—a safe transportation system. Safety research should focus on understanding how design, operations and users affect safety outcomes. It embraces the *U.S. DOT Strategic Plan's* strategy to “increase safe, convenient, and attractive facilities for non-motorists.”
- **Increase the efficiency and understanding of bicycle, pedestrian and transit modes:** Research that examines the behavioral decisions behind walking, bicycling, and transit use. An emphasis on a multidisciplinary approach—that includes urban planning and design, economics, modeling, and engineering—is critical in including and integrating non-auto modes and transit. This research complements the *U.S. DOT Strategic Plan's* Livable Communities strategies for improved public transit experience and improving networks to integrate pedestrians and bicycles.
- **Make the best use of data, performance measures, analytical tools and new technologies:** MAP-21's Declaration of Policy states that “Performance management will transform the Federal-aid highway program and provide a means to the most efficient investment.” In support of this goal, projects should aim to fill the gap and lead development in multimodal performance metrics, data and tools that will allow decision makers to create more livable transportation systems.
- **Integrate multimodal transportation and land use:** *U.S. DOT's Strategic Plan* clearly outlines a coordinated approach to livable communities that integrates transportation and housing while considering environmental concerns. NITC projects should focus on the nexus of multimodal transportation (passenger and freight) and land use that is the heart of creating sustainable, prosperous and safe communities.
- **Take long-term action on transportation emissions and climate change:** The *U.S. DOT Strategic Plan* recognizes the need to transform our transportation system into one that burns less oil and emits less carbon, another key aspect of livable communities. Recognizing the importance of both mitigating and adapting to climate change, projects should focus on modeling and program evaluation of new technologies (electric/alternatively-fueled vehicles and Intelligent Transportation Systems (ITS)), infrastructure, demand management and land use strategies.