NTC Program Progress Performance Report (PPPR) Information Form

For P.I.’s Use

On a semi-annual basis the NTC sponsored P.I. must report Program Progress Performance Report (PPPR) using the format specified in this PPPR Information Form. The form must be submitted electronically to the corresponding NTC Associate Director by 2/22/2016.

Cover Period: 4/01/2016 – 9/30/2016

<table>
<thead>
<tr>
<th>NTC Funded Project Information (Round/Year 1, 2013-2014)</th>
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</thead>
<tbody>
<tr>
<td>University Name</td>
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<tr>
<td>Project Title</td>
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</table>
| Principal Investigator | Hyeon-Shic Shin, Ph.D.  
                        | Michael Callow, Ph.D.                                     |
| PI Contact Information | hyeonshic.shin@morgan.edu, 443-885-1041  
                        | Michael.callow@morgan.edu, 443-885-1688                  |

The form includes the following six parts:

- Part I – Performance Indicators
- Part II – Accomplishments: What was done? What was learned?
- Part III – Products: What has the program produced?
- Part IV – Participants & Collaborating Organizations: Who has been involved?
- Part V – Impact: What is the impact of the program? How has it contributed to transportation education, research and technology transfer?
- Part VI – Changes/Problems

Supplementary documents/materials can be attached to this form with the submission.
### Part I – Performance Indicators

<table>
<thead>
<tr>
<th>Reporting Period</th>
<th>4/1/2016 – 9/30/2016</th>
</tr>
</thead>
</table>

1. **Transportation-related courses offered during the reporting period that were taught by faculty and/or teaching assistants who are associated with the UTC**

   **Undergraduate courses**

   **Graduate courses**
   - CREP 521 Urban Transportation Planning
   - CREP 512 Urban Economics (include transportation and land use throughout the course)
   - CREP 534 Public Policy Analysis (One of the case studies discussed throughout the semester is political disputes of transportation deregulation.)

2. **Students supported by this grant**

   **Undergraduate students**
   [Student Name]
   [Supervisor]

   **Masters students**
   Laura Marie Bianca-Pruett
   Supervisor: Hyeon-Shic Shin

   **Doctoral students**
   [Student Name]
   [Supervisor]

3. **Students participating in transportation research projects funded by this grant (but not supported by this grant)**

   **Undergraduate students**
   [Student Name]
   [Supervisor]

   **Graduate students**
   [Student Name]
   [Supervisor]

4. **Students supported by this grant who received degrees**

   **Undergraduate degrees**
   [Student Name]

   **Masters degrees**
   [Student Name]
## Part II – Accomplishments: What was done? What was learned?

The information provided in this section allows the OST-R grants official to assess whether satisfactory progress has been made during the reporting period.

<table>
<thead>
<tr>
<th>Reporting Period</th>
<th>4/1/2016– 9/30/2016</th>
</tr>
</thead>
</table>

1. **What are the major goals of the program?**

The National UTC aims to promote strategic transportation policies, investment, and decisions that bring lasting and equitable economic benefits to the U.S. and its citizens. The Center is concerned with the integrated operations and planning of all modes serving the nation’s passenger and freight transportation system, including the institutional issues associated with their management and investments. A balanced multi-modal approach will be used that considers freight and passenger travel mobility, reliability, and sustainability, as well as system operations during periods of both recurring and non-recurring incidents, including response to major emergencies. The modes in this theme include highway, transit, rail, and inter-modal interfaces including ports, terminals and airports. In particular, the center focuses on research, education, and technology transfer activities that can lead to (1) Freight efficiency for domestic shipping and for our international land, air, and sea ports; (2) Highway congestion mitigation with multi-modal strategies; and (3) Smart investments in intercity passenger travel facilities such as high speed rail. Major center activities are as following:

- **Advanced & Applied Research Promoting Economic Competitiveness:**
  Our research activities are multimodal/intermodal and multidisciplinary in scope, with the aims of addressing nationally and regionally significant transportation issues pertinent to economic competitiveness and providing practice-ready solutions.

- **Education, Workforce Development, Technology Transfer, & Diversity**
  The consortium is committed to providing high-quality transportation education and workforce development programs for a broad and diverse audience. Center’s efforts will support the development of a critical transportation knowledge base and a transportation workforce that is prepared to design, deploy, operate, and maintain the complex transportation systems of the
2. What was accomplished under these goals?

The goal of the study is to analyze freight sector stakeholders’ preferences for various policy alternatives on managing last mile delivery. Specific objectives are to (1) conduct in-depth interviews with leaders of the freight sector to guide the development of a survey to measure stakeholder opinion; (2) carry out a large scale survey of the industry; (3) conduct conjoint analysis to identify freight stakeholder’s preferences for alternative freight transportation policies; (4) develop a guide for the next stage of the study that will involve the development of an evaluation model for the chosen alternative policy.

The major mile-stone for this period is that a potential location for conceptual modeling has been identified and has refined the details that leads to the completion of this study soon.

Conceptual studies conducted by this study led to a new 5-year study in collaboration with the City of Baltimore. The proposed conceptual schemes to be found from this study will be applied and at least piloted.

3. How have the results been disseminated?

As stated in the previous question, conceptual studies conducted by this study led to a new 5-year study in collaboration with the City of Baltimore. The proposed conceptual schemes to be found from this study will be applied and at least piloted.

4. What do you plan to do during the next reporting period to accomplish the goals? (10/1/2014 – 3/10/2016)

We are writing a draft final report. The goal is to complete a draft report for review by the end of December 2016.
### Part II – Products: What has the program produced?

Publications are the characteristic product of research projects funded by the UTC Program. OST-R may evaluate what the publications demonstrate about the excellence and significance of the research and the efficacy with which the results are being communicated to colleagues, potential users, and the public, not the number of publications. Many research projects (though not all) develop significant products other than publications. OST-R may assess and report both publications and other products to Congress, communities of interest, and the public.

<table>
<thead>
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<th>Reporting Period</th>
<th>4/1/2016 – 9/30/2016</th>
</tr>
</thead>
</table>

1. **Journal publications:**

2. **Books or other non-periodical, one-time publications**

3. **Other publications, conference papers and presentations**

4. **Website(s) or other Internet site(s)**

5. **Technologies or techniques**

6. **Outreach activities**

   The discussion for several years with the city of Baltimore came to fruition. We will conduct a collaborative study with the city.

7. **Courses and workshops**

8. **Inventions, patent applications, and/or licenses**

9. **Other products**
### Part III – Participants & Collaborating Organizations: Who has been involved?

OST-R needs to know who has worked on the project to gauge and report performance in promoting partnerships and collaborations.

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<th>4/1/2016 – 9/30/2016</th>
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<tr>
<td>1. What organizations have been involved as partners?</td>
<td>For this period, the City of Baltimore transportation planners helped us to find out the potential locations and their interest.</td>
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<tr>
<td>2. Have other collaborators or contacts been involved?</td>
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Part IV – Impact: What is the impact of the program? How has it contributed to transportation education, research and technology transfer?

DOT uses this information to assess how the research and education programs:
- increase the body of knowledge and techniques;
- enlarge the pool of people trained to develop that knowledge and techniques or
- put it to use; and,
- improve the physical, institutional, and information resources that enable those people to get their training and perform their functions.

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<td>1. What is the impact on the development of the principal discipline(s) of the program?</td>
<td>This is a conceptual study, but aims to a pilot in the long run. The identified site in consultation with the city will be a testing bed in the long run. As stated earlier, we will conduct a 5-year study with the city, which includes a pilot test of concepts developed from this study.</td>
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<tr>
<td>2. What is the impact on other disciplines?</td>
<td>As stated earlier, we will conduct a 5-year study with the city, which includes a pilot test of concepts developed from this study. The purpose of the study is to design a last-mile delivery network that minimize negative environmental impacts.</td>
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<tr>
<td>3. What is the impact on the development of transportation workforce development?</td>
<td>If the pilot from the study with the City of Baltimore is found to be feasible, a full implementation would create new business opportunity for the 3rd party logistics sector.</td>
</tr>
<tr>
<td>4. What is the impact on physical, institutional, and information resources at the university or other partner institutions?</td>
<td>To researchers and public sector practitioners, the availability of any freight data is appreciated so much. The data collected as part of this study will become precious resources to researchers and practitioners.</td>
</tr>
<tr>
<td>5. What is the impact on technology transfer?</td>
<td>Once this concept is proved to be feasible, the findings from the study can be transferred to private sector businesses that are interested in a developed last mile delivery scheme.</td>
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<tr>
<td>6. What is the impact on society beyond science</td>
<td>Identifying business needs and implementing alternative freight delivery strategies have lots of impacts on society. First, a</td>
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<td><strong>and technology?</strong></td>
<td>rationalized freight delivery system will decrease the number of truck trips that will have contribute to reducing tailpipe emissions. This can be interpreted as public health benefit. Second, a rationalized freight delivery system will mitigate traffic congestion and other conflicts between trucks and other modes of transportation, including bicyclists and pedestrians. This will improve public safety. Third, a rationalized freight delivery system will help businesses since travel time would decrease and they need to operate fewer fleets. As a result, logistics costs will be decreased, which can be translated into increased productivity and profits. Lastly, new freight facilities will provide new jobs to the region that is the most important selling point of a new rationalized freight delivery system.</td>
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| **7. Additional impacts** | • Increased understanding and awareness of the importance of freight transportation system;  
• Improved methodological understanding on choice behavior by applying a marketing research methodology;  
• Have students trained for freight transportation planning.  

In the long run, the result of this study can have impacts on,  

• Increased reliability of freight movement;  
• Help improve intermodal operation at and near the Port of Baltimore;  
• Reduction in carbon footprint from freight delivery;  
• Provide jobs to the depressed neighborhood in or near former industrial zones near the Port of Baltimore. |
### Part V – Changes/Problems

If not previously reported in writing to OST-R through other mechanisms, provide the following additional information or state, “Nothing to Report, if applicable:

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<tr>
<td>1. Changes in approach and reasons for change</td>
<td>A large scale conjoint analysis cannot be carried out due to the low participation. Instead, the study team has focused on identifying potential locations and the city’s needs for urban freight delivery-related issues in and out of the Port and the city.</td>
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| 2. Actual or anticipated problems or delays and actions or plans to resolve them | An anticipated delay factor is the timing of interviews and surveys. We will try to schedule as many interviews as possible to make more progress.  
In addition, an extensive delay was caused due to a difficulty in finding a research assistant who are qualified to assist the current research. |
| 3. Changes that have a significant impact on expenditures | |
| 4. Significant changes in use or care of human subjects, vertebrate animals, and/or biohazards | Nothing to report |
| 5. Change of primary performance site location from that originally proposed | Nothing to report |