



ACCELERATED BRIDGE CONSTRUCTION  
UNIVERSITY TRANSPORTATION CENTER

| <b>UTC Project Information</b>  |  |
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| Project Title   | Developing ABC Success Index to Support Contractors During Pre-Project Planning  |
| University  | Florida International University   |
| Principal Investigator  | Dr. Mohamed ElZomor  |
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| Funding Source(s) and Amounts Provided (by each agency or organization) | \$56,007 from ABC-UTC<br>\$12,466 from FIU   |
| Total Project Cost  | \$68,473   |
| Agency ID or Contract Number  | 69A3551747121  |
| Start and End Dates   | 04/01/2021 to Active   |
| Brief Description of Research Project                                   | <p>The goal of this research is primarily geared towards supporting ABC projects through twofold: attracting contractors to adopt ABC projects and informing project stakeholders about ABC success indicators during the pre-project planning phase. Given the novelty of ABC method, providing knowledge of ABC success indicators during pre-project planning phase will have a significant impact on ABC project success. This is particularly true since planning efforts conducted during the early stages of a construction project, known as pre-project planning, which encompasses tasks from project scope, definition, alignment, funding source/s, initiation to the beginning of detailed design, has a significant effect on project success than efforts undertaken after project kickoff. Therefore, this study reinforces the success of ABC projects during the early planning phase by pre-informing contractors about the success indicators, which can be developed into a tool elicited from analyzing successes of previous ABC projects. The research team set forth the objective of producing a user-friendly tool that supports identifying ABC success indicators with the following characteristics and functions:</p> <ol style="list-style-type: none"> <li>1. Identify the success indicators based upon the literature and industry expertise,</li> <li>2. Conduct ABC industry interviews-workshops for professionals from construction, transportation, and the structural disciplines to define the required weighted success criteria i.e., ABC Success matrix; and</li> <li>3. Develop regression model with a machine learning algorithm that would help to determine the correlation between different project</li> </ol> |

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|  | performance factors and expected success in ABC projects as well make accurate predictions.   |
| Describe Implementation of Research Outcomes (or why not implemented)<br>Place Any Photos Here   | The outcomes will be tracked and reported once they are identified.   |
| Impacts/Benefits of Implementation (actual, not anticipated)                                     | The impacts will be tracked and reported once they are identified.  |
| Web Links <ul style="list-style-type: none"> <li>• Reports</li> <li>• Project website</li> </ul> | <a href="https://abc-utc.fiu.edu/research-projects/developing-abc-success-index-to-support-contractors-during-pre-project-planning/">https://abc-utc.fiu.edu/research-projects/developing-abc-success-index-to-support-contractors-during-pre-project-planning/</a> |