Grant Deliverables and Reporting Requirements for UTC Grants

UTC Project Information	
Project Title	Sustainable and Healthy Communities through Integrating Mobility Simulations in the Urban Design Process
University	Cornell University
Principal Investigator	Timur Dogan
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Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT: $65,117 Cornell: $32,075
Total Project Cost	$97,192
Agency ID or Contract Number	Sponsor Source: Federal Government CFDA #: 20.701 Agreement ID: 69A3551747119
Start and End Dates	Start date: 10/01/2020 End date: 09/30/2021
Brief Description of Research Project	We develop and validate a design focused active mobility simulation tool called Urbano.io that facilitates the design of healthy and sustainable urban habitats. We propose two significant new contributions: (1) Adapting statistical and behavioral models from the transportation literature to incorporate street quality and thermal comfort-aware active mobility mode choices over others. (2) Validate the new behavioral models with urban data from NYC: More specifically, we aim to create an hourly outdoor comfort map for NYC that will be correlated with CitiBike usage and pedestrian count data to investigate the link of urban form, microclimate, and life in the streets. In addition to the above contributions, we also plan to implement the most requested features from the community to remove a number of limitations that were revealed during intensive use in practice, online workshops, and conference calls with practitioners and researchers over the last four months. Key limitations that we aim to work on are listed below: (1)

	Accelerated algorithms and data structures to speed up analysis to allow larger analysis domains. (2) Support for multimodal trips and other travel modes (such as biking, transit, and shared mobility). (3) Support for customizable choice models to determine which modes would be used for different mobility needs. (4) 3D terrain support to accurately model effort of sloped pathways.
Describe Implementation of Research Outcomes (or why not implemented) Place Any Photos Here	
Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links • Reports • Project Website	http://ctech.cee.cornell.edu/final-project-reports/