TINY TOWN TO CITY OF TORONTO: CITY HALL MODEL

PROBLEM STATEMENT
A 30-YEAR-OLD OUTDATED CITY MODEL

Located by the front entrance of Toronto City Hall, Tiny Town TO is a scale model of the city of Toronto that was first unveiled in 1989 as a planning tool for the City Planning Division. It was a highly relevant tool for the professions of architecture, urban planning, and city development alike. Despite its unique attributes and use of cutting-edge technology at its time, it has not undergone a meaningful physical update in the last 30 years. Many of the existing buildings on the model are not currently being represented by it. This jarring difference between the model and the reality that it strives to represent makes it an ineffective model for any meaningful engagement. As stakeholders had not also been clearly outlined at the outset of this project, resulting in uncertainty around who will benefit from updates to the model. Despite the planning department’s best interests and belief in the potential that the model holds, there has yet to be any formalized study of stakeholder benefits, the current user experience with the model, and how to go about improving the model itself. This work is essential to uncover other issues in the model that are more subtle than its physical appearance itself, and to formulate solutions and action plans that will add value to the activities of various stakeholders.

The project calls for a design solution that will be proposed to the client and potential stakeholders that work to tackle the problem addressed above in the form of an engagement plan. This must also be designed in an inclusive way and assure that any changes made to the model and any complementary programming is accessible to people of all socio-economic backgrounds and of different abilities, and is inclusive of all the identities that live in Toronto. Any solutions must also take long-term effects into account, and be capable of being sustained in the long run of the model.

As such, efficiency, flexibility, and creativity will be important in the formation of any solution. The solutions that are delivered also need to be feasible and implemented in a reasonable amount of time as to not be a strain on the resources of any department at the City of Toronto. The lack of physical updates thus far to the model is due to funding being allocated to its maintenance; all of the minimal updates to the model thus far have been coming out of the office budget of the city planning department. While this is enough for minor updates such as landscapes printed on paper, or thematic add-ons, it has not been nearly enough to update physical elements that would allow the model to be an accurate representation of the city. As such, any solution implementation will require careful planning with various City of Toronto departments to secure funding and take into account how much work could reasonably be done by any department involved.

KEY RESEARCH INSIGHTS

One of the main barriers to engagement identified in our research is the outdated nature of the model. The model itself has not undergone any significant updates since 1989 and its current state is an impediment towards the implementation of any engagement plans. A significant portion of the model is outdated or missing, making it no longer relevant for its original purposes as a city planning tool. This means that envisioning redevelopment options, analyzing urban issues, considering growth planning issues, or using it as an educational tool is rendered impractical.

Much of this was the result of the city’s transition towards developing digital data as a means of delivering services and projects today. In many cases, it is currently more of a hindrance than it is a public engagement tool. However, its physicality has the potential to enhance the city of community connections, in addition to serving as a platform to engage interactive public spaces.

The potential that these scale models hold in regards to education, civic engagement, and understanding was uncovered through case studies of city models around the world and conversations with various stakeholders of the model. Models are an effective way to visualize a changing city, and to formulate solutions and action plans that will add value to the activities of various stakeholders.

While the two biggest concerns regarding 3D printing are cost and time, there are a number of measures to address this. Printing a solid mass is unnecessary, and therefore during the preparation and optimization stage, the model should be hollowed out with only an exterior shell visible. This would significantly reduce filament material and in turn, reduce print time. Furthermore, at the comprehensive scale of this project, dozens of 1:1250 models can be nested and printed in bulk at once, greatly reducing cost and time. At the unprecedented rate that 3D printing technology is developing at, these factors are projected to be even more reasonable in the near future.

The future of the model

There is still much potential beyond this educational proposal to continue building engagement with the model. It will be important for work to be done around building notoriety, and to implement more educational and community engagement programs that encompass more than just the physicality of the city. At the same time, this presents itself as an opportunity to engage the many departments of Daniels Faculty to be able to participate in a real-world project and gain experience with soft skills that derive from working with a client beyond the academic context. The City of Toronto can benefit from student ideas while this unique opportunity enables them to learn about the processes of 3D printing, as well as city planning engagement, and urban issues.

ENGAGEMENT SOLUTION
STUDENT EDUCATIONAL INTEGRATION

Based on discussions with members at the Daniels Faculty of Architecture, Landscape, and Design, we have recognized the potential for students to partake in contributing towards the revitalization of the model and develop the skills and connections that work to them. We identified two avenues that this design solution can be implemented: Integration Into Existing Course Curriculums and Development of an Additional Elective Course.

2. Development of an Additional Elective Course

There is also the option of creating a new elective course focused on the model that would be open to third and fourth-year students. In the event that integration into existing courses may be too difficult due to their rigid curricular structure, development of a new elective course may be a more manageable solution. Currently, there is a high demand for elective courses in Daniels, as many upper-year students complain that there is a lack of space in elective courses during the core instruction period. With many resources such as multiple 3D printers but students seldom take advantage of them unless required by their courses. By having a course designed around the model, larger chunks can be updated at once with greater quality as that work will be the main purpose of the course, and not just a side requirement in an existing course.

ENGAGEMENT SOLUTION
MULTIDISCIPLINARY URBAN CAPSTONE PROJECT

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Two opportunities

1. Integration Into Existing Course Curriculums

The proposal of integration into existing course curriculums would require the course to be relevant to model making and 3D printing, as well as the supplemental modifications to the existing syllabus to accommodate for additional requirements. There are a few potential courses that have been discussed as options for this integration, that involve both model making and analyses of the city. Students would be granted access on the models and prints for both the building reflective of real life (to be used at City Hall) and their own designs that would be accompanied by a presentation, as well as other course deliverables in either case.

2. Development of an Additional Elective Course

The model is an impediment towards the implementation of more sophisticated layers and engagement programs. In order to maximize the efficiency of implementing this design solution, modern technology should be taken advantage of in aiding the revitalization process of the model.

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