

## Minneapolis Downtown Improvement District

### INNOVATION

The purpose of Greening Lab is for downtown Minneapolis to become a place where most trees that are planted grow to maturity and benefit the community.

Minneapolis is a winter city, and that has serious ramifications for trees. Our growing season is relatively short, and winter conditions entail threats to trees like snow removal equipment and ice melting chemicals. Moreover, winter conditions create freeze-thaw challenges, which means that our right-of-way surfaces need to be repaved once a decade or two. Fortunately, in an era in which deferred infrastructure maintenance is being addressed, that has meant that one or two of our downtown streets are being completely reconstructed every year. Our organization has led advocacy to make sure that those street reconstructions have included major investments in green infrastructure.

Unfortunately, a disappointing number of the trees planted in these reconstructed downtown streets were not performing well. It became clear that our public systems for maintaining and growing trees were not effective. In order for our community to not miss chances for the investments that have already been made to benefit the public, and to avoid the potential outcome of future street reconstructions to not include green infrastructure, it was imperative to address this gap in maintenance and information. Greening Lab is the resulting program to learn quickly about what works and what doesn't work for growing trees in our climate and context.

### OUTCOME

As the saying goes, it takes twenty years to grow a twenty-year-old tree. With very few mature trees in our downtown, growing our tree canopy is a very long-term effort. We can benefit future generations through the investments we make now to grow, maintain, and protect downtown's trees.

Greening Lab has shown that near-term investments in downtown's trees are paying off and that we're making progress towards our long-term goal. By providing evidence that our street trees are growing, we have galvanized enthusiasm and further investment.

With three years of data, we have documented two straight years of average tree trunk growth exceeding 1" per year, which is a very positive outcome. Our data showed a high level of tree mortality in 2018, which led to operational changes in 2019 that markedly improved tree survival.

Given the long timescale, we have intentionally built new partnerships and funding relationships. We partnered with the city's forestry department to share data and communications tools. That partnership has grown and borne fruit – they assigned dedicated staff for downtown and planned to hold Arbor Day downtown for the first time this year. We partner with Green Minneapolis, our downtown conservancy, to tee up long-term opportunities for private fundraising. The project has received matching funds from our downtown residents association and our local watershed, and both groups have committed to continue funding the project this year. The project has been operating one year at a time, but enthusiasm for this work is growing every year.

### EXECUTION

The pilot projects that comprise Greening Lab have not been complex to execute. We use a vendor for the supplemental tree watering and use a tracking software to monitor the performance of that contract. The interpretive tree tags are professionally designed and printed on a durable material. The text-a-tree service is handled through a custom SMS tool. The supportive staffing has come from research assistants through a partnership with the University of Minnesota's College of Design. Other outcomes and supporting information are shared in the attached document.

There were two innovative variations on the Greening Lab program in 2019: we organized two community tree census events to broaden engagement, and we procured and installed prototype soil sensors to track factors influencing tree performance in real time.

## REPRESENTATION

This program has been very intentional in building relationships with a range of community partners, but – due to its focus on research and maintenance over the first three years – more inclusive social representation has not been a priority thus far. We anticipate more opportunities to grow how inclusive Greening Lab has been in 2020 and beyond. We sought and received a grant to expand community engagement with this work this year.

As mentioned above, we have recruited partners representing the public sector, residents, and the local watershed. Each has had an opportunity to shape the program through input and feedback.

In terms of the inclusivity, the interpretive tree tags are the most important step taken so far. Trees that were previously silent are now chatty. The tags have made information about downtown trees and the benefits they provide available to passers-by for the past three years. The tool those tags use is SMS-based, which was chosen to reduce barriers to access that information. We have a growing list of people who have texted a tree over the past three years and are using that contact list to grow the number of people involved in this work.

## REPLICATION

Two core programs would be useful and replicable in a broad range of downtown contexts.

First, interpretive tree tags are a low-cost tactic to raise awareness of new trees as a valuable resource in your public realm and to improve community stewardship. Most community engagement about trees has traditionally happened at planting events. There's been comparatively little attention paid to enlisting the community in looking out for trees after they're planted. Community education about risk factors for street trees (e.g. insufficient water, dog urination, ice melt) coupled with a communication tool that's tied to a specific tree is a powerful combination.

Second, organizing an annual tree census provides an invaluable baseline of information on an issue where progress is imperceptibly slow. Our research into common practices in other cities bears out that most city forestry departments do not have the resources (or even – perhaps – the inclination) to evaluate every tree every year. It is a much more common practice to react to problems as they arise. The opportunity here is to support the work of your public forestry partner with useful local data, which can inform decisions about species selection, siting, planting techniques, and maintenance in any downtown.

## COMPLEXITY/SIMPLICITY

This program represents a simple solution to a set of complex challenges. How can we get better outcomes for street trees after decades of poor results? How can we convince institutional partners who have been reluctant to innovate processes and practices for better outcomes? And can we get engaged in this issue without incurring massive new maintenance obligations?

The secret to responding to these challenges was patience and building relationships. Our team started convening a downtown tree task force in 2013. Over that time, that group grappled with the issue and was able to successfully advocate for major tree infrastructure investments in major street reconstructions. With the time invested in building those relationships, it was possible for our organization to credibly say that we were going to experiment in strategic ways in order to support the good work of our public partners, and to ask for their ongoing collaborative support in doing so.

It was also important to start quietly and simply rather than launching a large, public, expensive campaign. At its inception, we did not know if these tactics would be successful. In that context, it made sense to start small and to focus on research.