

canopii

Your friendly neighbourhood urban forest manager

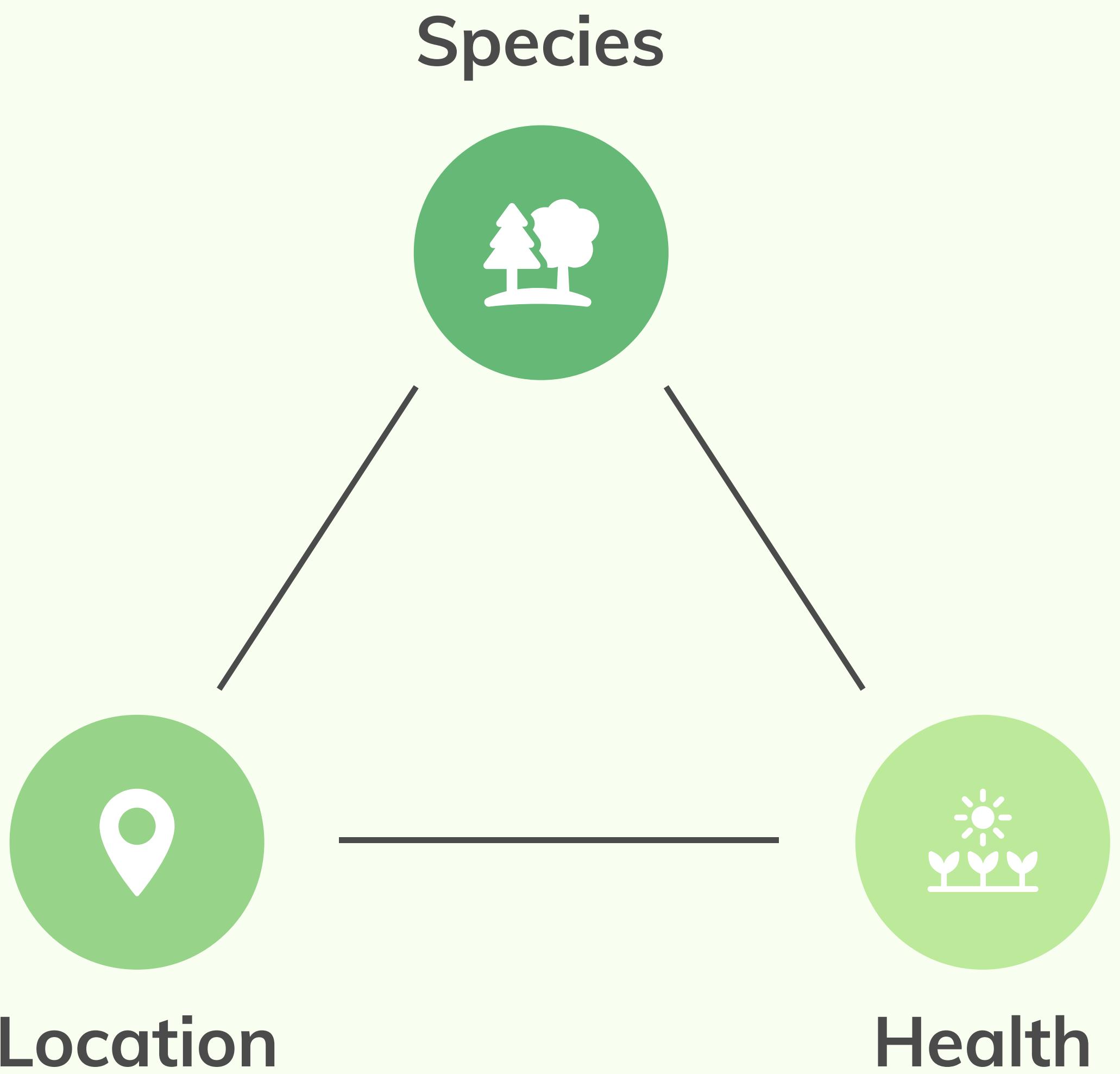
We wanted to fight climate change and
make a difference in the areas
closest to home



Urban forests are one of the forefront
defences we have against
global warming



Why is tree data important?



Data enables a
Proactive strategy
and reduces
Reactive problems

Why aren't cities getting the data they need?

1. Resource Shortage

Cities do not have the resources or manpower

2. Time-Intensive Process

The current process is extremely manual and requires trained volunteers

3. No Access to Private Lands

Private property composes the majority of the urban forest



Existing Solutions

Other Commercial Solutions

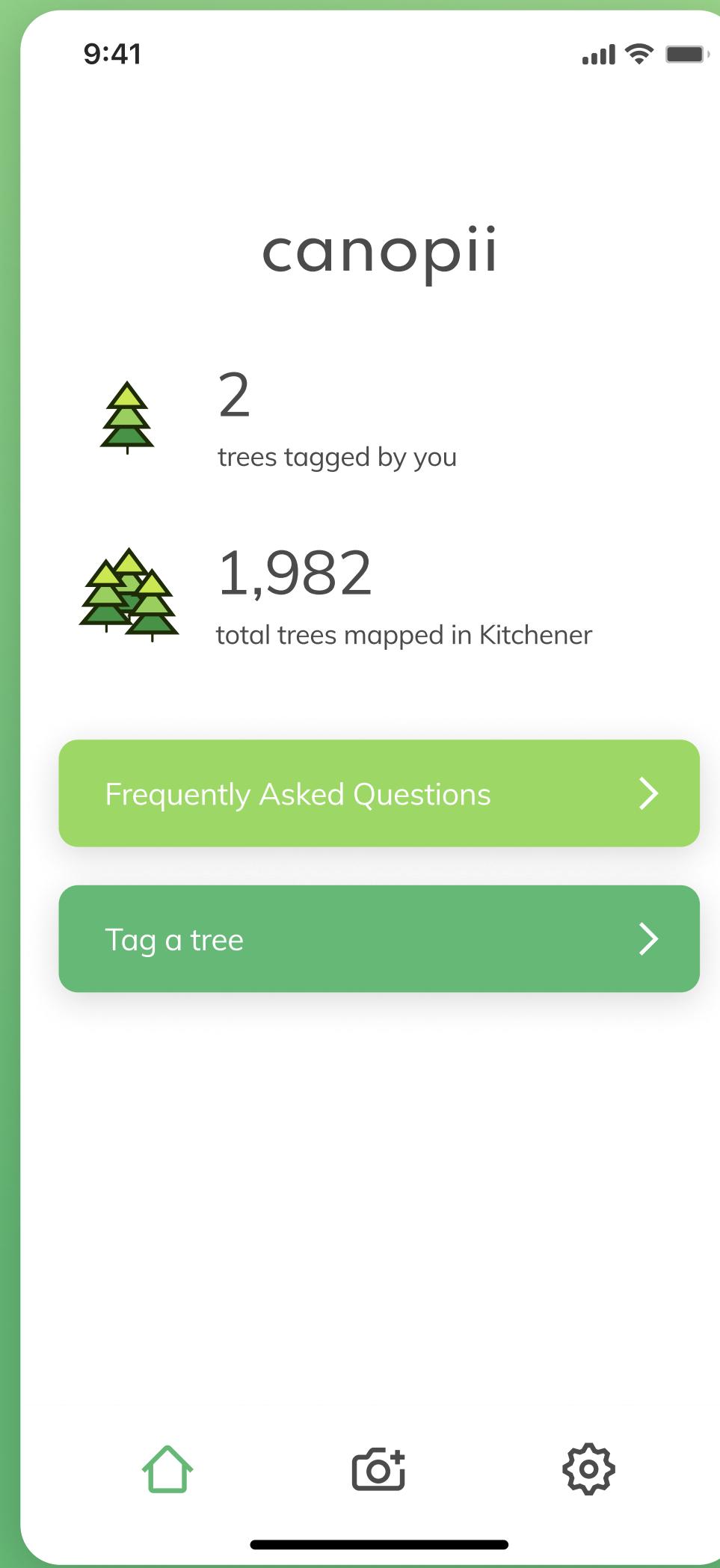
Data is private

Unreliable and inaccurate

Current Method

Requires trained volunteers

Expensive and time consuming



Mobile App
Automatically
tag trees

The dashboard features a map of a neighborhood in Kitchener with several green dots representing tagged trees. A callout box for a tree at 257 Samuel Street provides the following details:

- # 092753322
- Acer platanoides
- PRIVATE
- 257 Samuel Street

On the right side of the dashboard, there is a summary section titled "Forest Heights Neighbourhood Overview" with the following data:

| Value | Description |
|----------------------|-------------|
| 12.3 km ² | area |
| 162 trees tagged | count |
| 17 species | types |
| 4 genera | genus |

Below this is a donut chart showing the distribution of tree species:

- Acer (42%)
- Quercus (27%)
- Fraxinus (20%)
- Salix (11%)

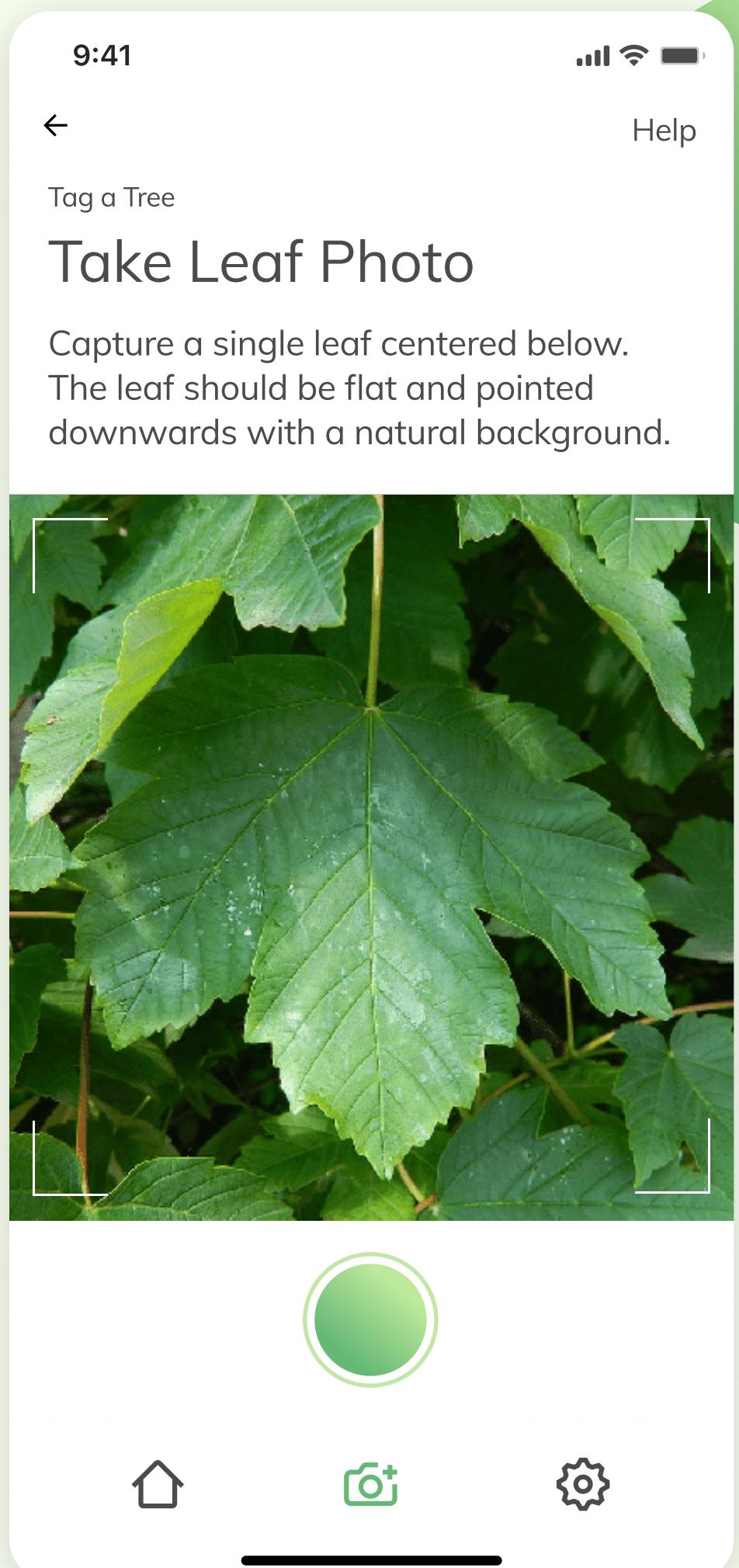
Further down, a series of metrics are listed:

| Metric | Value | Unit |
|------------------------|--------|---------|
| Stormwater intercepted | 206787 | gallons |
| Energy conserved | 116631 | kWh |
| Air pollutants removed | 214 | pounds |
| Carbon dioxide reduced | 122 | tons |

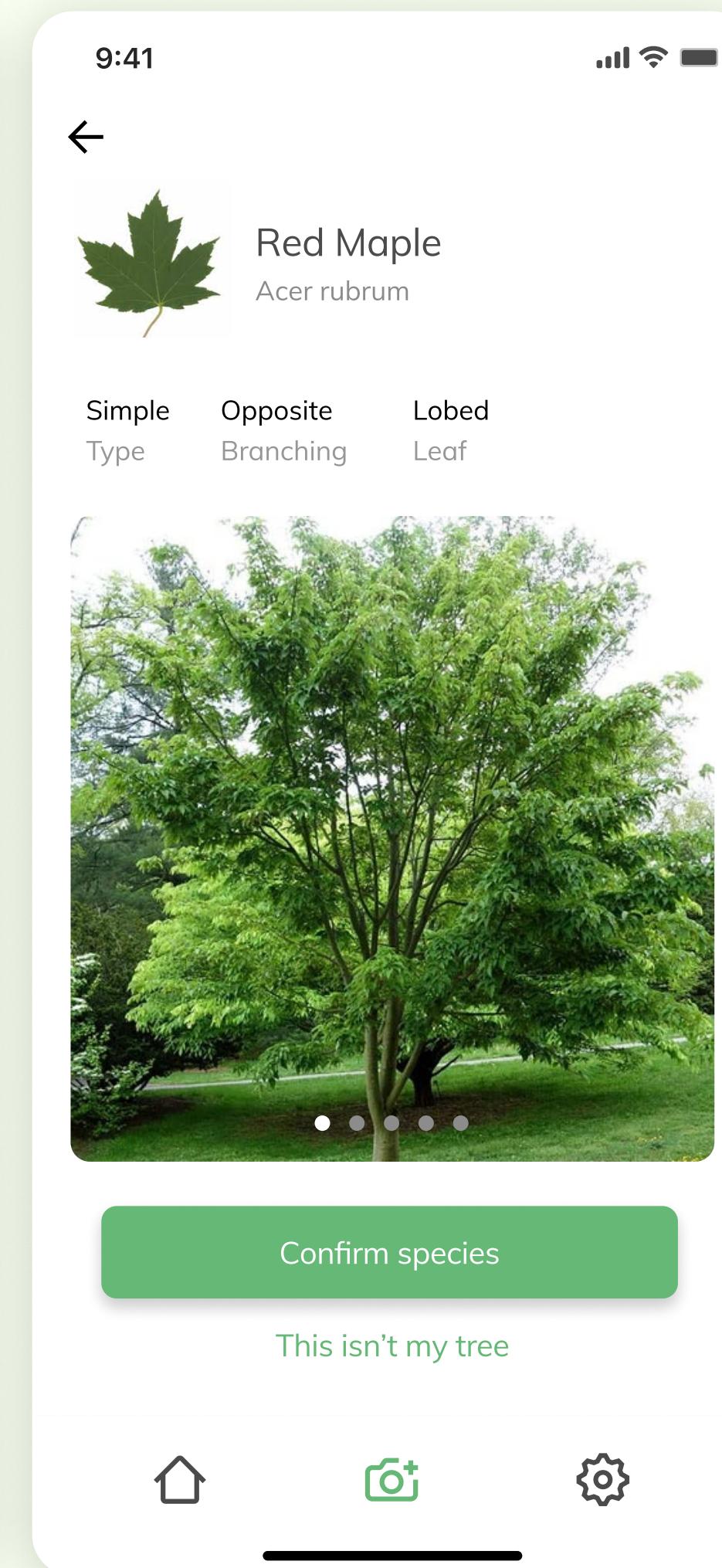
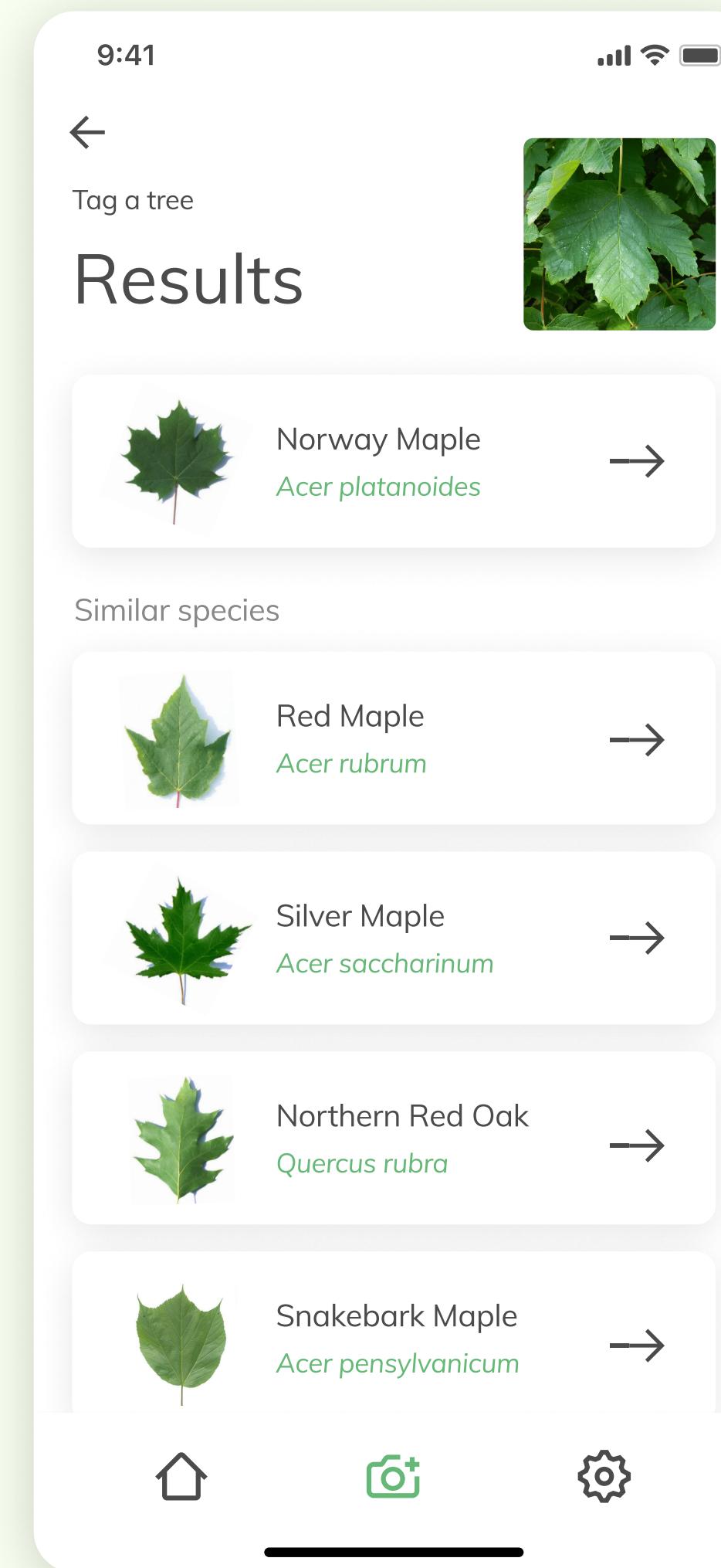
A notification at the bottom right states: "Risk of Emerald Ash Borer just now Ash tree tagged at 36 King Street".

Dashboard

Use tree data to provide meaningful insights for urban forest development



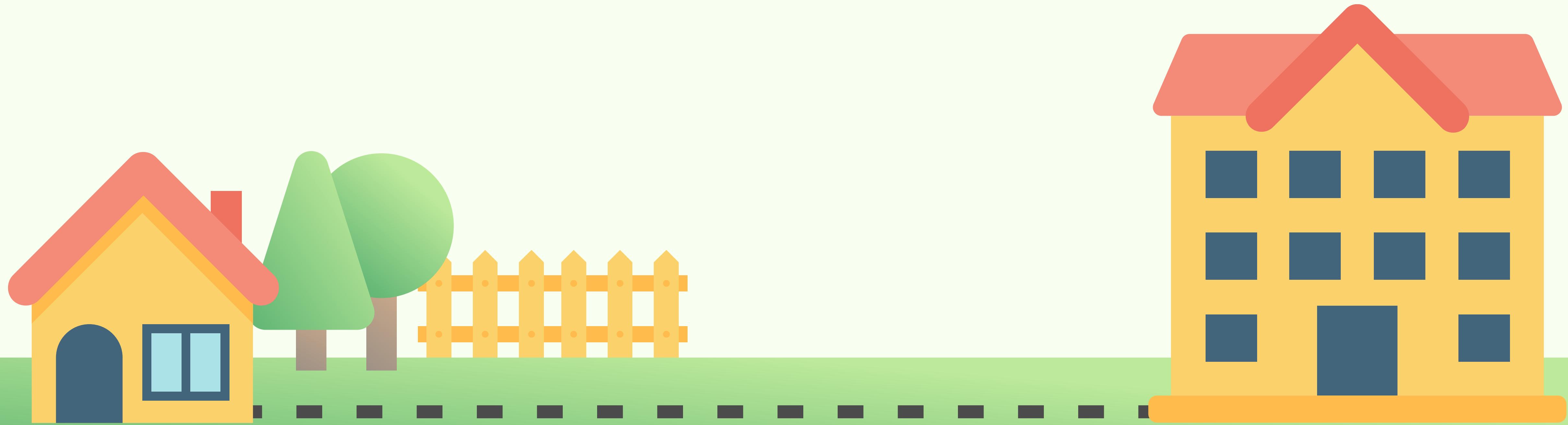
Extracts data using
image processing
with a
90.5% accuracy



→ 
canopii
Tree database

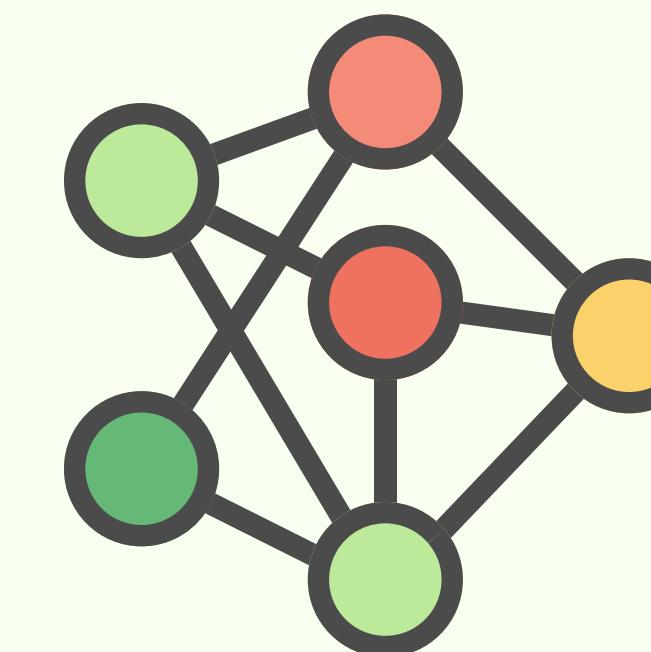
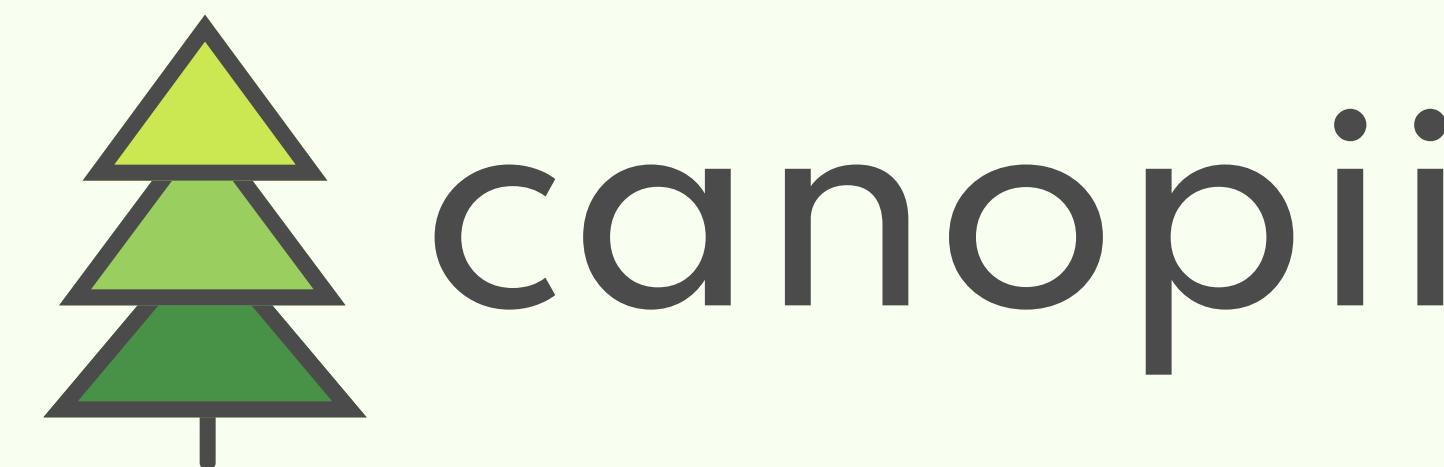
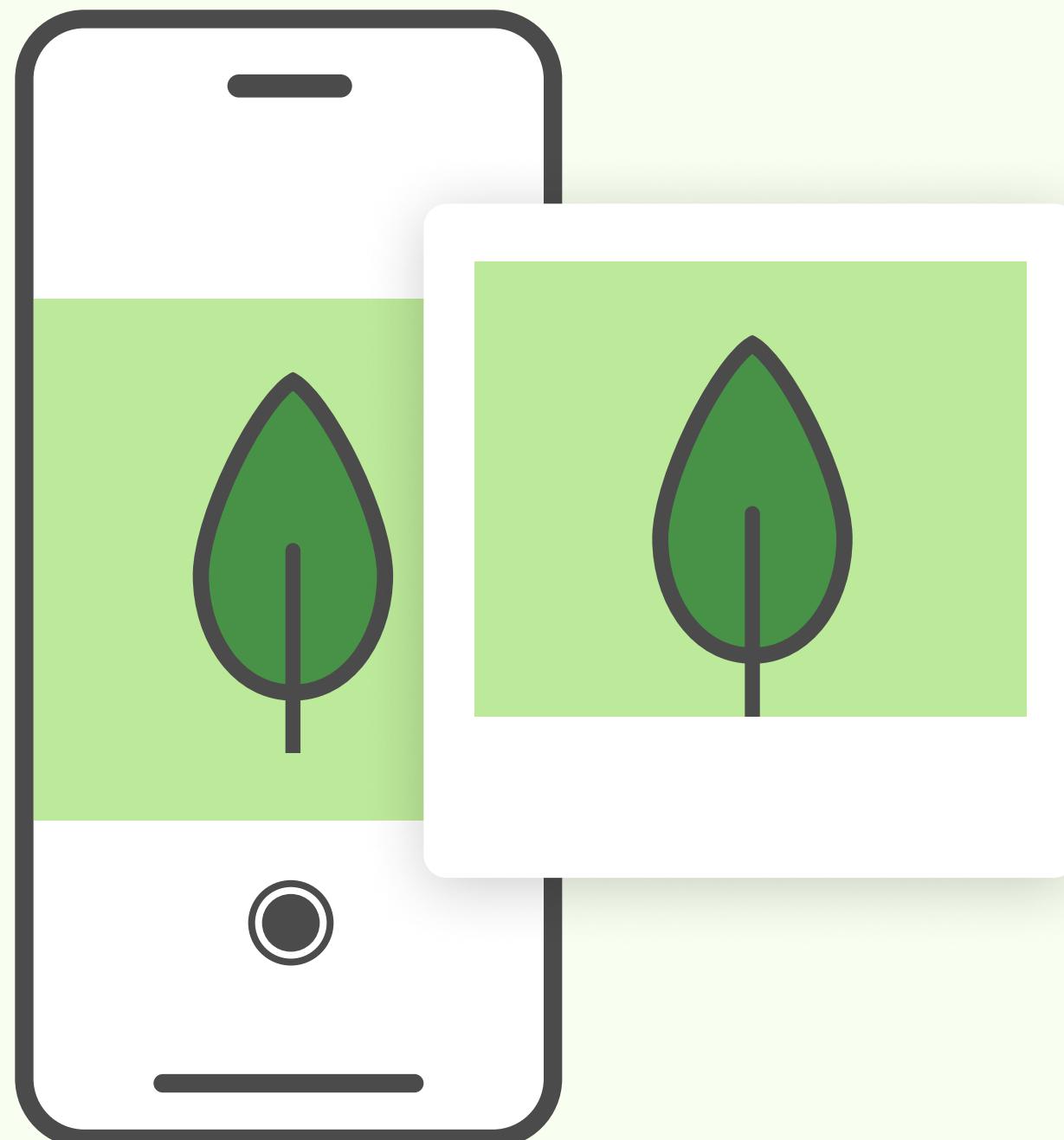
Why will residents use Canopii?

- Connects citizens with their city
- Avenue to request tree maintenance and plantings
- Encourages residents to give back and fight **climate change**



IP Strategy

Contributes photos to improve
our **closed-source** ML algorithm



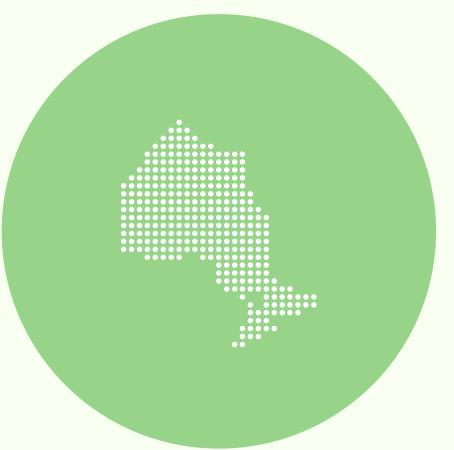
Users benefit from better accuracy

Business Model

Federal



Provincial



Municipal

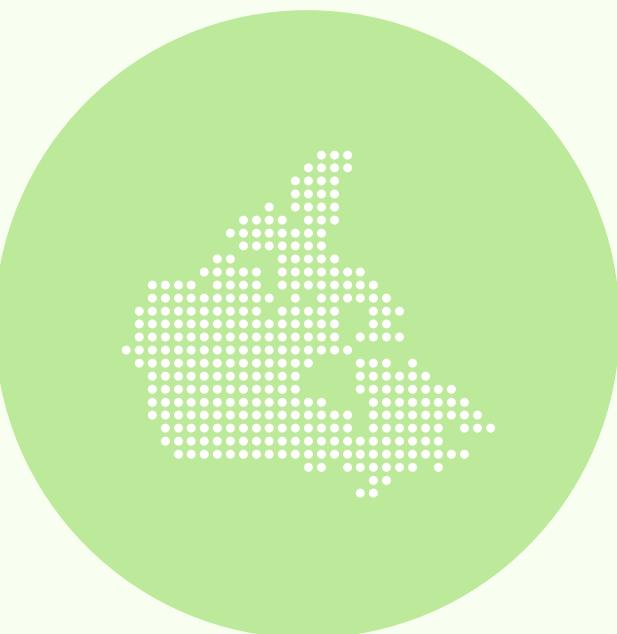


\$1000 / month

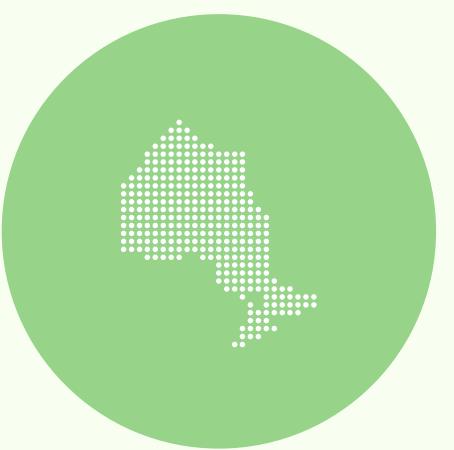
Kitchener

Business Model

Federal



Provincial



Municipal



\$1000 / month

Kitchener

Why will cities pay us to solve the problem?

The Emerald Ash Borer costs Kitchener \$2.4M in tree removals¹

Kitchener's New Urban Forestry Budget (2020)

\$200,000 Tree Pruning and Proactive Maintenance

\$100,000 Risk Mitigation and Inspection

\$50,000 Conserve and Protect



¹ <https://www.cbc.ca/news/canada/kitchener-waterloo/emerald-ash-borer-grca-1.4446952>

Timeline

Community launch

Wide-scale testing and contract negotiations

Q2 Spring



Q3 Summer

Kitchener rollout

Launch and integrate with Kitchener

Q4 Fall

Improve winter image recognition

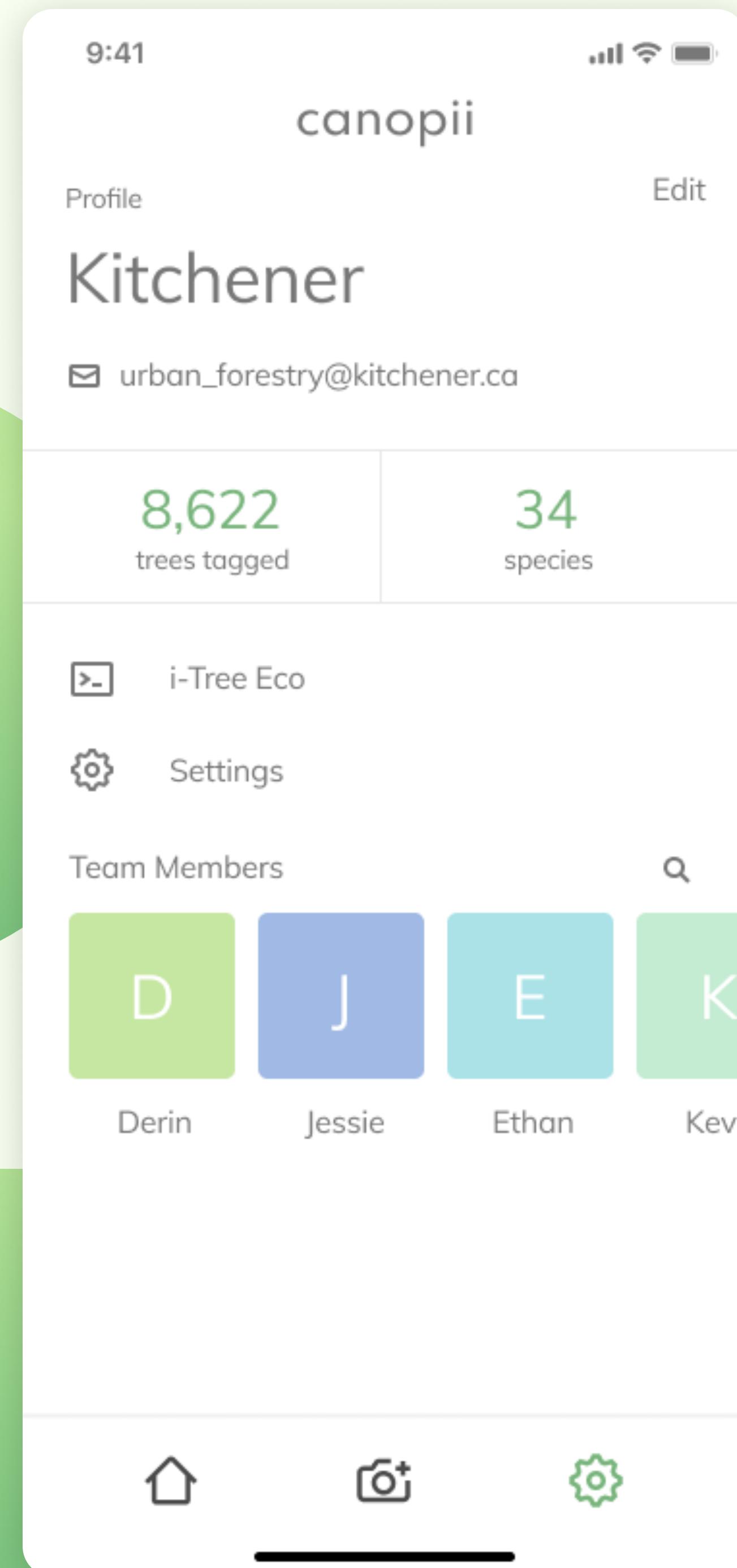


2021 & Beyond



Growth

Continuous improvement and new city integrations



Thank you!