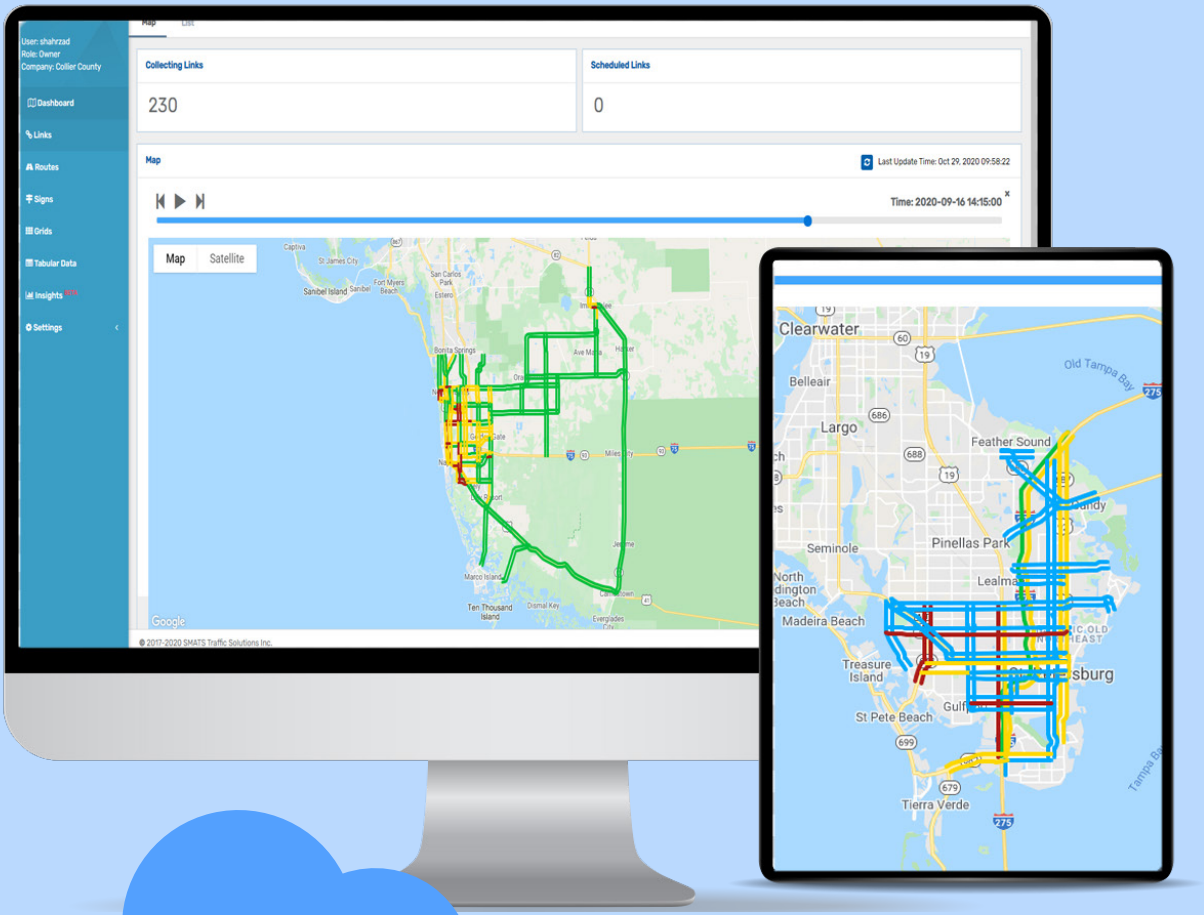
CROWDSOURCING DATA ANALYTICS

COLLECT, ANALYZE, & INTERPRET TRAFFIC DATA IN REAL TIME WITH NO SENSORS

Get Real Time Data with Enriched Analytics



What is iNode™?

iNode™ is a cloud-based traffic data analytics application for Traffic Management Offices. It provides all the Departments – including Traffic Operation, Engineering, Federal, State, and Planning – accurate and robust real-time traffic information for better management of traffic congestion.

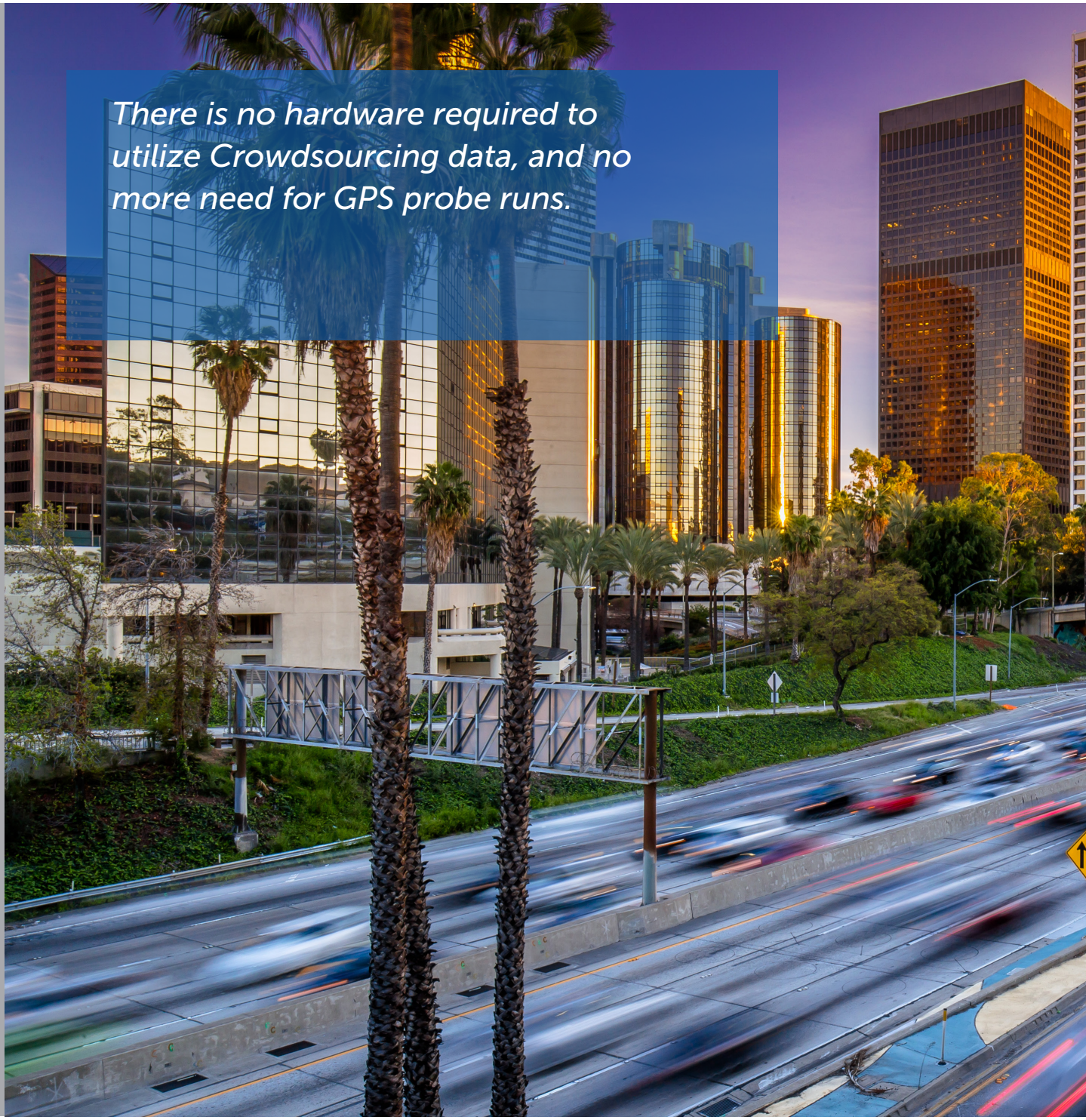
What is Crowdsourcing Traffic Data

Crowdsourcing traffic data, a.k.a. probe data or floating car data, is a new way of capturing traffic congestion data. This traffic data source is based on timestamped location and speed data received from moving vehicles. The location data can be sourced from onboard car GPS systems or mobile applications. Crowdsourcing travel time data brings an opportunity to have traffic data for more roads and locations, eliminating the installation of the physical sensors.

What is iNode™ + Crowdsourcing Traffic Data

SMATS iNode™ is a powerful data processing platform designed to provide on-demand accurate and robust traffic information from 3rd party Crowdsourcing traffic data. Through our API, the data travels to iNode™, where it is automatically captured and analyzed efficiently, saving agencies time and money.

Public agencies at the Federal, State, and local levels are increasing both their situational awareness and the quality and quantity of operations data using iNode™, which enables agency staff to cost-effectively apply proactive strategies and make better decisions that lead to safer and more reliable transportation system.


There is no hardware required to utilize Crowdsourcing data, and no more need for GPS probe runs.

Set-up

Creating monitoring segments: Users can create data collection segments (links) on the Google map using iNode's ™ interactive interface. The segments need origin and destination coordinates and there is no limit on the segment minimum or maximum length. Once the segment is created it can be scheduled for data collection for the selected dates, days, and hours and update frequency.

Real-Time, Low-Cost, Valuable Data

Because Crowdsourcing data is obtained whenever and wherever people travel, SMATS can capture in real-time what happens in the created segments, in rural regions, along arterials, and beyond jurisdictional boundaries. Crowdsourcing data can be accessed using iNode™ with minimal or no time lags, and it does not suffer from local sensor or system outages. Complementing Crowdsourcing data with tools for data integration enables TMC operators to more quickly focus on proactively managing emerging events, rather than reacting to them after congestion forms.

USE CASES

iNode™ can capture real-time travel time data and perform historical analysis using data back to the time the virtual link is activated.

Traffic Operations

CONGESTION MONITORING
Real-time data monitoring for popular routes such as AM and PM commutes routes. Capture factual data on the location that citizens complain about traffic congestion and long delays the most.

TRAFFIC ALERTS
Getting real-time email alerts when speed drops below a threshold historical pattern. This can be used for incident detection or unusual congestions.

WORK ZONE MONITORING
Monitor the impact of road and lane closure on the traffic and design and monitor detours efficiently.

Traffic Engineering

TRAFFIC SIGNALS RE-TIMING PROJECT
Users can use iNode™ Crowdsourcing data to manage traffic at signalized intersections, which are the major components of a traffic system. The solution consists of a signal re-timing method, which makes use of real-time travel time and delays data to optimize traffic signals and run before and after studies.

TRAFFIC SIMULATION MODEL CALIBRATION
The availability, accuracy, and relevance of real-world input data are essential for developing a reliable traffic simulation model. Large-scale traffic simulation models, in particular, require data from many sources and in great detail. iNode™ Crowdsourcing can collect and analyze travel time information on any road segment without the need to install sensors or run GPS probes.

USE CASES

Transportation Planing

NETWORK SCREENING

Traffic practitioners can use iNode™ to find find bottlenecks and problematic areas within their traffic network Determine points of congestion in your current infrastructure, analyze the data, and better understand how to combat it. Allow iNode™ to help you make educated suggestions as to how, when, where, and if to travel.

TRAFFIC STUDIES

Whether you are allocating new lanes or undertaking a Complete Streets project, iNode™ traffic data will help to make the right decision and evaluate the outcomes quantitatively.

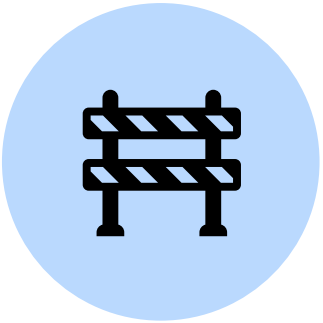
Benefits

IMPROVED OPERATIONS

Crowdsourcing with iNode™ enables agency staff to provide better traveler information and more proactive and effective operations strategies that can lead to reduced traffic congestion. The iNode™ dashboard is very user friendly, customizable and can support multiple user accounts.

INCREASED SAFETY AND RELIABILITY

Crowdsourcing allows agency staff to identify problems more quickly and confidently, The iNode™ "alerts" feature can lead to faster and more accurate responses to traffic incidents and other congestion-causing events, which in turn reduces the likelihood of secondary crashes and improves travel reliability.

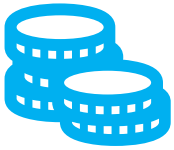


COST SAVINGS

Crowdsourcing is cost-effective and can reduce the need for additional roadway sensors and equipment that require installation and maintenance. iNode™ + crowdsourcing allows agencies to leverage and more effectively use their existing Intelligent Transportation Systems infrastructure such as signal systems and Advanced Traffic Management System (ATMS).

PRICING STRUCTURE

Purchase a bank of credits starting as low as $5,000. Various bundles packages are available based on your Traffic Management requirments.



Use as you go! Use your credits to collect data on your segments. Turn on and off data collection as required and schedule your data collection for the days and times that work for you.

Through our API, the data travels to iNode™, where it is automatically broken down and analyzed efficiently to give you the traffic data when and where you need it cost-effectively. 1 API call = 1 data point = 1 credit

iNode™ software licensing = no annual fee!

DATA ANALYTIC FEATURES

Route Heatmap

Before and After Comparison

Travel Time Reliability Indices

Traffic Trends

SERVICES

TRANING

To be effective in iNode™, you need to be trained in iNode™. Facilitate your Traffic Operations by empowering your team with the iNode™ cloud-based traffic data analytics application.With a minimal investment of time our SMATS team can have your operators trained in as little as one hour session. All that is required is a browser – on your PC, a laptop or tablet. In this Indepth walkthrough we will show you how to create links & routes, navigate Insights as well as everything else iNode™ has to offer.

SUPPORT

Prompt response to your support question via email or phone included in the subscription.

SMATS Traffic Solutions / 7 Bayview Station Rd, Ottawa, ON, Canada / T. 888 441 5666 E. info@smats.ca

www.smatstraffic.com