TRAFI Experience
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What is TRAFI

Public transport data

Collecting public transport data from variety of sources including transit authorities, private operators and our community contributors

TRAFI platform

Improving transit data based on real-time processing, machine learning algorithms, statistical analysis and crowd-sourcing technologies

B2C

Ingesting schedules through multiple means to ensure the latest data is made available

B2B

Ingesting schedules through multiple means to ensure the latest data is made available

TRAFI collects, organises and improves public transport information globally so people can navigate their cities easily

TRAFI B2B Platform

TRAFI Fleet

Cloud based fleet management software with GPS trackers

TRAFI DMP

Data management platform which organises transit information

TRAFI Backend

Core backend process data from number of sources , improves the quality and distributes it to B2C application and B2B partners

Enterprise API

Route search engine and arrival prediction APIs

GTFS Data Export

Improved and tuned transit data in GTFS and GTFS-R formats, updated every 24 hours

TRAFI Platform is a unique suite of B2B product including improved transit data, route search engine and arrival prediction APIs

TRAFI Algorithms

What is a "good route"?

Many different criterias:
- Total travel time
- Number of transfers
- Walking time
- Frequency of buses
- Prefer metro to buses
- Prefer minibuses to buses
- Prefer not to wait for bus in stop "A" at night time

Route search results

Route search engine based on real-time data and predictive analyses suggest the best options to reach your destination

TRAFI Algorithms

Dijkstra / A* (2007)

RAPTOR (2013)

CSA (2014)

Self-learning (2015)

Statistical (2016)

TRAFI Algorithms

- Real time – PTX data (gps coordinates)

- Real time bus movement on map - TRAFI

- Route number – PTX data

- Bus stops – PTX + TRAFI

- Route shapes – TRAFI (except Taipei – PTX)

- Schedules – TRAFI

- Estimated arrivals – TRAFI

TRAFI for Passengers

Real time vehicles on map

GPS raw data allows us to show vehicle locations on the map, improve official schedule, predict traffic jams
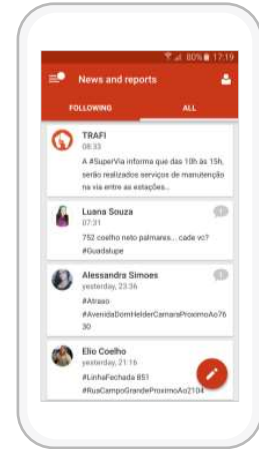
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Offline Mode

Offline mode allows people to use the most of TRAFI app with poor or no data connection

Crowdsourced news

Community can report various situations in the city and contribute to real-time alerts

* Official Rio public transport application for Olympics 2016, Apple app of the year in 2014, Official Istanbul metro company partner, etc.

TRAFI for Agencies

Real time dashboards and tools for transport agencies

Our unique analytical data approach provides the most accurate view on vehicle speed, route, accuracy, popularity of routes (at times of day/week) and even occupancy for the entire fleet.

We can provide live updating dashboards that give transport agencies real-time insight.

Here is a sample of the dashboards that we can provide.

Live transit speed dashboard

What?

- Live traffic map showing transit speeds
- Historic transit speeds on traffic map by day and hour
- Based on public transport only: distinguishes bus lanes and trams from other traffic

Why?

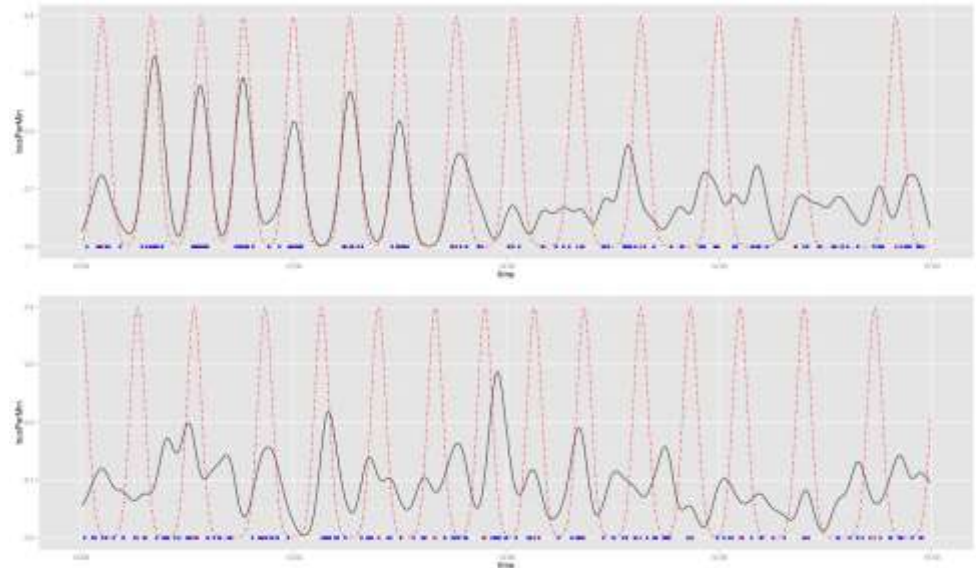- Highlights where traffic issues exist and delays can be expected

Schedule deviations dashboard

What?
- Delays map (live), showing differences versus the official schedules
- Coming soon: ability to show recent passenger messages on the map

Why?
- Highlights which buses are late
- Helps define or refine schedule modifications
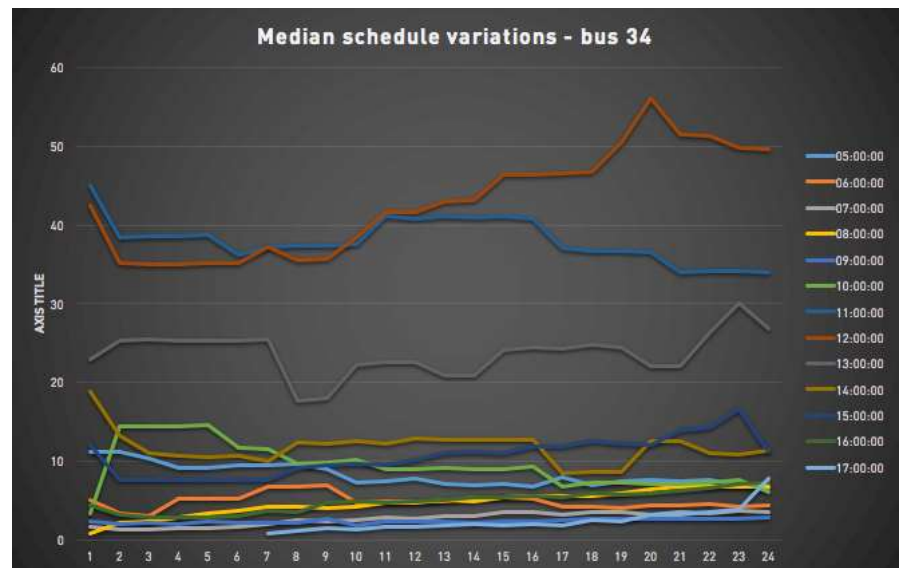- Alerts to temporary situations

TRAFI for Agencies

Real time vs. scheduled analysis

What?
- Analyse schedules deviations for certain times of day, comparing between bus lines or between bus stops.

Why?
- Shows which schedule deviations are common
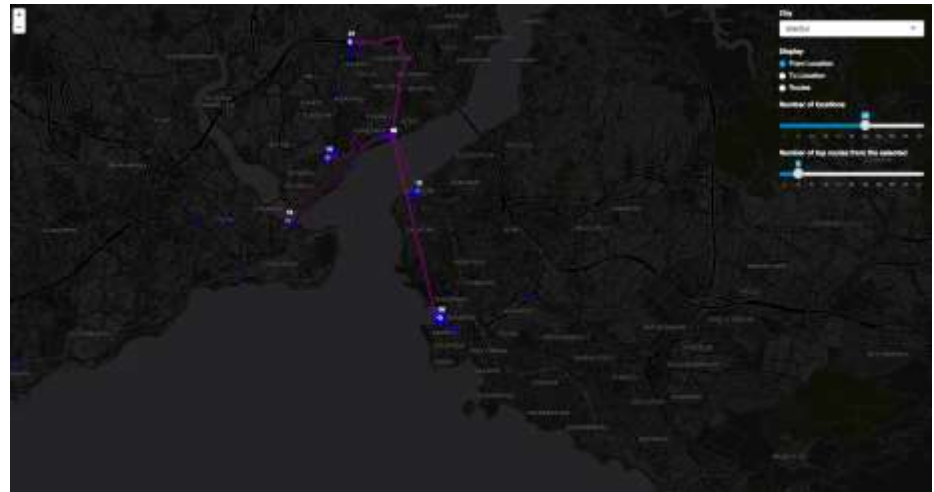- Clear input for schedule optimisations

Median schedule variations - bus 34

User/ behaviour analysis

What?
- Most popular searched routes on a map
- Most popular search starting points and destinations
- Most popular routes to/from specific stops
- Routes with most "agony" (waiting time and stops)

Why?
- Predict changes in occupancy
- Alert to unusual route search behaviour
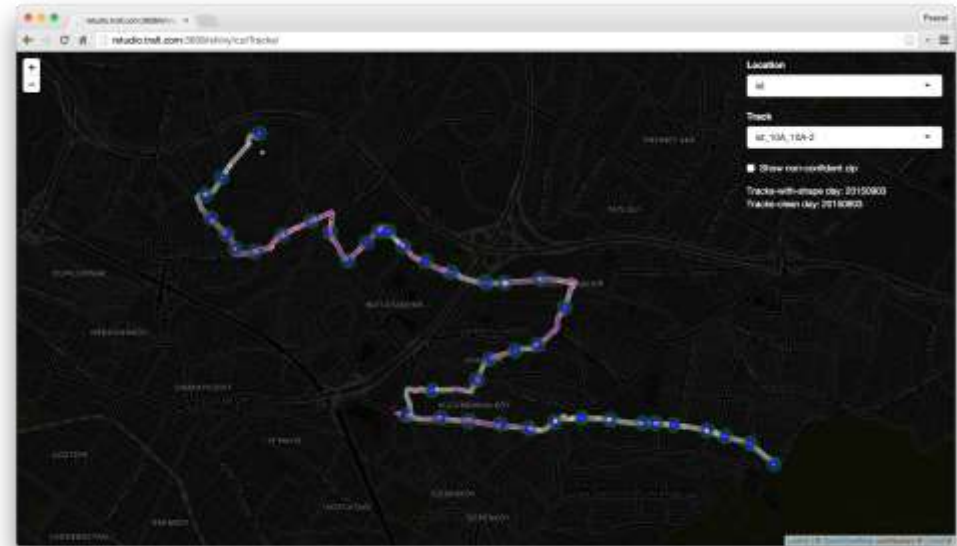- Understand user demand per route

TRAFI for Agencies

Track map generation

What?
- Automatic generation of track maps based on real time data, in custom colour schemes.
- Automatic detection of temporary or permanent route changes e.g. due to building works.

Why?
- Fast and accurate refresh of manually created track maps to actual situation
- Possibility to re-generate maps for online publication to notify passengers of such changes.
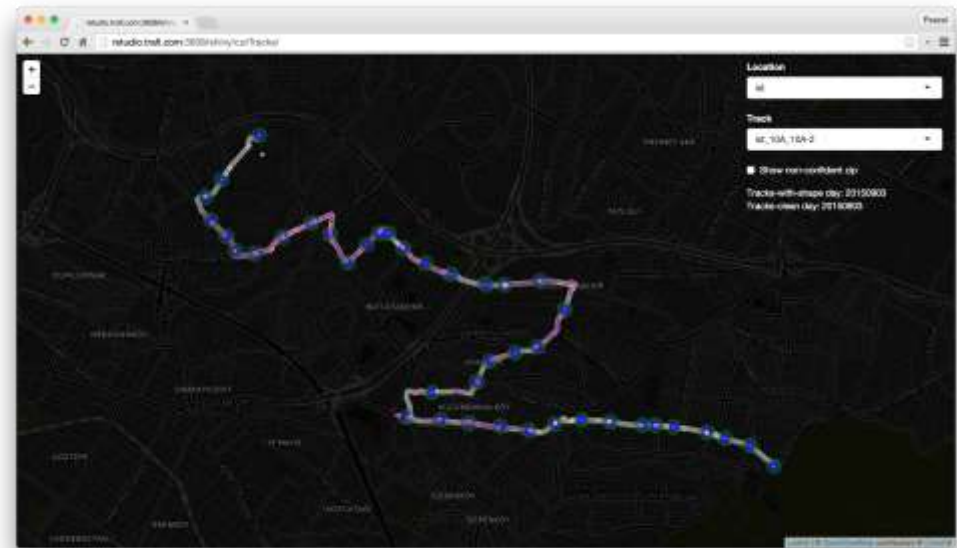
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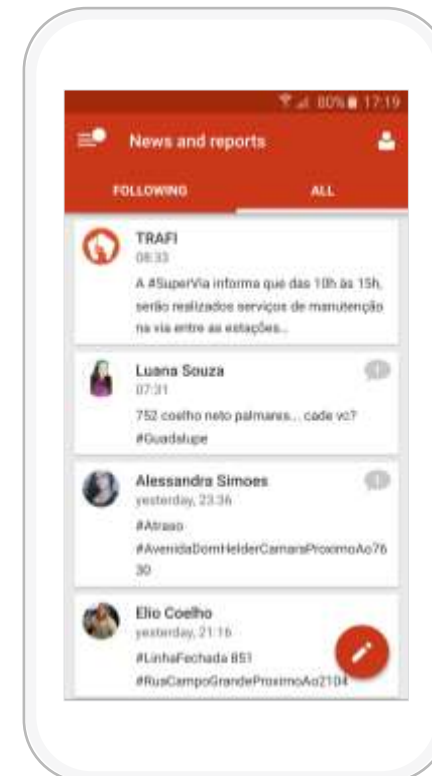
TRAFI for Agencies

News feed

What?
- Publish official messages into the TRAFI news feed
- Access the TRAFI news feed on the public transport website
- Coming soon: message users that search for or at specific stops
- Show recent user messages on traffic map

Why?
- Reach out to users with messages only on specific bus routes or bus stops
- Allow for early detection of problems on the route network

TRAFI API' s

What?
- API's to share arrival time prediction based on real-time and history
- API's to perform route search and display of results

Why?
- Show arrival time prediction on bus stop displays or inside buses
- List best routes to common locations on information panels at museums and airports
- Power info-touch screens at stations (offline possible)
- Power web site or mobile route-search widgets

Thank you

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