IPENZ

Transportation Conference 2014
Technical Subgroup - SNUG

Signals New Zealand User Group
ITS and New Technology

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Chairman SNUG 2014
AT Traffic Systems Manager

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• ITS and New Technology

- IPENZ Transportation Conference March 2014
  Signals NZ User Group

I will highlight how the Signals New Zealand User Group, who have traditionally focussed on Traffic signals, are embracing new technology to manage traffic, transport data flow and communications and that this is by definition moving into ITS.

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IPENZ Transportation Sub-group SNUG

(http://www.ipenz.org.nz/ipenztg/Subgroups/SNUG/)

The object of the **Signals NZ User Group (SNUG)** is the advancement of the fundamental knowledge of the art, science and practice of design, operation and maintenance of traffic signals.

ITS New Zealand (http://www.itsnz.org/)

Intelligent Transportation Systems (Inc) commonly known as ITS NZ, provides leadership in the promotion leadership in the promotion, development and facilitation of ITS in New Zealand to achieve a sustainable, effective, efficient, safe and environmentally friendly transportation system.

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ITS
Intelligent Transport Systems

A broad range of communications-based information, control, and electronic technologies integrated into the transportation system infrastructure, and in vehicles, to help monitor and manage traffic flow, reduce congestion, provide alternate routes to travellers, enhance productivity, and save lives, time, and money

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Tools for managing traffic

- Traditional
  - Traffic signals controlling traffic
  - Automated systems optimising the traffic signals
  - Operators in traffic operating centres
  - Management by exception – traffic congestion monitor
- Advances
  - Faster communications
  - Better analytics

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Improvements in traffic control technology

- All traffic signals on adaptive traffic control (SCATS)
- Upgrade traffic signals communications
  - High speed communications, fibre optics, ADSL, VDSL, Wifi
- Increase traffic/transport CCTV coverage
- Buses communicating with traffic signals (RAPID)
- Cyclist and pedestrian detection
- Use traffic signal loops data to get volume data translated into traffic density, estimated travel time and estimated LOS – congestion information

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Tools for managing transportation systems

- Modern information sharing
  - Congestion information
    - Relating traffic signal data to congestion
    - VMS on road
    - Real Time Travel Information Signs
    - Public Transport Information Devices
    - Web sites and mobile apps
  - Mode choice information
- Network operating strategy and network operating plans
- Incident management & Information sharing

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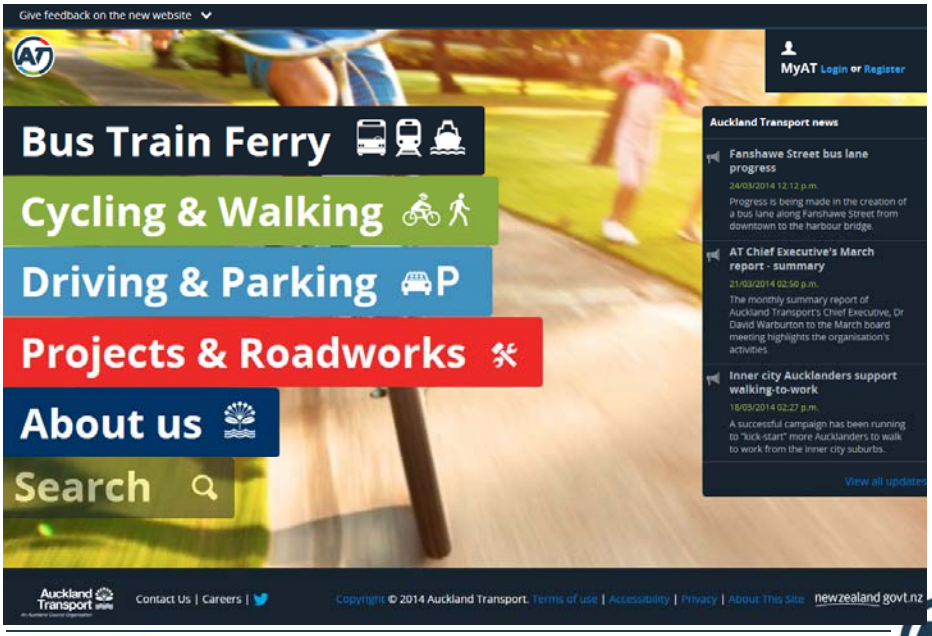

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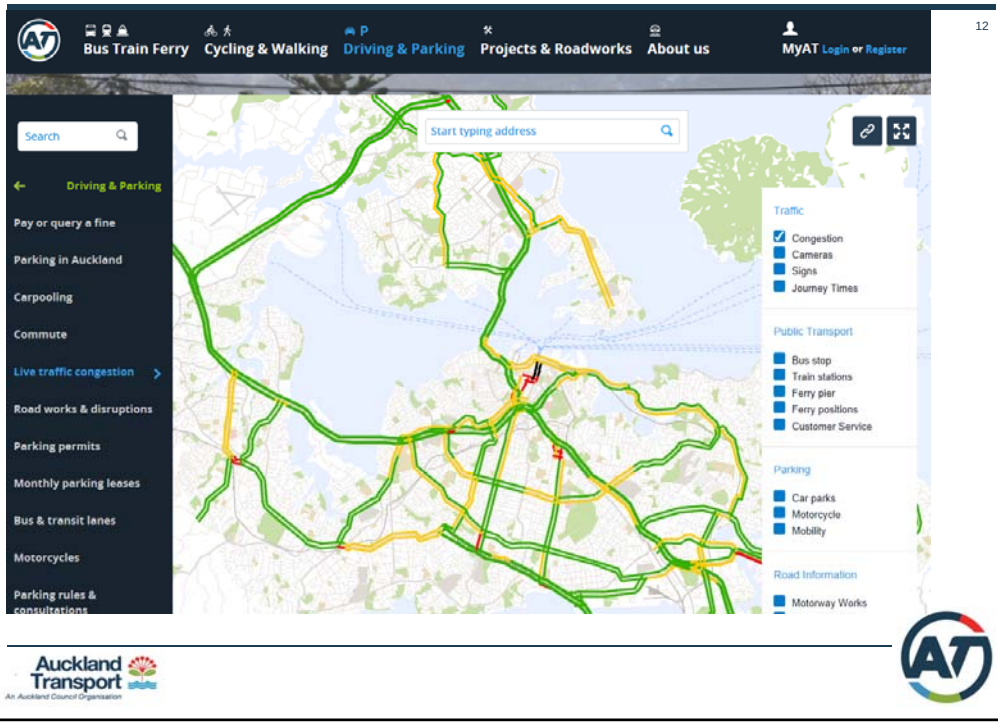
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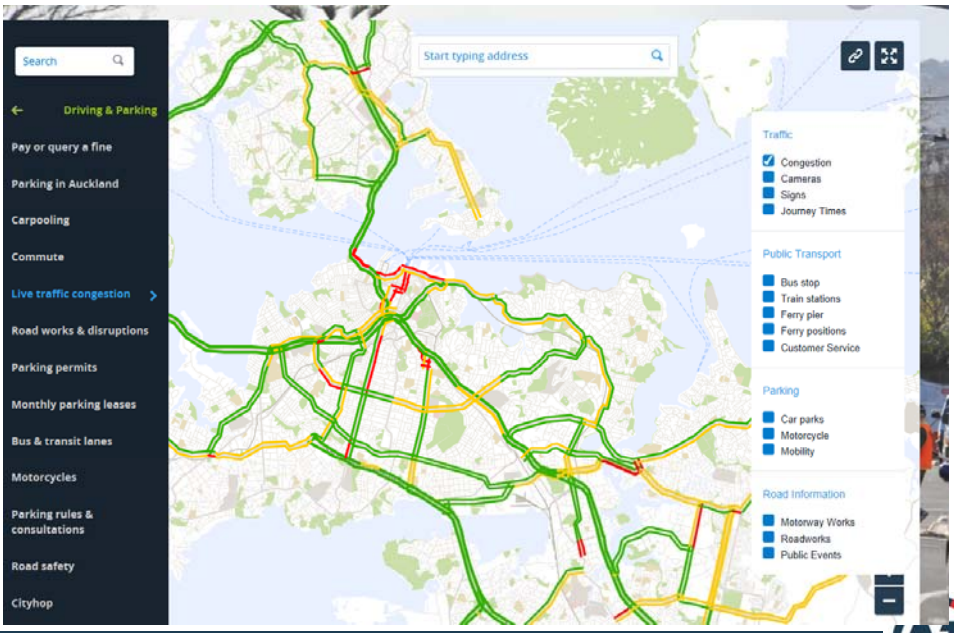

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Future tools for managing transportation

- I2V - Infrastructure to vehicle
- V2V - Vehicle to Vehicle
- I2I - Infrastructure to Infrastructure
- Smart vehicles
- ITS
  - Systems – communications, end devices
  - Traffic and transport network management
  - Vehicle, people and infrastructure communications

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Increased productivity of critical infrastructure

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Summary

- **SNUG** Traditional Focus on Traffic Signals
- **ITS** focus on transportation system
- **SNUG – ITS** information, control, and electronic technologies integrated into the transportation system infrastructure and in vehicles
- Real time **Network performance** and
- Information Management – **website** - **apps**
- Future Identifying **ITS opportunities** for integration of infrastructure and operations

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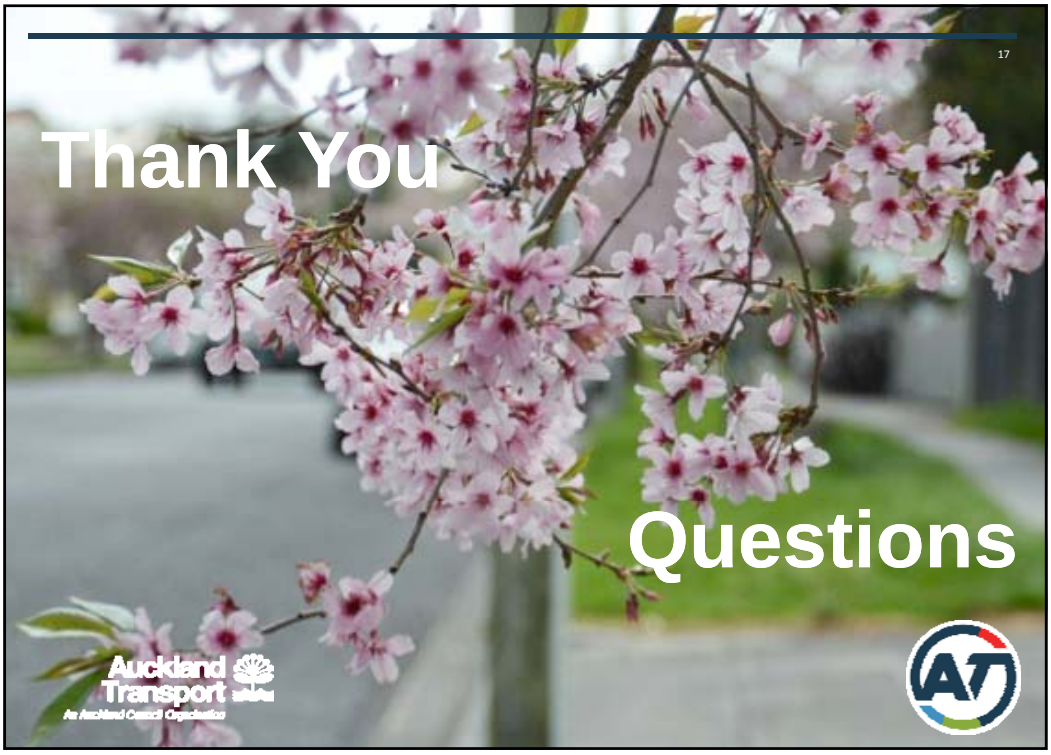
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Thank You
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