

Interesting Issues

- Background to the project

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- Management Structure

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- Geographic coverage

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- Data collection

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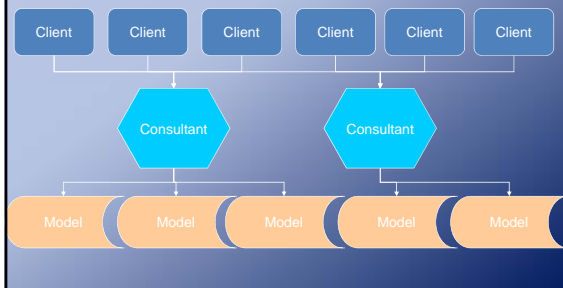
Interesting Issues

- Background to the project
- Management Structure
- Geographic coverage
- Data collection
- Model structure
- Peer review process

Background

- First Hamilton model built in 1967
- Updated in 1977-80
- Period models developed in the 80's
- Regular updates – but still using 1967 data
- Other models built for Cambridge, Te Awamutu
- Also a region wide assignment model

Modelling prior to 2010



Scoping Study

- Scoping Study undertaken in 2006
- Recommended
 - a new model be built following a data collection exercise.
 - a management structure that would ensure long term benefits for the model owners
- Gabites and TDG engaged in October 2007 to build and operate the model

Objectives for the WRTM

1. A single transport model for the Waikato Region
 - As opposed to**
 - Two modelling platforms
 - Five different models

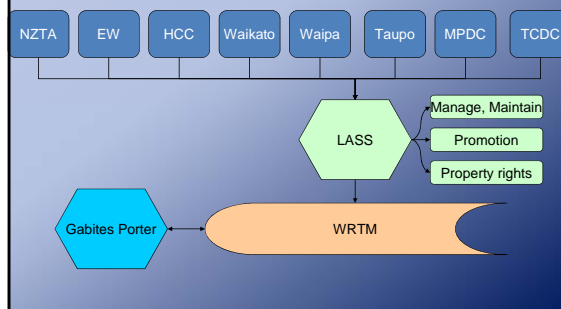
Objectives for the WRTM

1. A single transport model for the Waikato Region
2. Quality data and modelling:
 - Currently**
 - Existing models used old or borrowed data
 - Asking more (too much) of existing models

Objectives for the WRTM

1. A single transport model for the Waikato Region
2. Quality data and modelling:
3. Minimise project and administration overhead:
 - Range of project managers and administrators

WRTM Project Structure

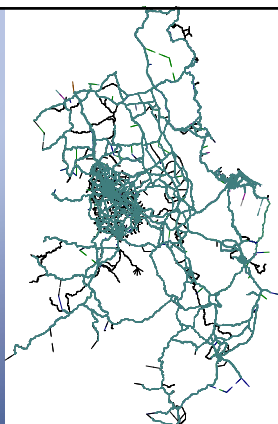


Project Timetable

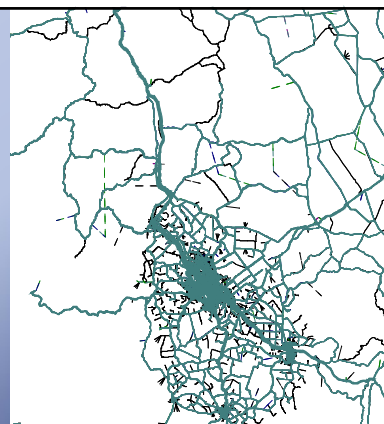
- Project = Model Build + Operation
- Contract signed 19th October 2007
- Initial Completion date April 2009
- Delayed by Home Interview Survey
- Clean HIS data available March 2009
- Model build completed Jan 2010

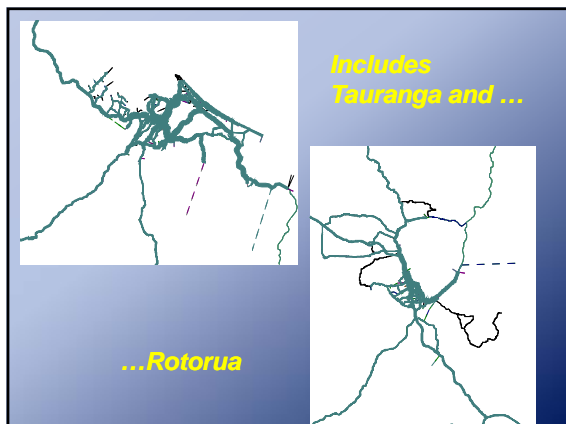
Geographic Coverage

Covers the whole of the Waikato region



More detailed around Hamilton





Data Collected

- Household Interview Surveys

Data Collected

Household Interview Surveys

- Survey March 2008 to January 2009
- Face-to-face interviews conducted
- 2,000 Households (1,000 in Hamilton)
- Saturday Survey for additional 500 HHs
- Trip rates:
 - Unexpanded = 9.4 daily person trips/HH
 - Expanded = 11.2 daily person trips/HH

Data Collected

- Household Interview Surveys
- Roadside Interview Surveys

Data Collected

Roadside Interview Surveys


- Survey December 2007 to March 2008
- 18 locations in total
- Auckland & Tauranga data borrowed
- All vehs, 1 direction, 12 hours
- 6 Hamilton Sites ANPR

Data Collected

- Household Interview Surveys
- Roadside Interview Surveys
- Bus Passenger Interview Surveys

Data Collected

- **Bus Passenger Interview Surveys**
 - Survey July 2008 to November 2008
 - Survey 50% peak & 33% off-peak services
 - On-board interview survey
 - Interviewed 4,700 passengers
 - 30% sample (16k pax/day)
 - Expand to EW patronage data



Data Collected

- Household Interview Surveys
- Roadside Interview Surveys
- Bus Passenger Interview Surveys
- Census Data (JTW & Crosstabs)

Data Collected

- Household Interview Surveys
- Roadside Interview Surveys
- Bus Passenger Interview Surveys
- Census Data (JTW & Crosstabs)
- Traffic Counts

Data Collected

- Household Interview Surveys
- Roadside Interview Surveys
- Bus Passenger Interview Surveys
- Census Data (JTW & Crosstabs)
- Traffic Counts
- Journey Time Surveys

Capabilities of the Models

Two models

- Vehicle driver

Capabilities of the Models

Vehicle Driver

- Includes light and heavy vehicles separately
- Three periods
 - Morning Peak – 0700 to 0900
 - Inter peak – 1100 to 1300
 - Evening peak – 1600 to 1800

Capabilities of the Models

Vehicle Driver

Suitable for

- Road network analysis
- Network operation
- Landuse planning
- Inputs to economic analysis

Capabilities of the Models

Two models

- Vehicle driver
- Person

Capabilities of the Models

Person model

Outputs are trips by mode

- Car Driver
- Car Passenger
- Bus Passenger
- Walk and Cycle

Capabilities of the Models

Person model

- Two Periods
 - Morning Peak – 0700 to 0900
 - Inter Peak – 1100 to 1300

Capabilities of the Models

Person model

Suitable for

- Travel demand management analysis
- Bus Passenger service design
- Land use Planning

Model Form

Standard three and four step models

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Standard three and four step models
Trip generation – 10x4 category model

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Gravity Distribution - -ve exponential functions

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Road Assignment – full Intersection modelling

Model Form

Standard three and four step models
Trip generation – 10x4 category model
Gravity Distribution - -ve exponential functions
Logit mode split model
Road Assignment – full Intersection modelling
Public Transport time sliced assignment

Some Basic Statistics

900 Zones

Some Basic Statistics

900 Zones
8400 Nodes

Some Basic Statistics

900 Zones
8400 Nodes
20,000 Links

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900 Zones
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13 Trip Purposes

Some Basic Statistics

900 Zones
8400 Nodes
20,000 Links
13 Trip Purposes
Three step takes 6 minutes per period

Some Basic Statistics

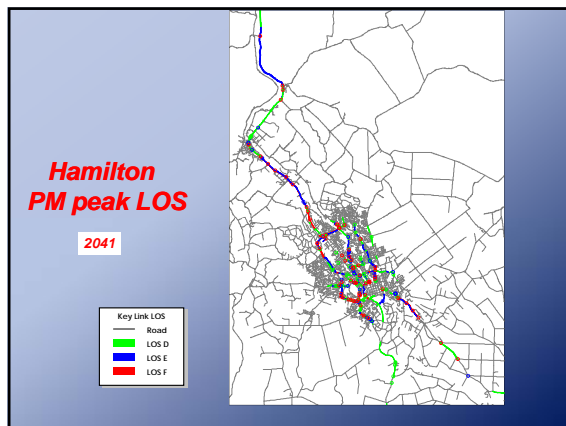
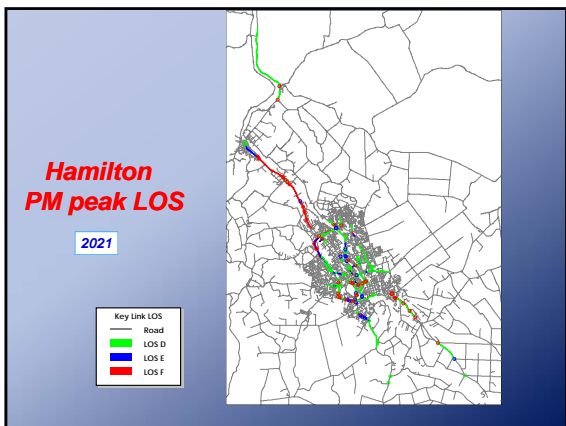
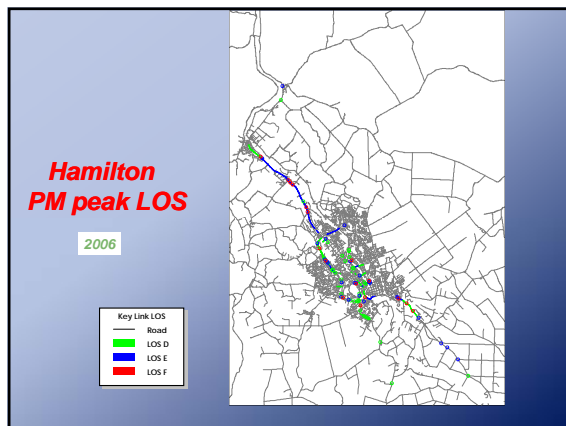
900 Zones
8400 Nodes
20,000 Links
13 Trip Purposes
Three step takes 6 minutes per period
Four step takes a little longer

Some Basic Statistics

900 Zones
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Three step takes 6 minutes per period
Four step takes a little longer
TRACKS software platform

A look at the future

Deficiency analysis at
2006
2021
2041



Peer Review

Reviewer (Ian Clark)

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Involved from inception

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- the RFT for model build
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- technical note review

Peer Review

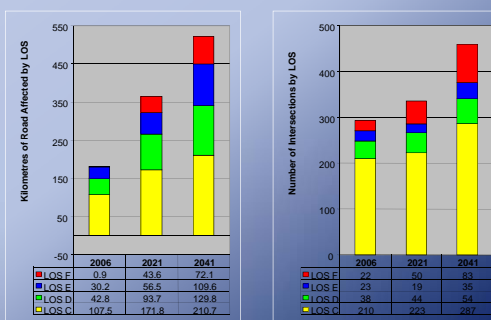
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Final sign off

Questions?

Change in Level of Service



Basic Travel Statistics

