

# Auckland Regional Transport Model - Update

IPENZ Transportation Conference – October 2007

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**SINCLAIR KNIGHT MERZ**



# Introduction

- > Purpose – Model Update and Data
- > Auckland Regional Modelling History
- > New Model Functionality
- > Current Project Progress
- > Data Collection
- > Data Results

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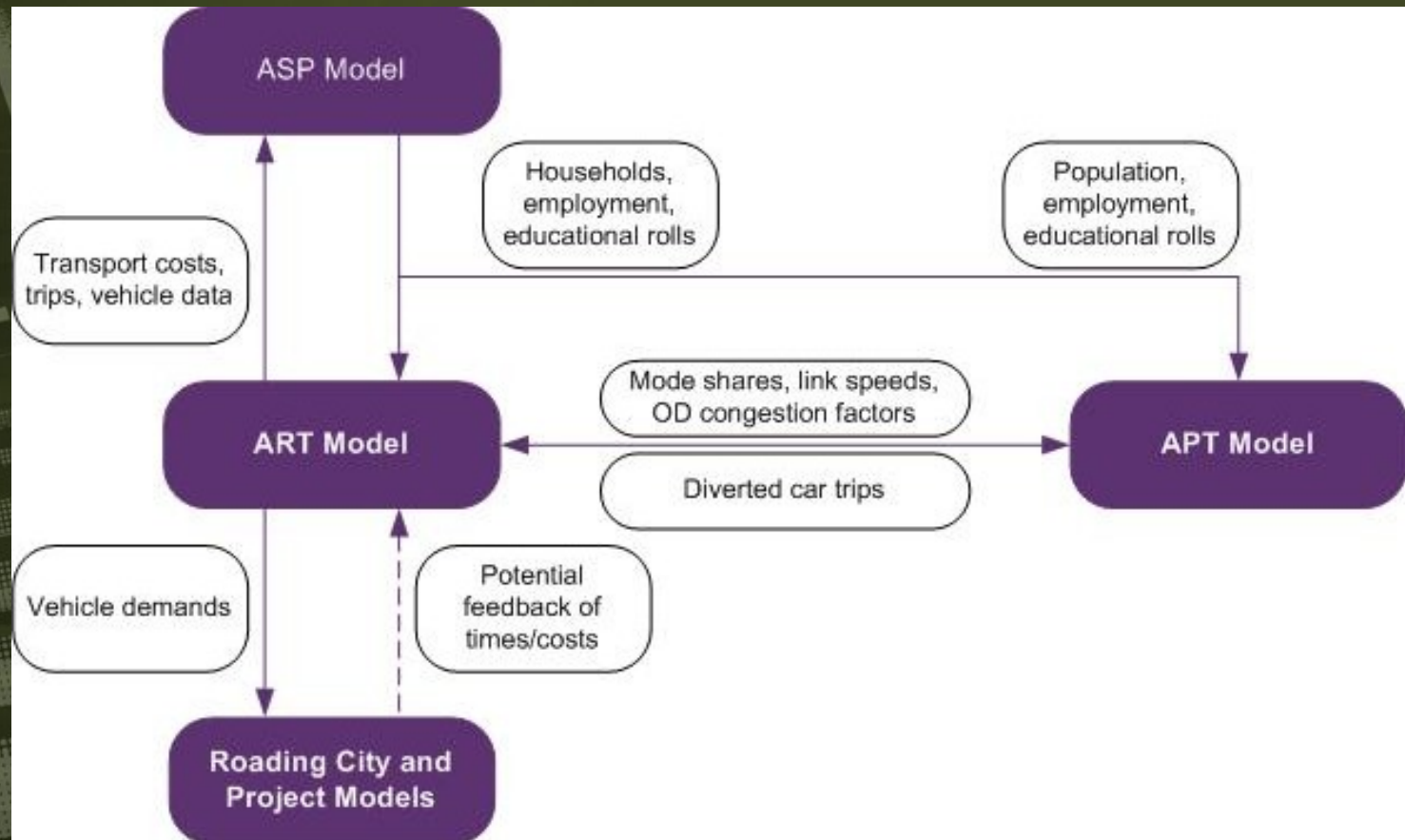
# Auckland Regional Model History

- > Originally Development in 1992
  - Based on 1991 HIS
- > Partially updated in 2001 to take account of 2001 census data
- > 2005 Tendered Update
- > SKM in association with Beca, David Young and David Simmonds Consultancy won tender

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# New Model Functionality

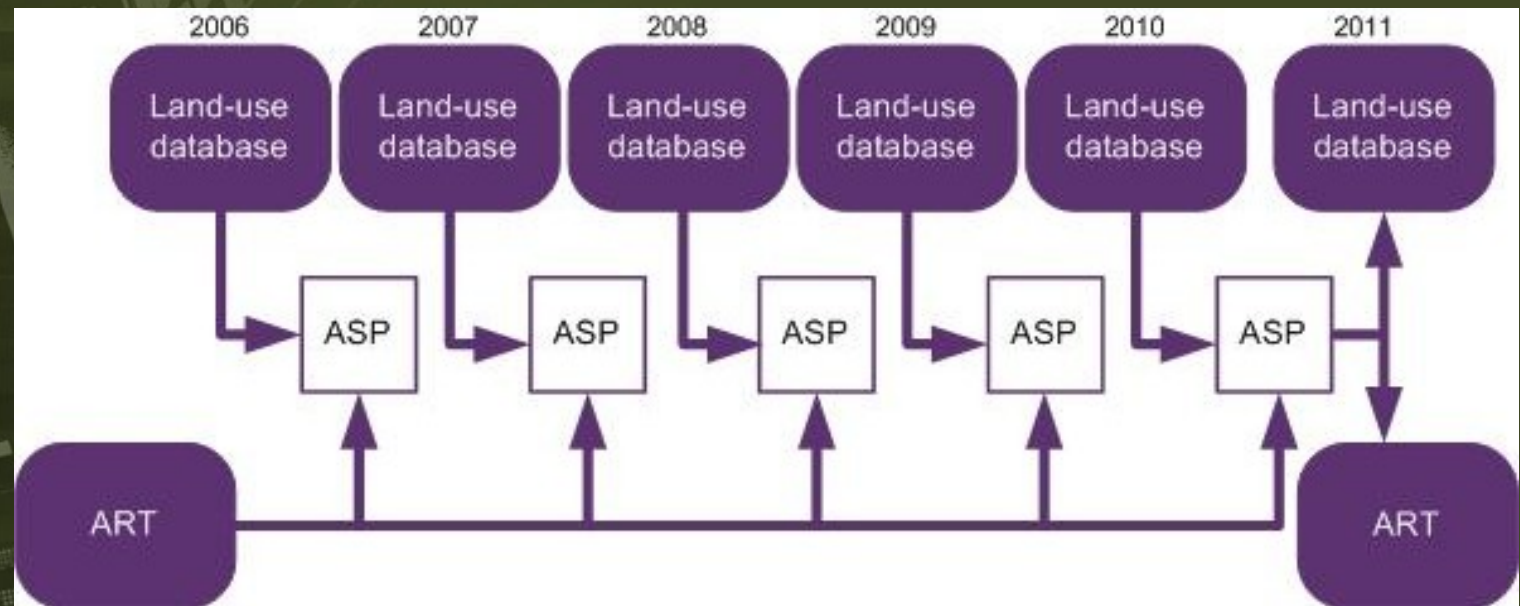
- > Current model is four stage model
- > New model provides further refinement:
  - Land Use model



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# New Model Functionality

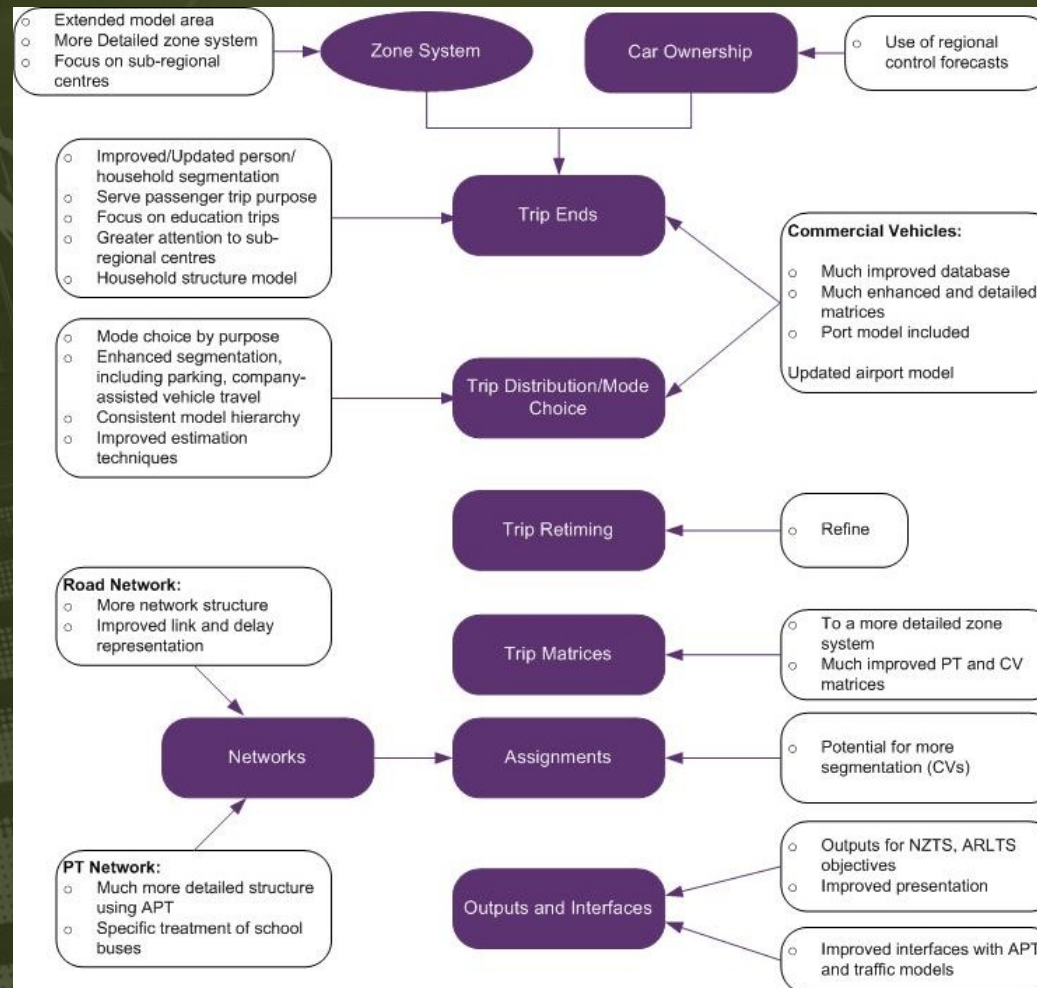
## > Land Use Model



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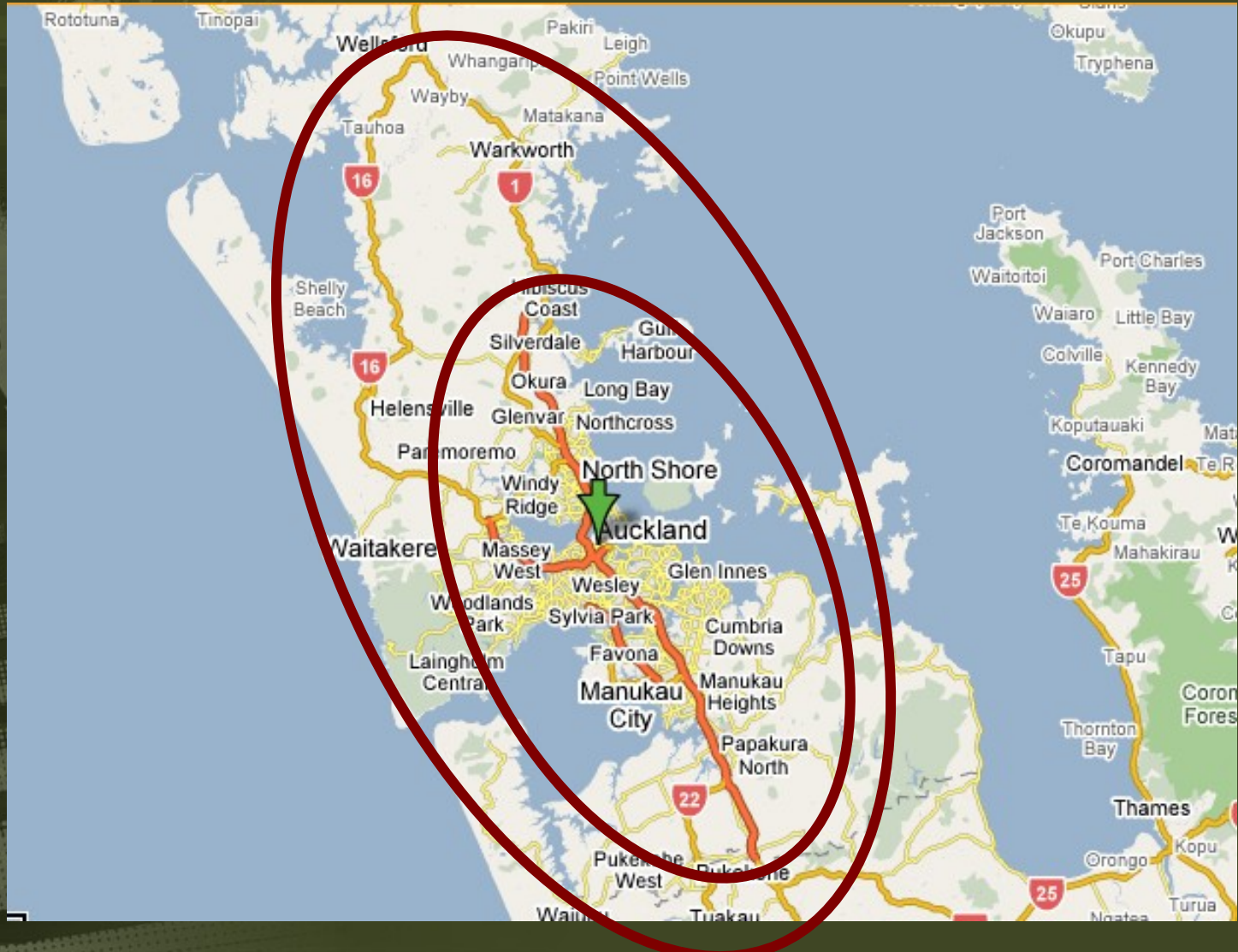
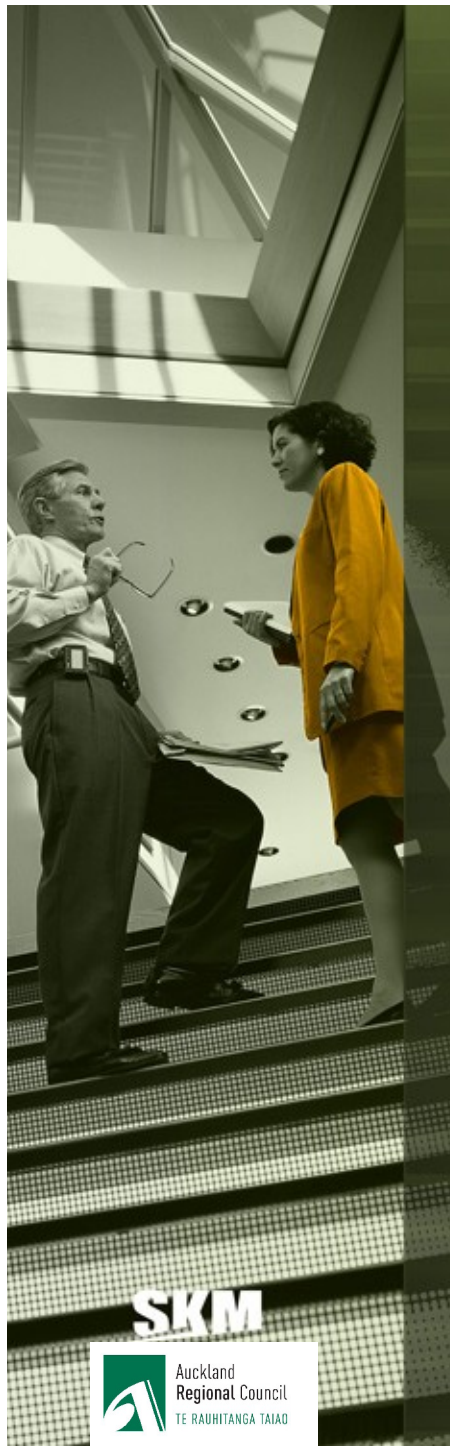
# New Model Functionality

## > Transport Model Enhancements:



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# Model Area



# Current Project Progress

- > Model Specification ✓
- > Land Use Model 2001 Base ✓
- > Data Collection ✓
- > Data Processing ✓
- > Transport Model estimation 75%
- > Land Use model validation 70%
- > Transport Model validation 50%
- > Model Implementation Nov - Dec
- > Future Testing Jan - Feb
- > Model Delivery March

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# Data Collection

- > Substantial data collection undertaken \$2.5M
  - 6000 Household travel Survey
  - Public Transport intercept Survey
    - » Bus
    - » Rail
    - » Ferry
  - External Cordon Survey
  - Traffic Counts
  - Travel Time Surveys
  - Parking Rates
  - Heavy Commercial Vehicle interview
  - STATS Census data
  - Cycling Survey

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# Data Results

- > HTS
  - Demographic Data

Type	Person Type	% of Person in HTS
1	infant, age<5	5%
2	child, age 5-10	9%
3	dependent <sup>1</sup> child, age 11-17	11%
4	working adult child <sup>2</sup> or adult, age<26	6%
5	working adult child or adult, age 26+	45%
6	other adult child or adult, age <26	6%
7	adult child or adult, not retired, not working age 26+	9%
8	adult, retired <sup>3</sup>	10%

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# Data Results

- > HTS
  - Demographic Data

Type	ART3	% of AHTS Households
1	1 adult, not working/retired	7%
2	1 adult, working	9%
3	2 adults, not working/retired	9%
4	2 adults, 1 working	16%
5	2 adults, both working	33%
6	3+ adults, 0/1 working	5%
7	3+ adults, 2 working	10%
8	3+ adults, 3+ working	10%

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# Data Results

- > HTS Results
  - Low PT Mode Share

Purpose	PT Share
Home – Work	7%
Home – Ed	15%
Home - Shop	2%
Home – Social	1%
Home - Other	2%
Home - Business	2%
Non Home – Business	1%
Non Home - Other	2%

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# Data Results

- > PTIS Results
  - PT Accessibility

Public Transport Mode	Access/Egress Mode Shares			
	Car	PT	Active	Total
<b>Bus</b>				
Access	8%	7%	85%	100%
Egress	2%	8%	90%	100%
<b>Ferry</b>				
Access	52%	19%	30%	100%
Egress	19%	16%	66%	100%
<b>Train</b>				
Access	44%	8%	48%	100%
Egress	7%	8%	85%	100%

Note: car includes park & ride and kiss & ride

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# Data Results

## > HTS Results

- Car Ownership Levels High

Cars per Household	HTS
0	6%
1	36%
2	40%
3+	17%
Total	100%

- Increased from 2001

0.55 – 0.58 cars per person

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# Data Results

## > HTS Results

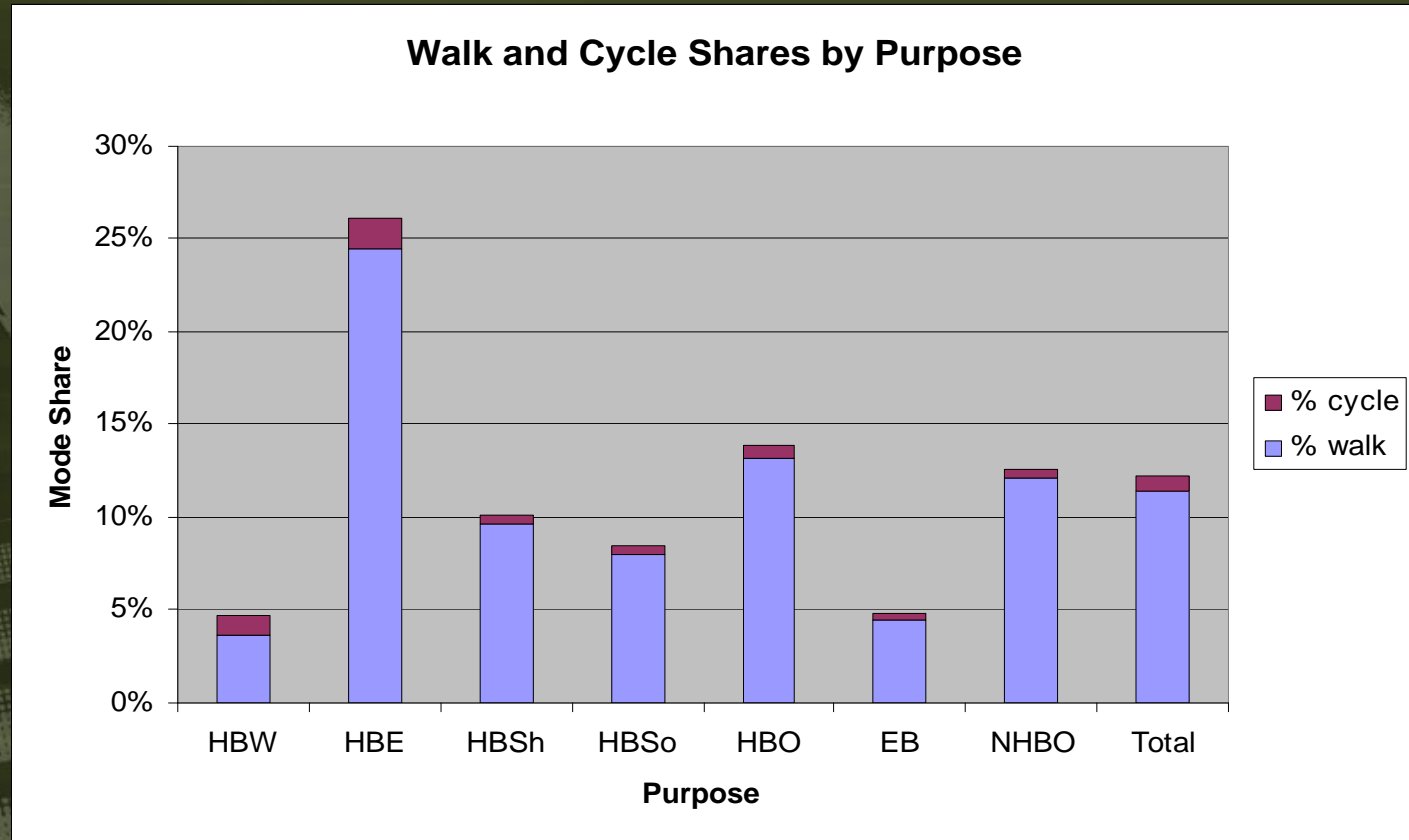
- Walk / Cycle Mode Shares
- Low Cycle
- CBD walk is 22%

TA	Walk	Cycle
Rodney	8%	1%
North Shore	11%	1%
Auckland	14%	1%
Waitakere	9%	1%
Manukau	9%	0%
Papakura	12%	0%
Franklin	10%	1%
<b>Total</b>	<b>11%</b>	<b>1%</b>

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# Data Results

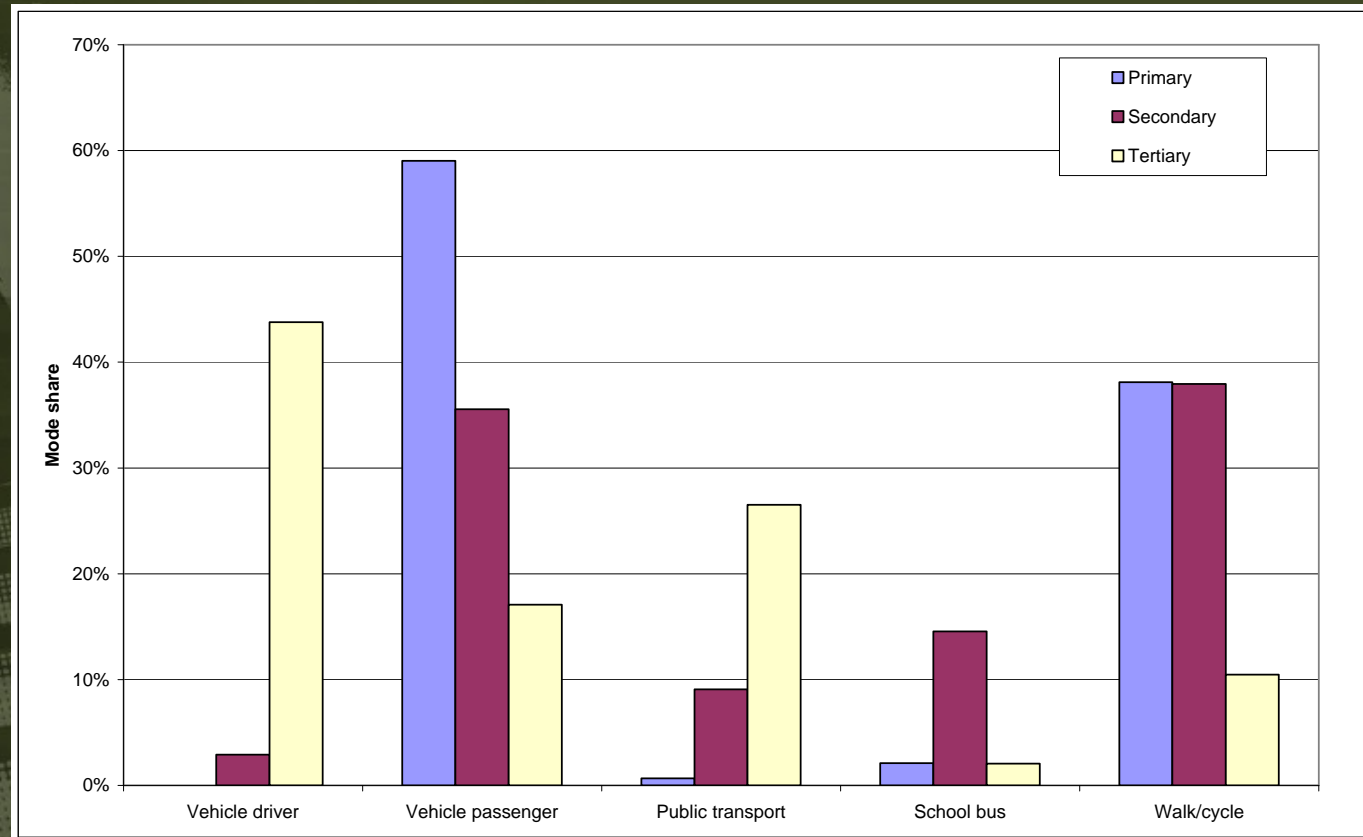
- > HTS Results
  - Walk / Cycle Mode Shares by purpose



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# Data Results

- > HTS School Traffic
  - Mode of travel by school type



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# Summary

- > ATM2 project in final stages
- > Significantly enhanced and updated model
- > Significant amount of data available for Auckland area
- > Questions ????????????????

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