

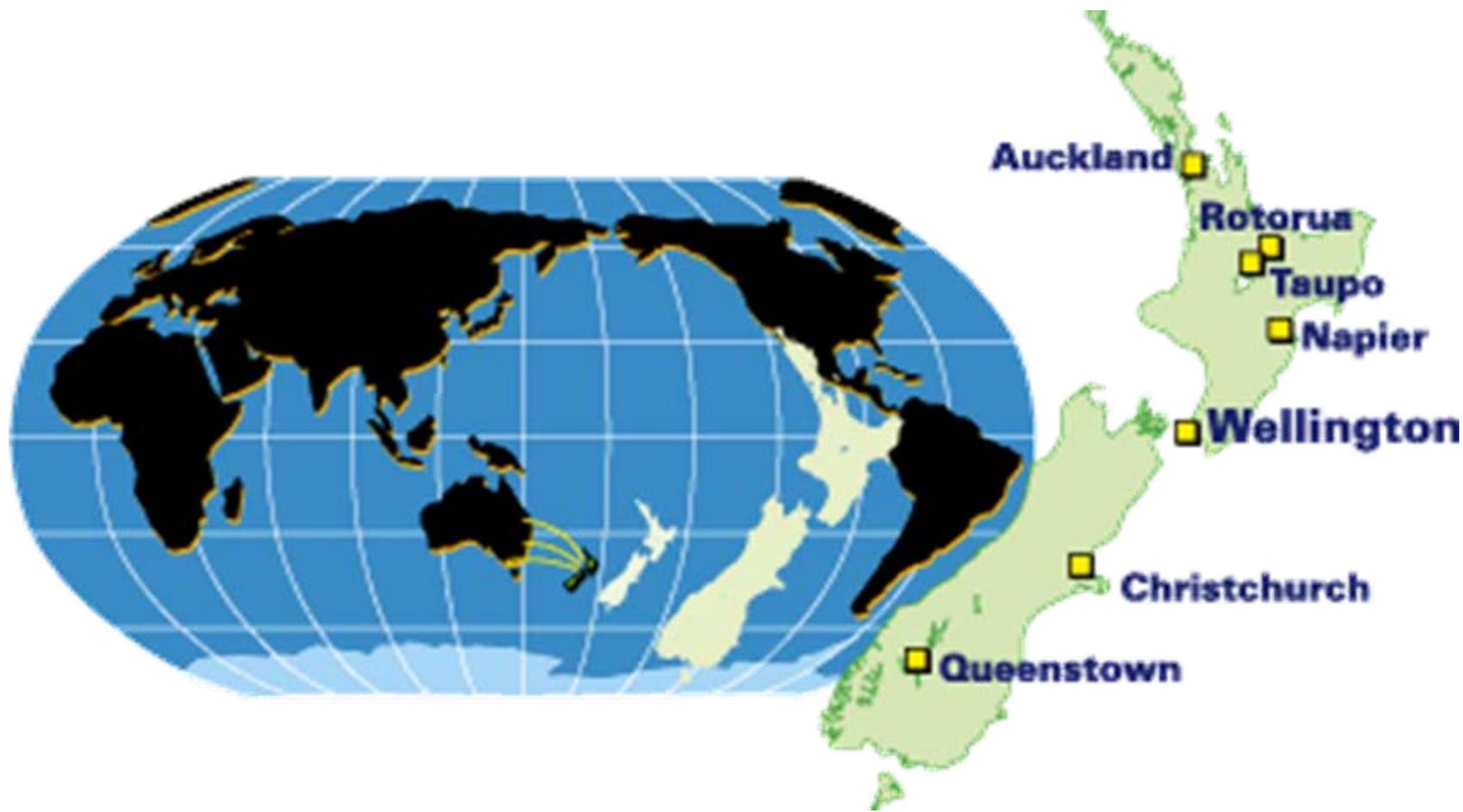


## Performance Measurement

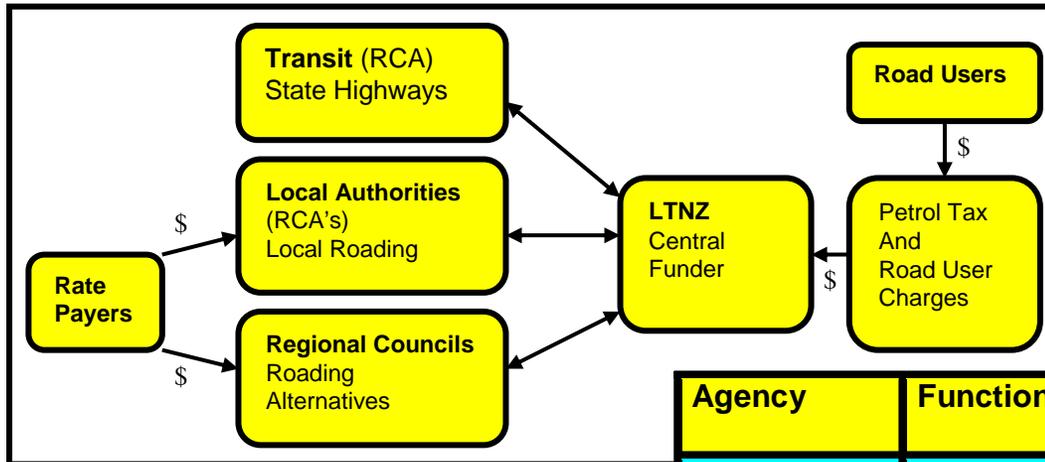
### Roly Frost

- Transit New Zealand
- General Manager Network Operations
- [Roly.Frost@transit.govt.nz](mailto:Roly.Frost@transit.govt.nz)

# Where are we?



# Business Relationships

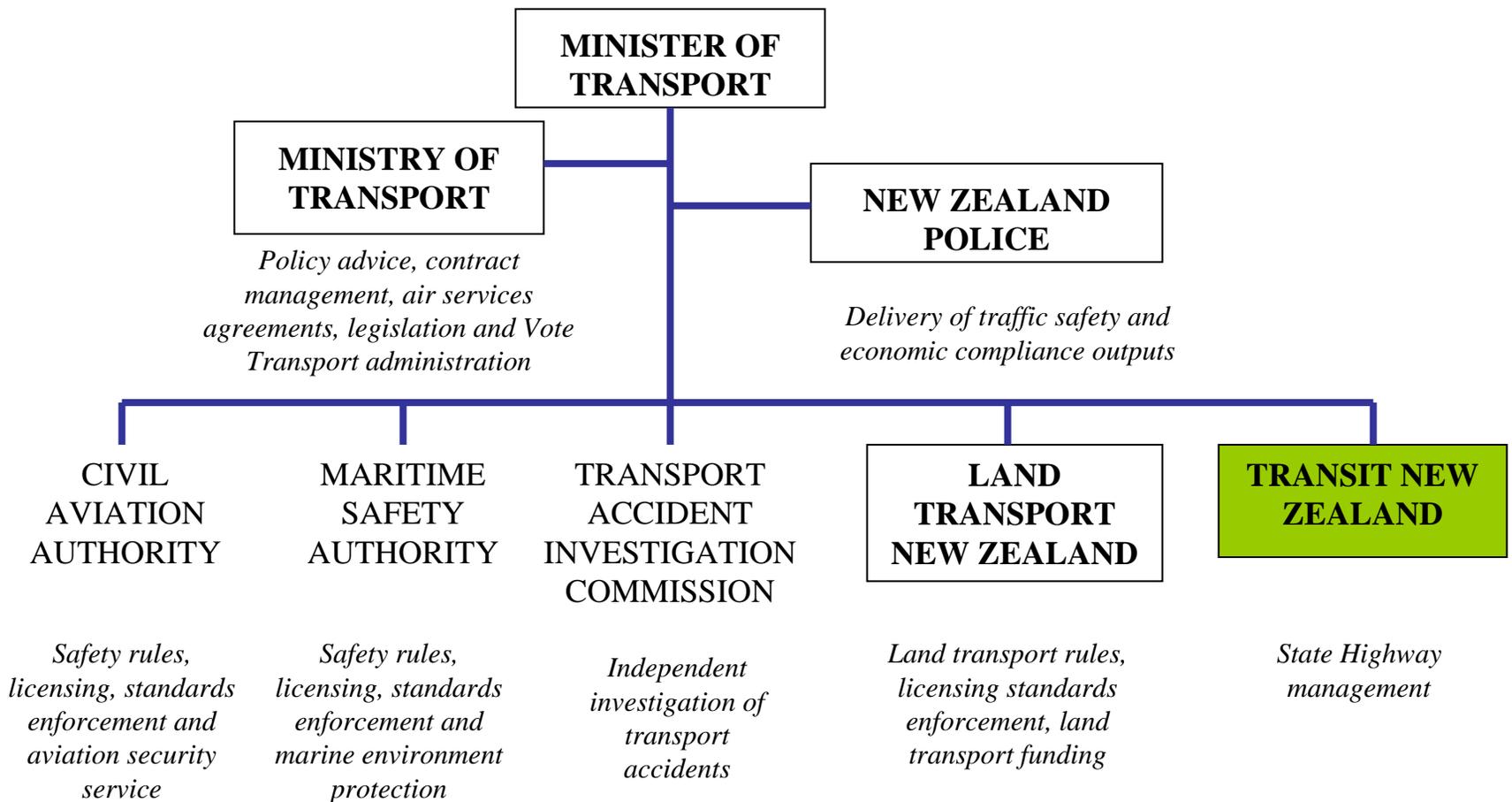


**Players**

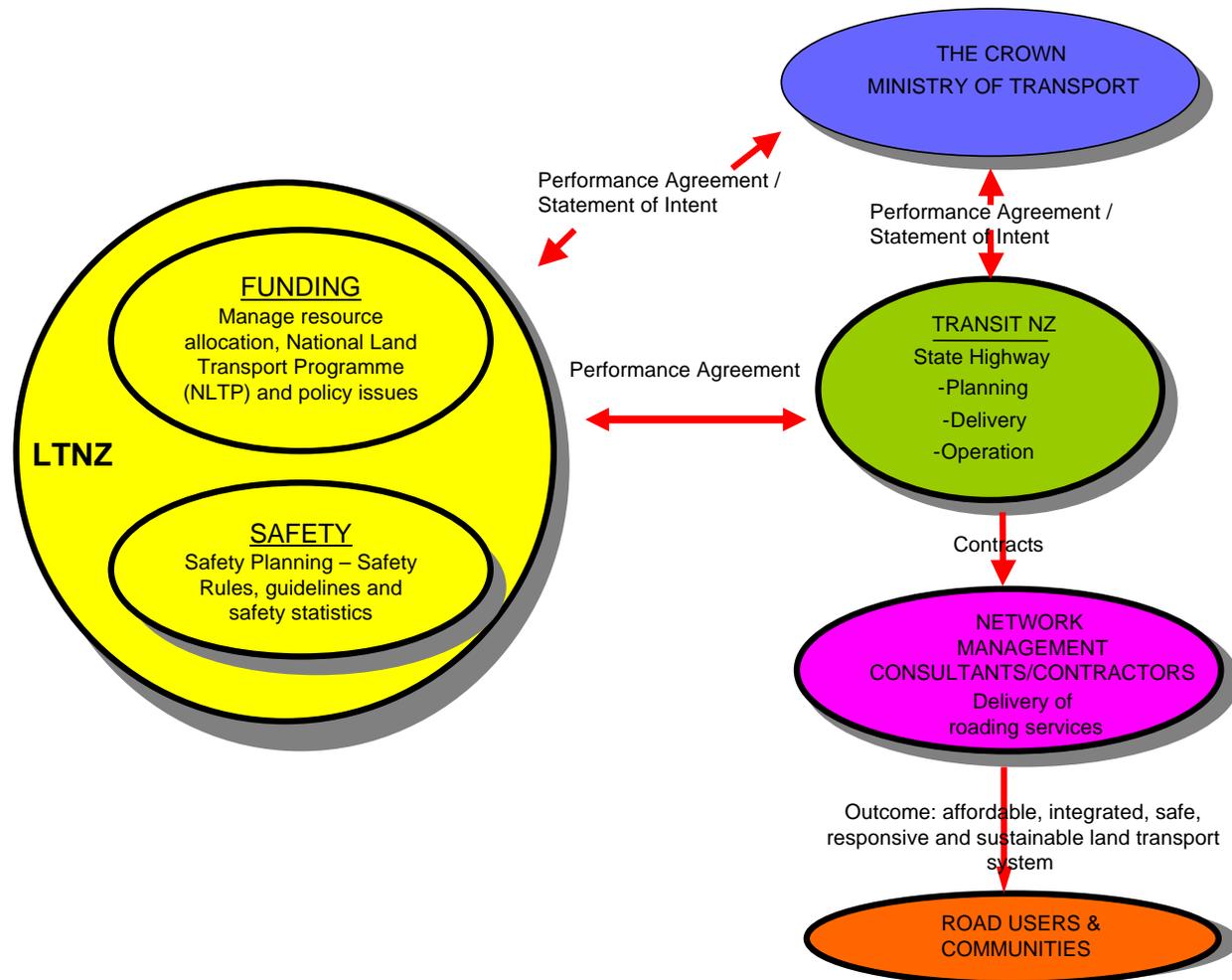
**And what they do**

Agency	Function	Contractual Relationship
Road Controlling Authority (Client)	<ul style="list-style-type: none"> <li>• Statutory control</li> <li>• Service acquisition (Consulting Services and Physical Works)</li> <li>• Audit</li> <li>• Principal to Consulting and Physical Works Contracts</li> </ul>	
Consultant	<ul style="list-style-type: none"> <li>• Network Management Services</li> <li>• Contract Supervision</li> <li>• Quality Management</li> </ul>	
Contractor	<ul style="list-style-type: none"> <li>• Physical Works</li> <li>• Quality Control</li> </ul>	

# Transport Sector Family



# Relationships



# Hierarchy



# Our Vision

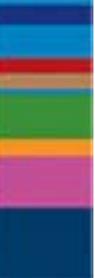
## **OUR VISION**

“A transport system that builds a better New Zealand”



## **STATUTORY OBJECTIVE**

“To operate the state highway system in a way that contributes to an integrated, safe, responsive, and sustainable land transport system”



# Key Goals

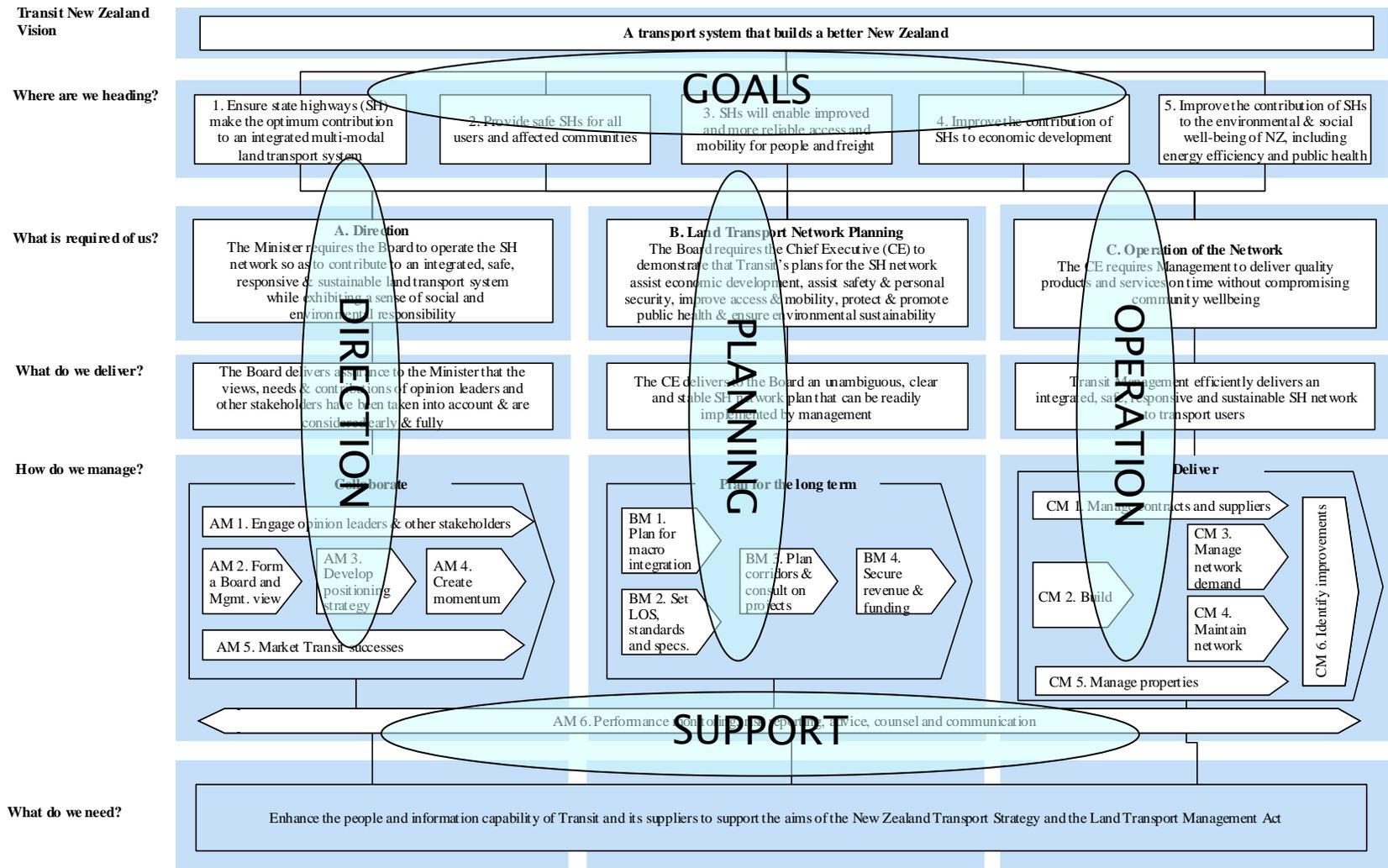
Transit's five key goals are:

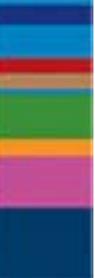
1. Ensure state highway corridors make the optimum contribution to an **integrated** multi-modal land transport system
2. Provide **safe** state highway corridors for all users and affected communities

## Key Goals (cont)

3. State highways will enable improved and more reliable **access and mobility** for people and freight
4. Improve the contribution of state highways to **economic development**
5. Improve the contribution of state highways to the **environmental and social well being** of New Zealand, including **energy efficiency and public health**.

# Our Statutory Objective





# Key Performance Measures

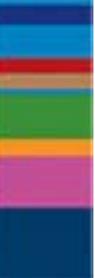
- **Annual Report** (annual)
- **Statement of Intent** (annual)
- **Achievement Report** (quarterly)
- **Strategic Plan** (annual)
- **Business Plan** (monthly)



# Annual Report and Statement of Intent

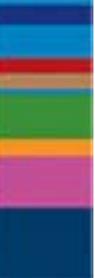
## Annual Report and Statement of Intent

- **Number of fatal accidents on State Highways**
- **Proportion of memoranda of understanding that are healthy**
- **Total amount of nitrous dioxide and carbon monoxide attributed to vehicle emissions.**
- **Total amount of carbon dioxide emissions**
- **Energy use and non-recycled wastage from Transit offices**



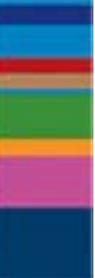
# Annual Report and Statement of Intent

- **Proportion of urban state highways with a speed environment greater than 70km/h in noise-sensitive areas where traffic noise is treated by designed solutions**
- **Proportion of the network within sensitive receiving environments where stormwater run-off is treated by designed solutions**
- **Road user and stakeholder satisfaction with the visual amenity of state highways**



# Achievement Report

- **Strategic direction**
- **Projects**
- **Operations**
- **Statement of financial performance**
- **Contingent liabilities**



# Contract/Project Report

## Performance Based Contracts

- contain over 220 KPMs

## Hybrid Contracts

- contain over 150 KPMs

## Traditional contracts

- contain over 35 KPMs

# Capital Projects

- **Benefits for large projects are qualified under social, economic and environmental**
- **Benefit cost ratio of a sample number of projects compared at investigation, design and post construction**
- **Variance between number of projects planned to commence and number commenced**
- **Number and value of construction projects completed compared with plan.**

# Expenditure Measurement

	2002/03	2003/04	2004/05	2005/06	2006/07
<b>Maintenance</b>	<b>98.5%</b>	<b>98.6%</b>	<b>101.4%</b>	<b>100%</b>	<b>101%</b>
<b>Capital</b>	<b>94.8%</b>	<b>107%</b>	<b>98.6%</b>	<b>103%</b>	<b>96.9%</b>

# Project Measurements

## **Plethora of measures**

- Lighting
- Edge break
- Flushing
- Bridge railing
- Footpaths

# Supplier Measurement

- **Consultants measured on a monthly basis as an interim and final evaluation**
- **Contractors measure by consultant and sometimes client on the same basis**
- **Prequalification measures for contractors**
- **Independent audits of projects (capital & operations)**
- **Audit New Zealand performance base audit**
- **Internal reviews on supplier chain**
- **Parallel review of estimates over \$20M**
- **Extensive use of peer review**

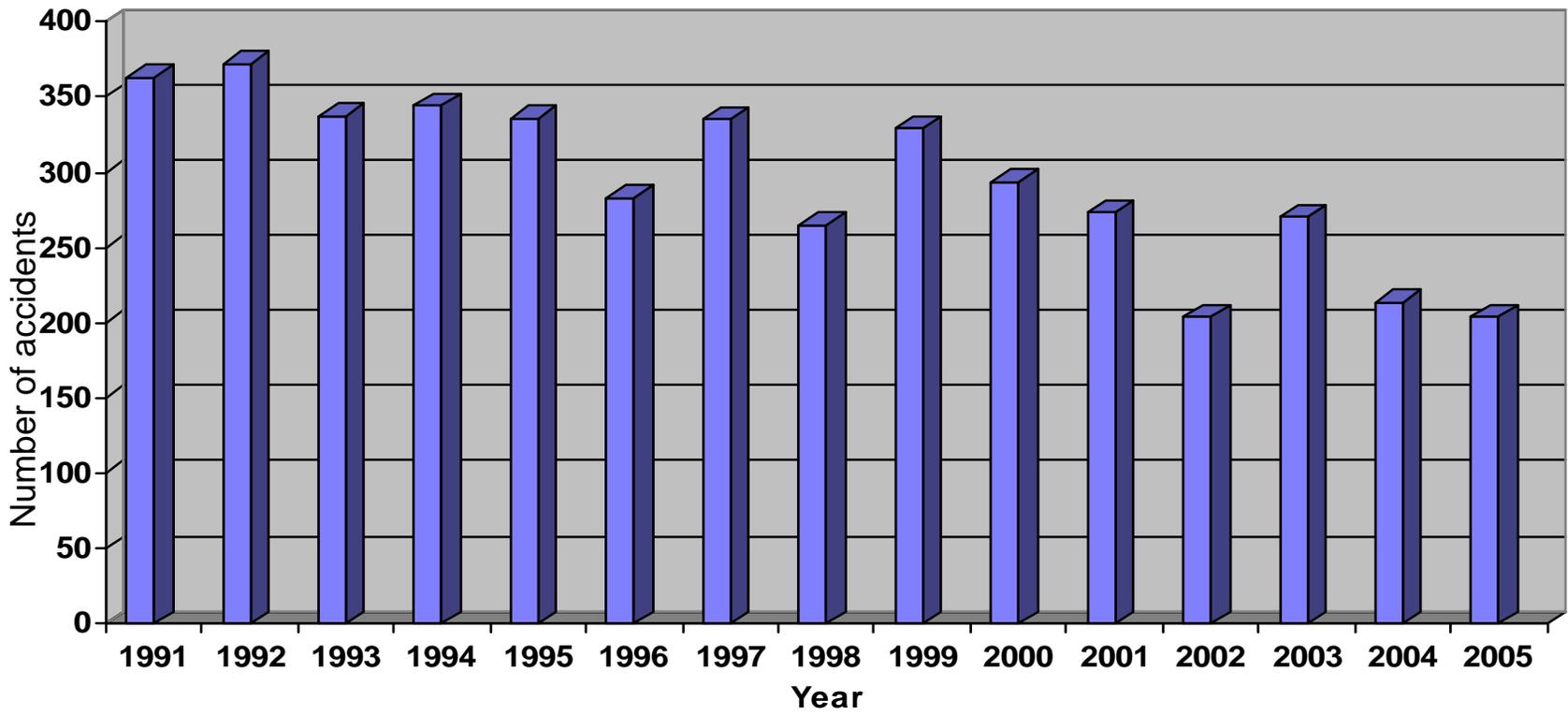


# Key Performance Indicators Safety

- **Number and cost of crashes**
- **Number of accident sites**
- **Compatibility with speed environment**
- **Sealed carriageway width**
- **Bridge width deficiencies**

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# Number of Fatal Crashes

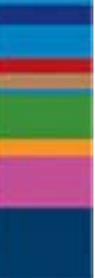


# Number of Accident Sites

<b>Region</b>	<b>2003/04</b>	<b>2004/05</b>	<b>Change</b>
<b>Auckland</b>	<b>499</b>	<b>463</b>	<b>- 37</b>
<b>Hamilton</b>	<b>165</b>	<b>135</b>	<b>- 30</b>
<b>Napier</b>	<b>38</b>	<b>39</b>	<b>+ 1</b>
<b>Wanganui</b>	<b>89</b>	<b>72</b>	<b>- 17</b>
<b>Wellington</b>	<b>134</b>	<b>116</b>	<b>- 18</b>
<b>Christchurch</b>	<b>61</b>	<b>69</b>	<b>+ 8</b>
<b>Dunedin</b>	<b>109</b>	<b>129</b>	<b>+ 20</b>
	<b>1,095</b>	<b>1,022</b>	<b>- 73</b>

# Other Safety Measures

- **Skid resistance**
- **Retrofit median barrier**
- **Length of installation of rumble strips**
- **Installation of guard rails**
- **Expenditure on projects**

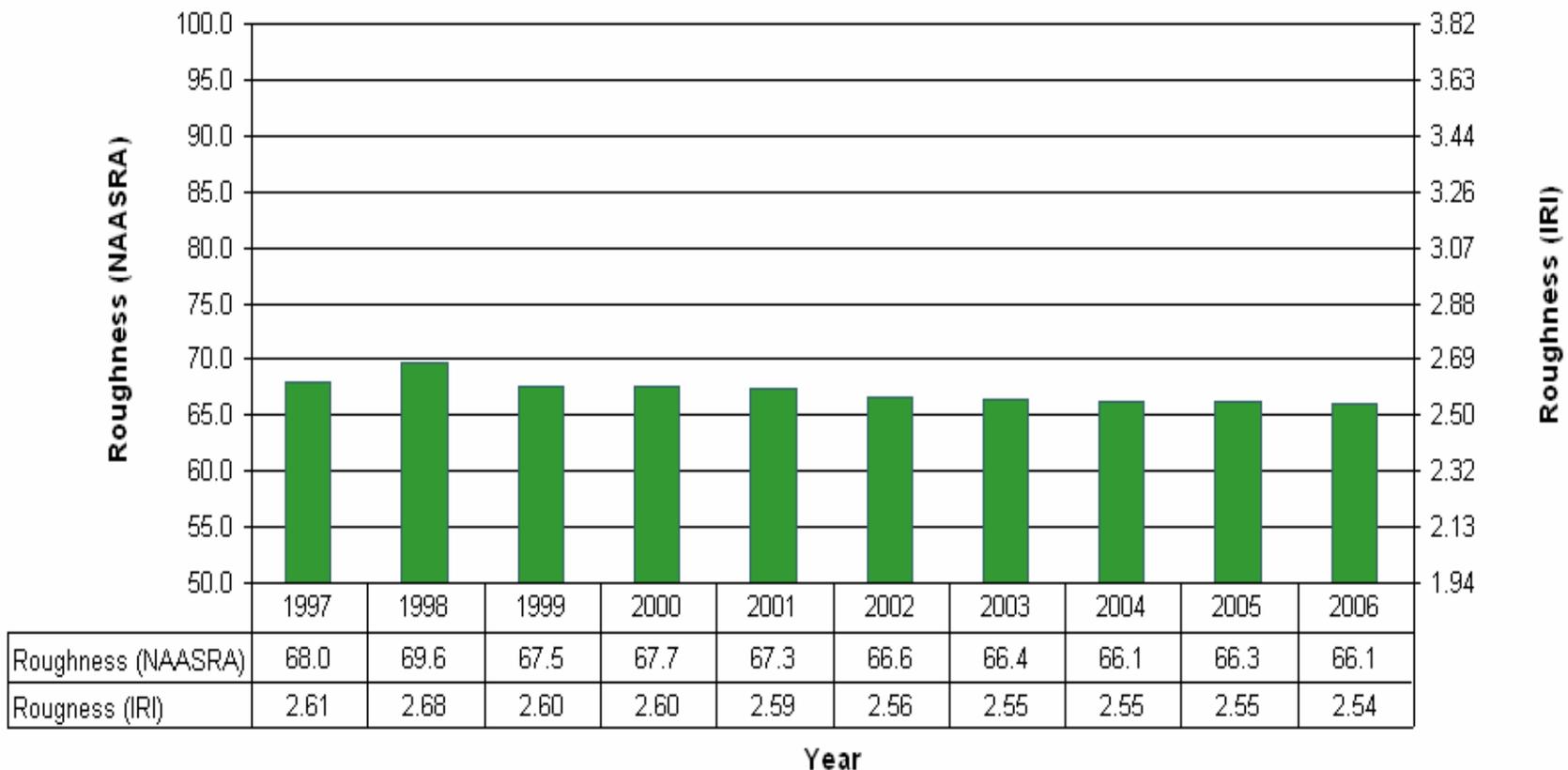


# Levels of Service

## **Pavement Performance Monitoring**

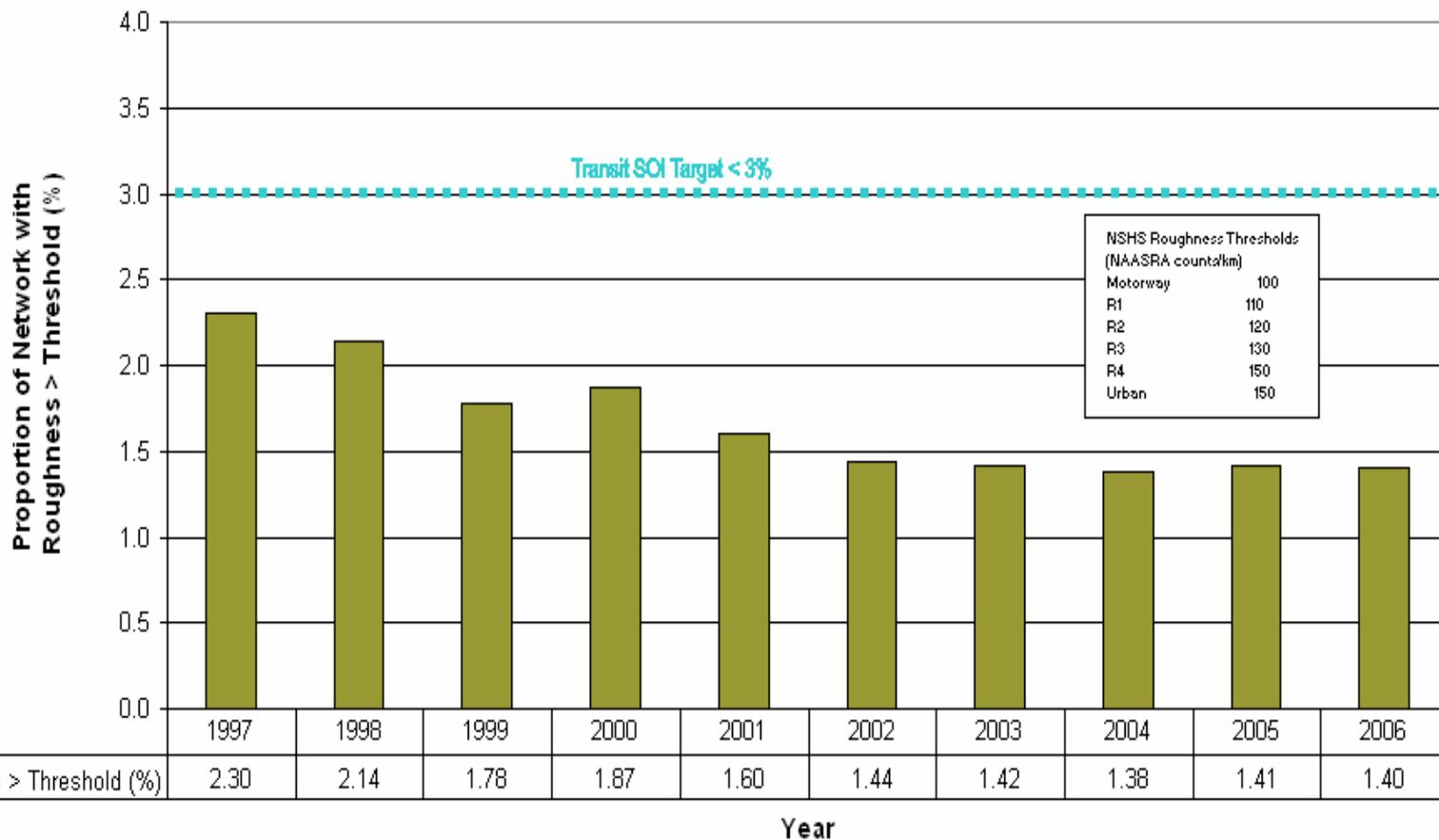
- **measures consistent with other RCA's**
- **Comparable to Australia**
- **Endorsed by Land Transport New Zealand**

# Roughness – National Average 1996-2006

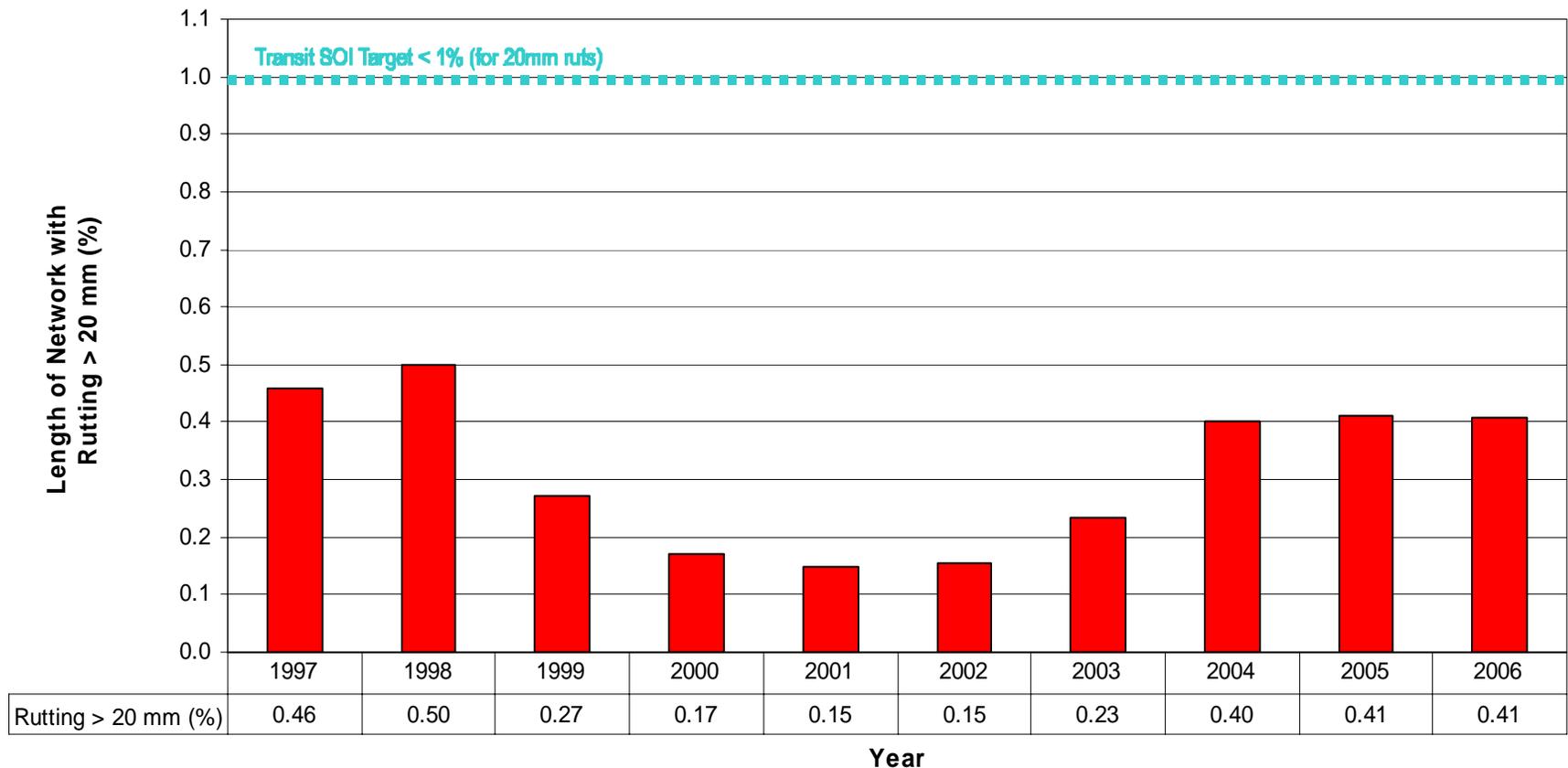


**Figure 1** Roughness: The average roughness of the whole network.

# Proportion of Network with Roughness > Threshold 1996-2006

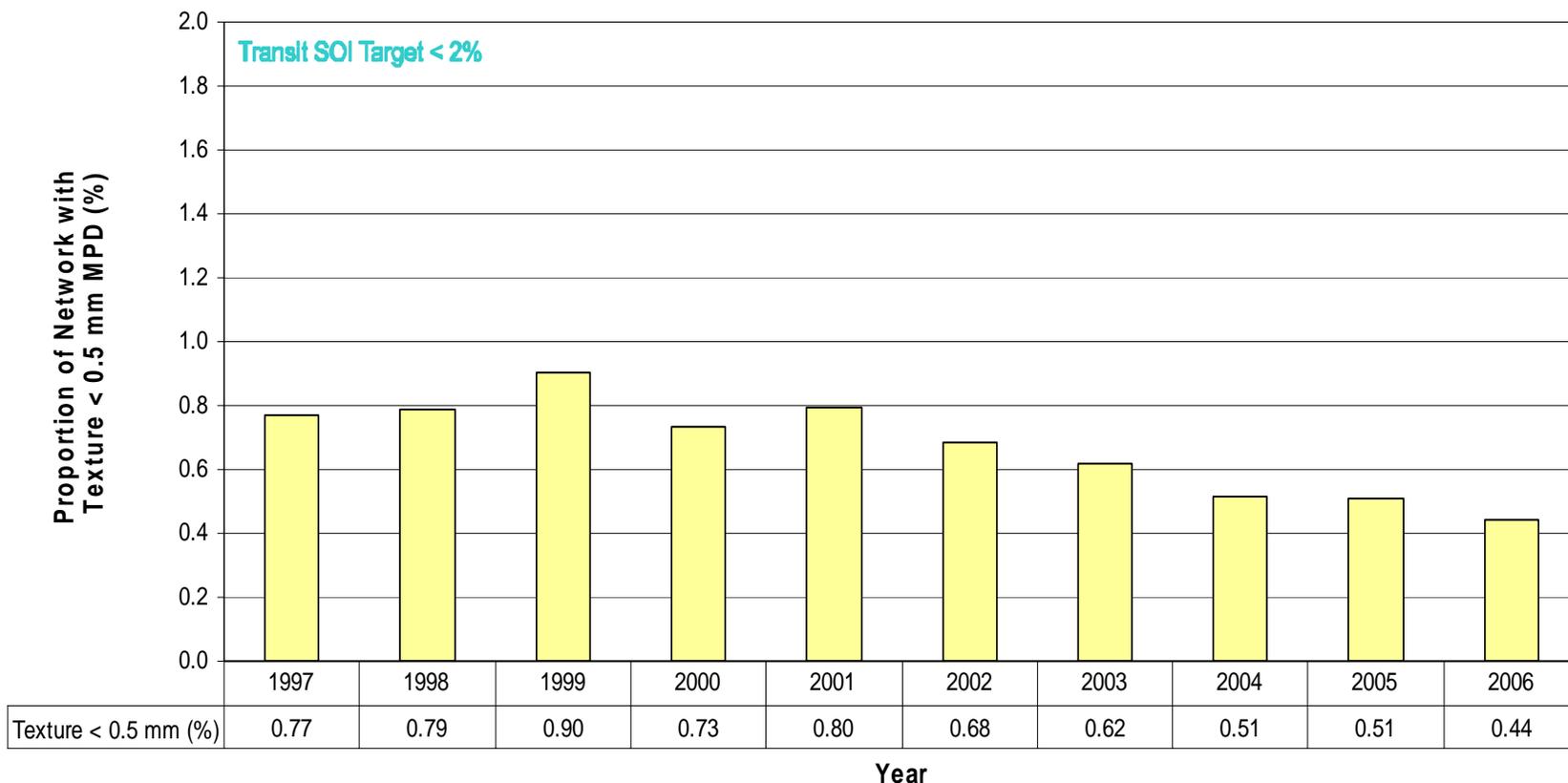


# Proportion of Network with Rutting > 20mm 1996-2006



**Figure 3 Rutting:** The percentage of network length exhibiting rutting >20mm in depth. The 0.41% equates to 44km of the network with ruts in the wheel path.

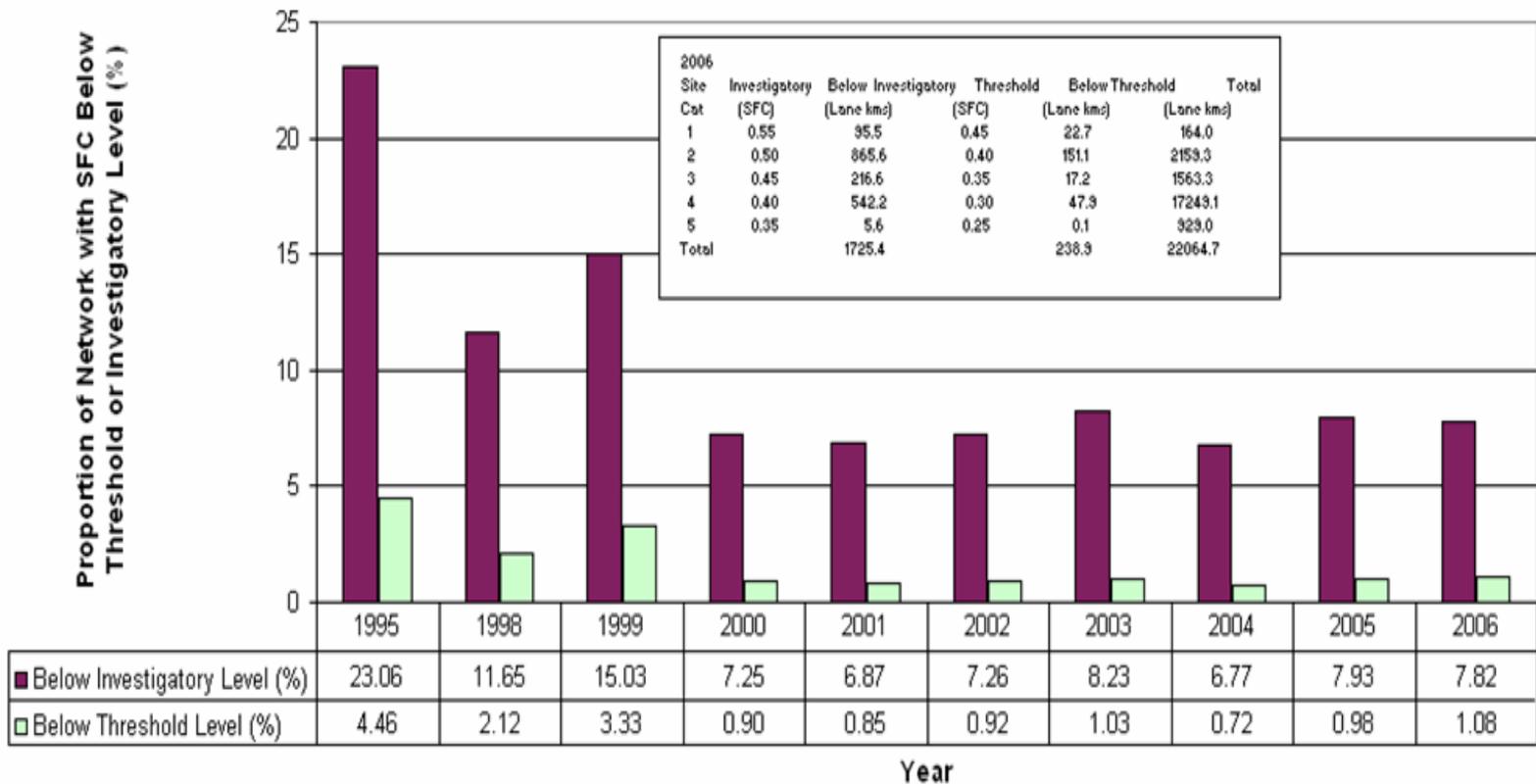
# Proportion of Network with Texture <0.5mm MPD 1996-2006



**Figure 4 Texture <0.5mm (MPD):** The percentage of pavement length below the minimum texture depth. The 0.51% equates to 55km.

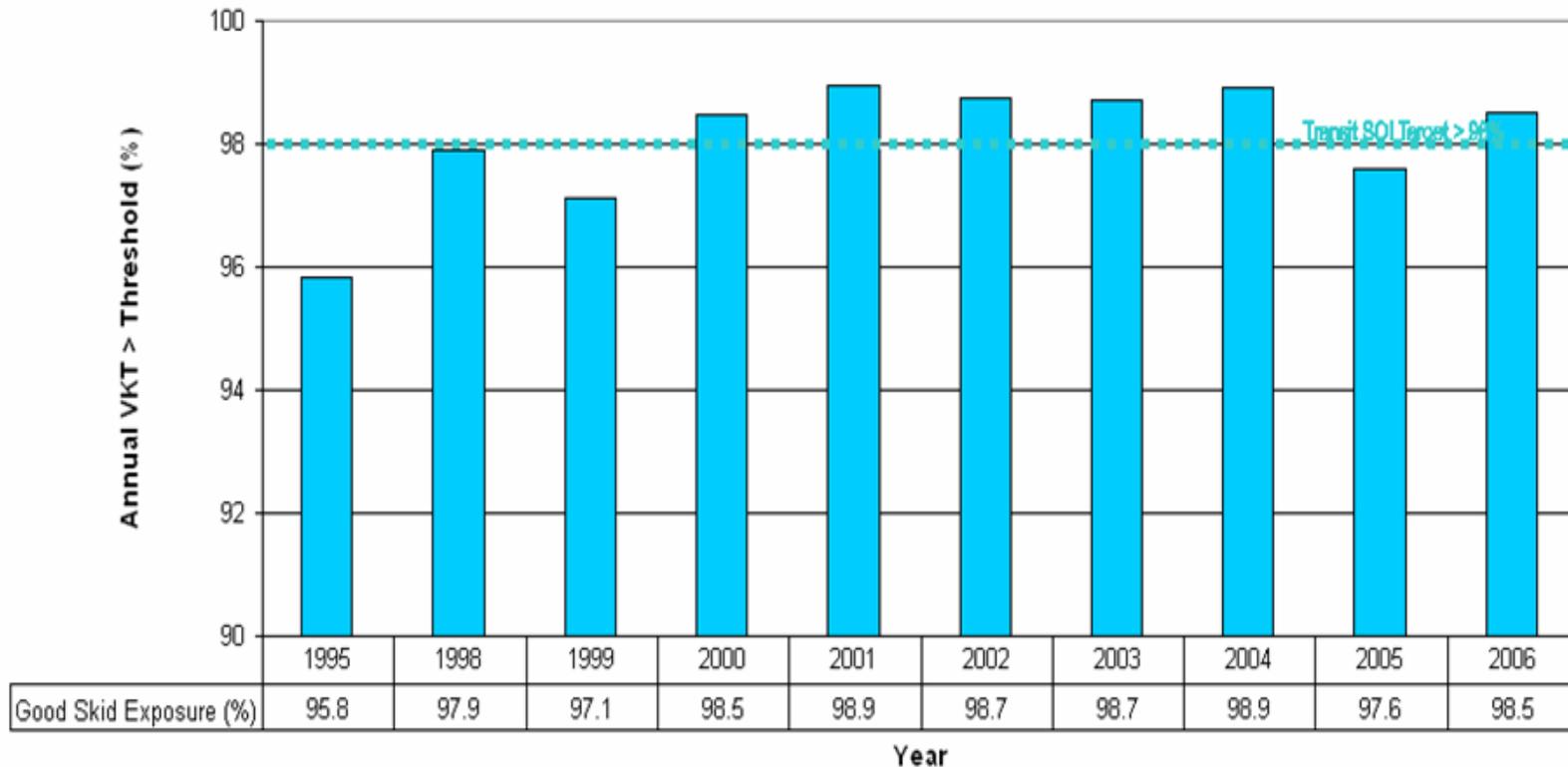
# National Skid Resistance

## Proportion of Network with Skid Resistance less than Investigatory Level of Threshold Level – 1995, 1998-2006



**Figure 5 National Skid Resistance:** The percentage of the network length where skid resistance is below the level of service threshold. (Investigatory level is used for management monitoring only).

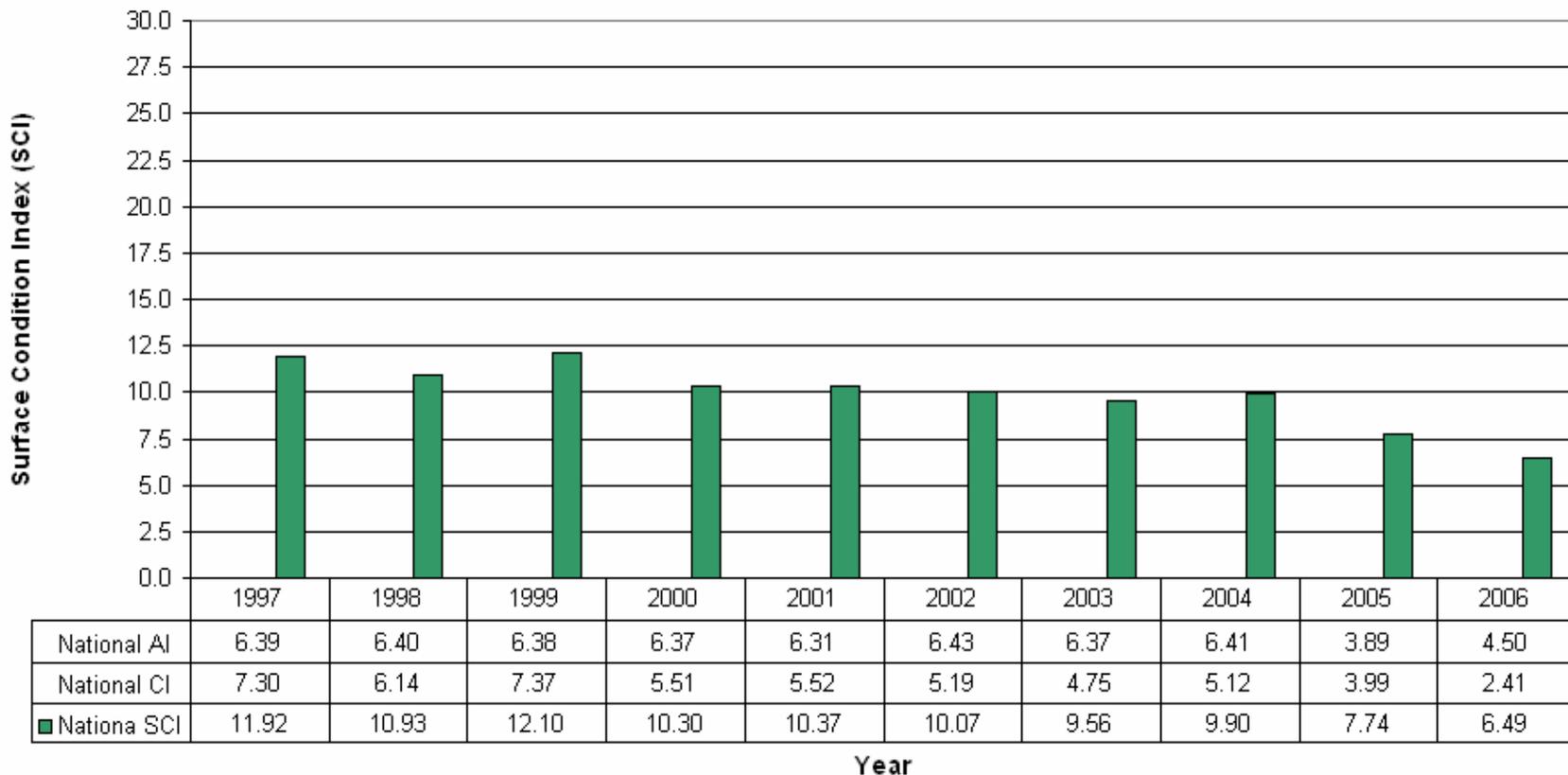
# National Good Skid Exposure VKT Above Threshold Level 1995, 1998 - 2006 (No surveys undertaken in 1996, 1997)



**Figure 6 National Good Skid Exposure:** The amount of travel undertaken on the network, on roads with skid resistance greater than the minimum level of service. (Threshold level as defined in Figure 5).

# Surface Condition Index 1997-2006

## National Average



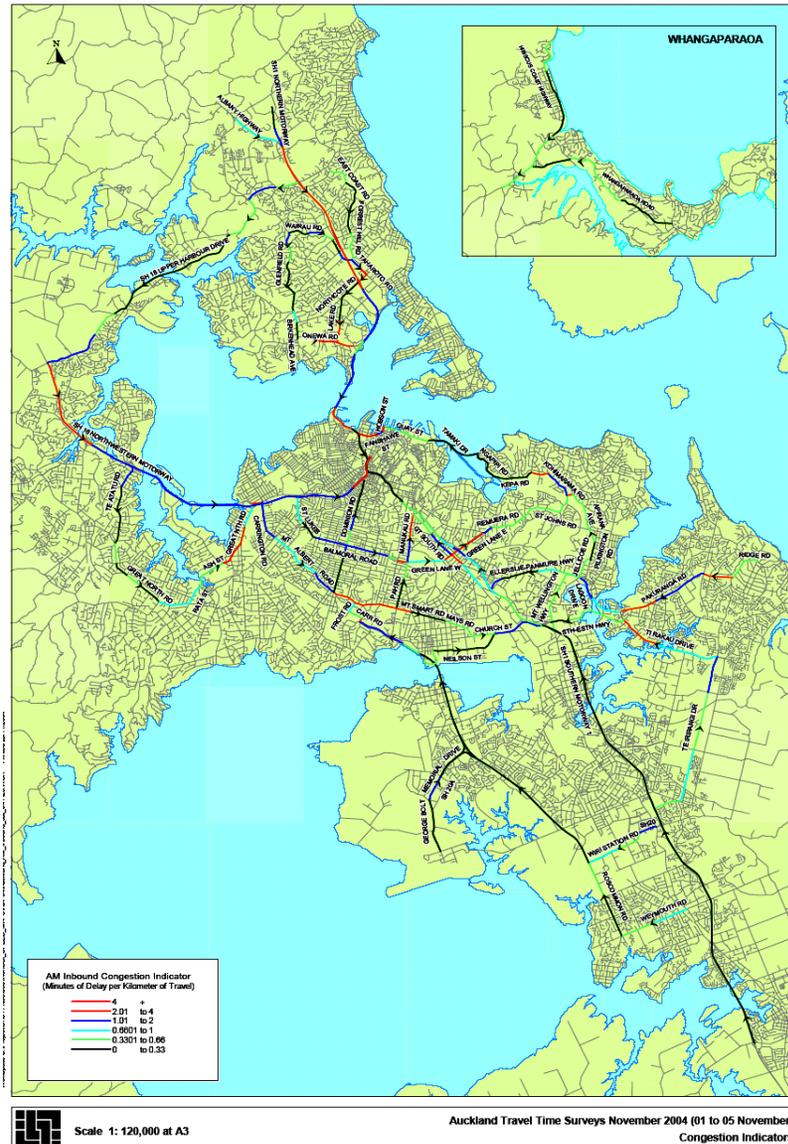
**Figure 7 Surface Condition Index:** A summary measure of whether the surface asset is deteriorating faster than it is replaced. (A lower index is a better surface).

# Levels of Service

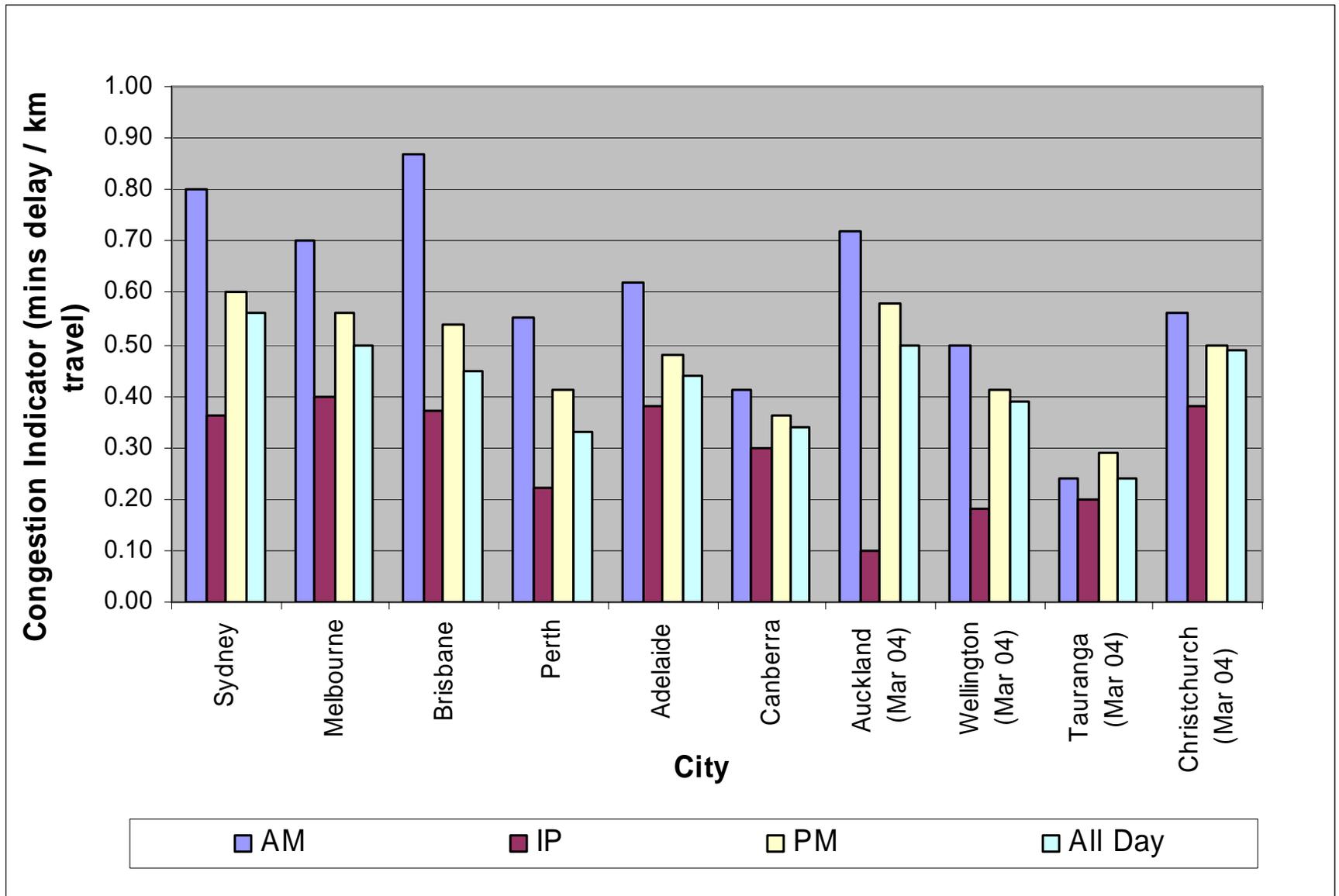
	<b>State highway restoration after event</b>			
	<b>2002/03</b>	<b>2003/04</b>	<b>2004/05</b>	<b>200506</b>
<b>Single lane access restored within 12 hours</b>	<b>98</b>	<b>83</b>	<b>81</b>	<b>86</b>
<b>Expenditure on emergency works</b>	<b>\$15.3M</b>	<b>\$26.5M</b>	<b>\$27.9M</b>	<b>\$25.2M</b>



# Congestion



# Comparison of Congestion Indicators of New Zealand and Australian Centres



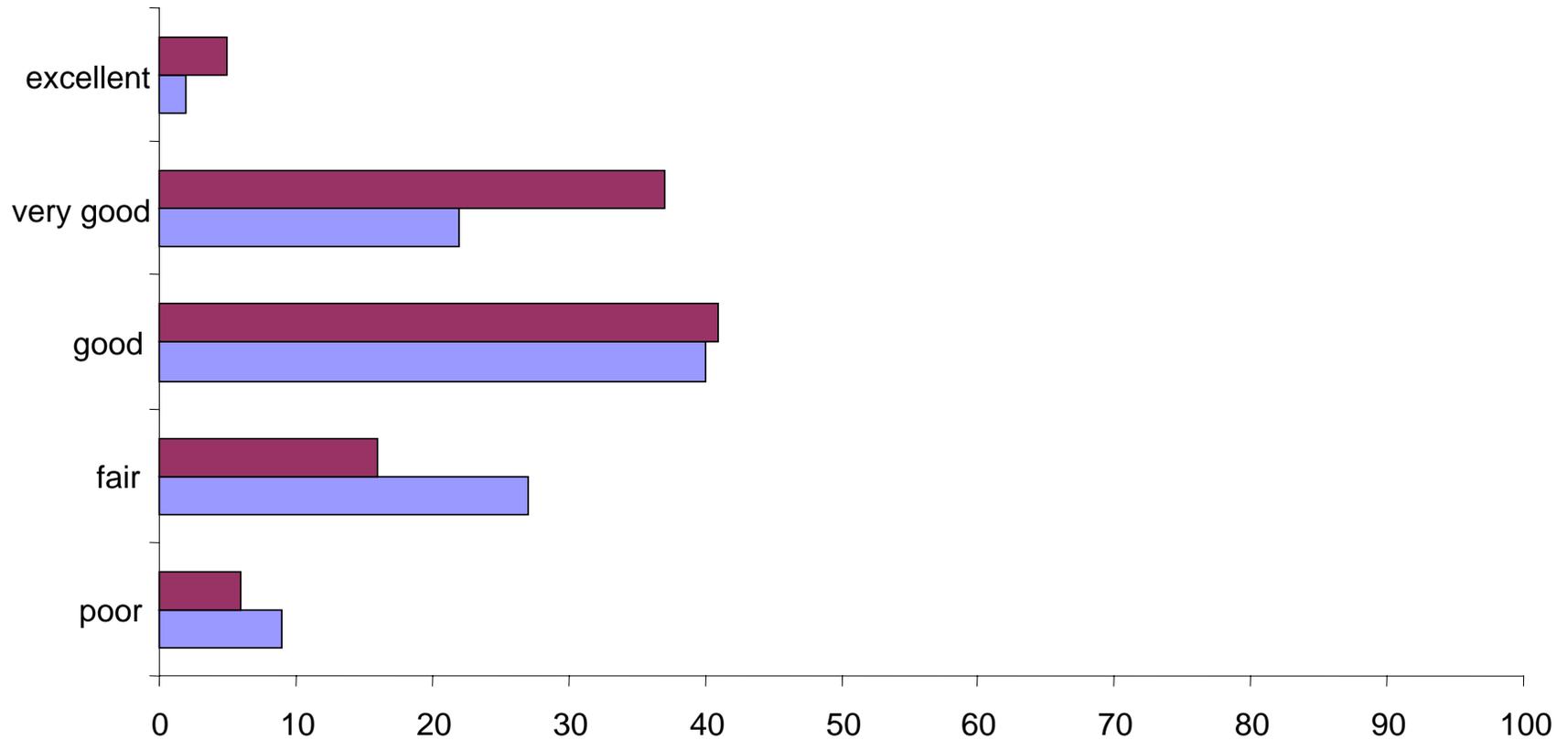


# Who are our customers?

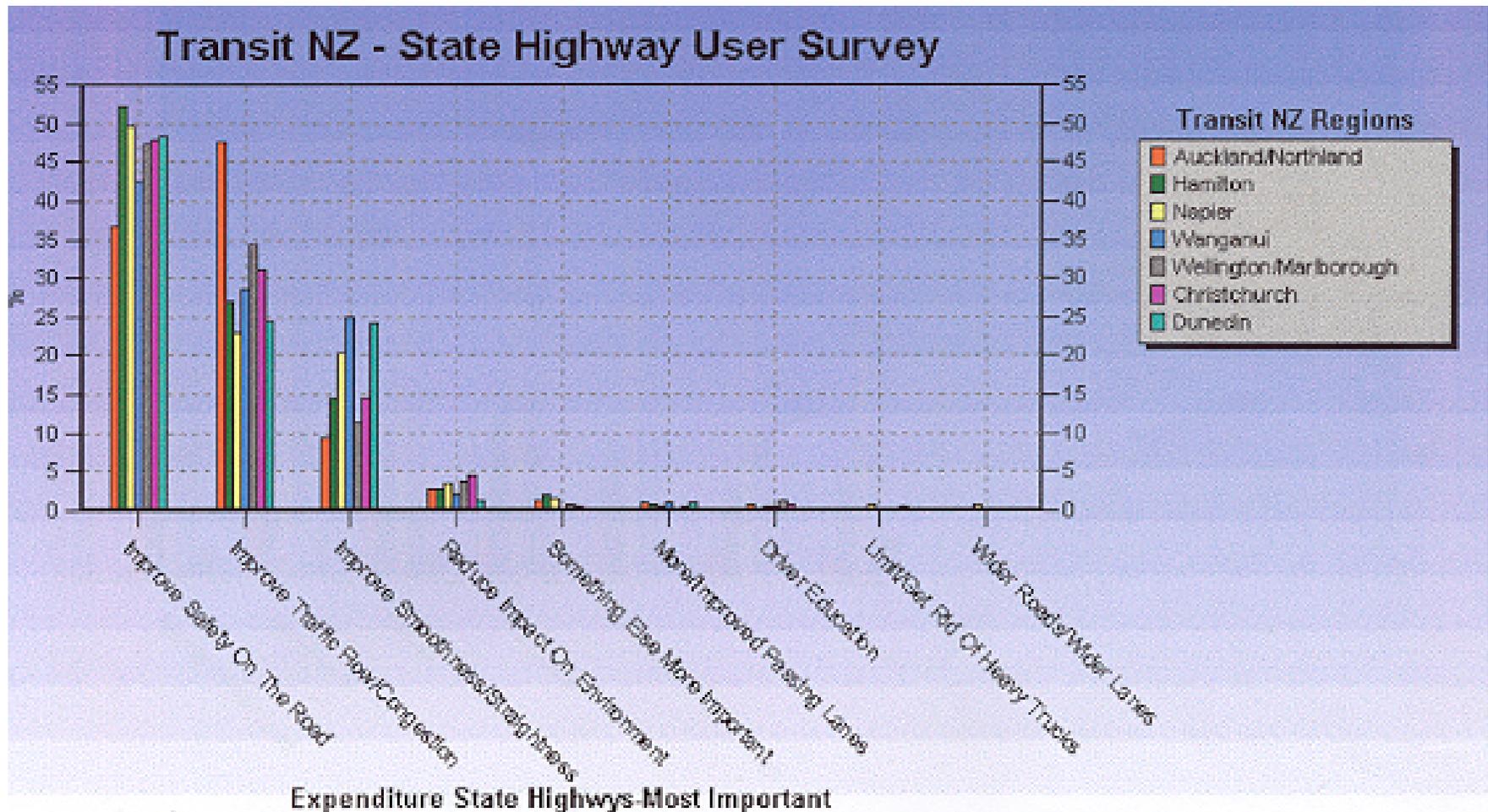
- **Road users**
- **Stakeholders**
- **Internal Staff**

# 2003 Road User Survey

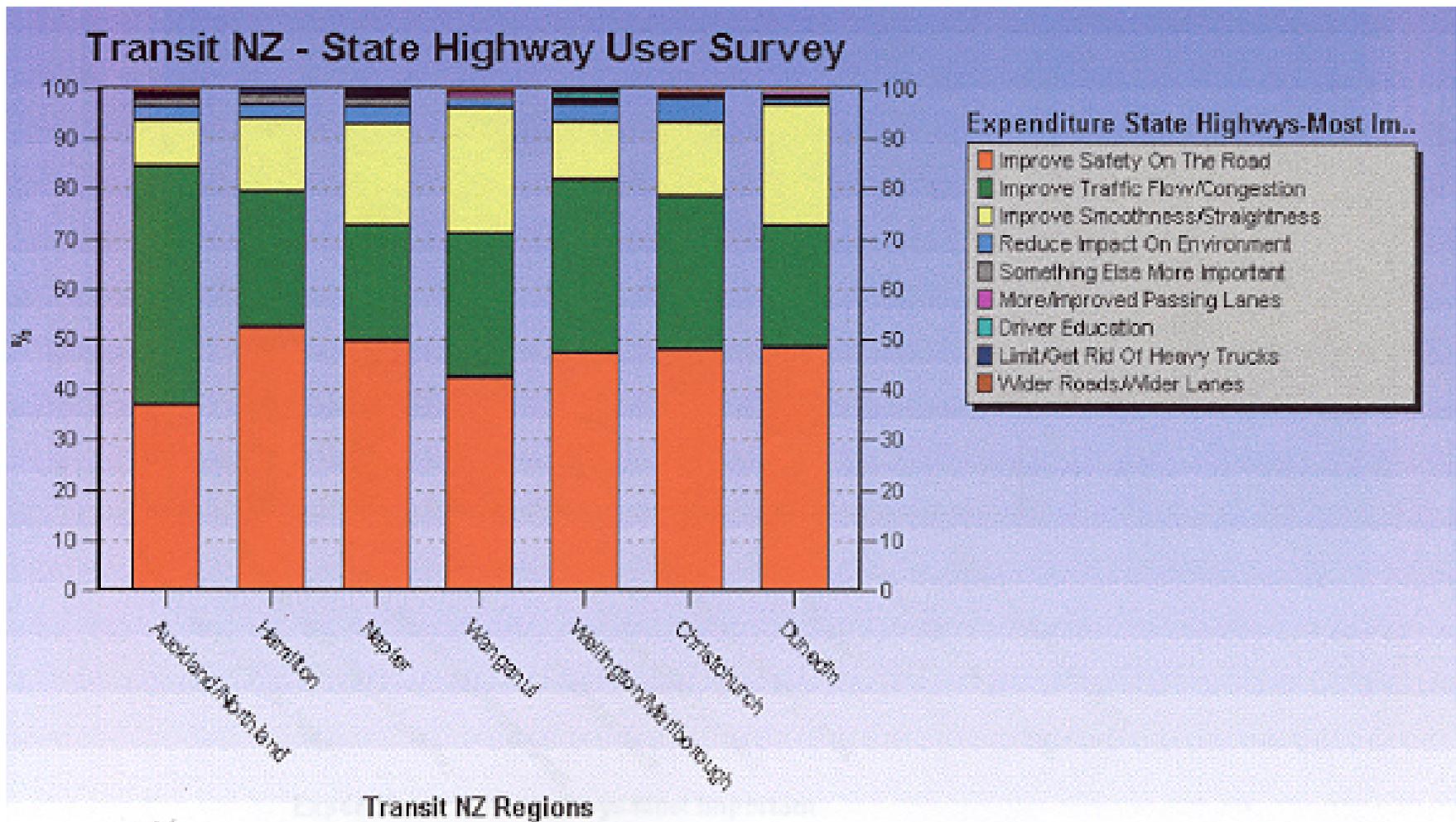
## Overall Ratings



# 2003 Road User Survey

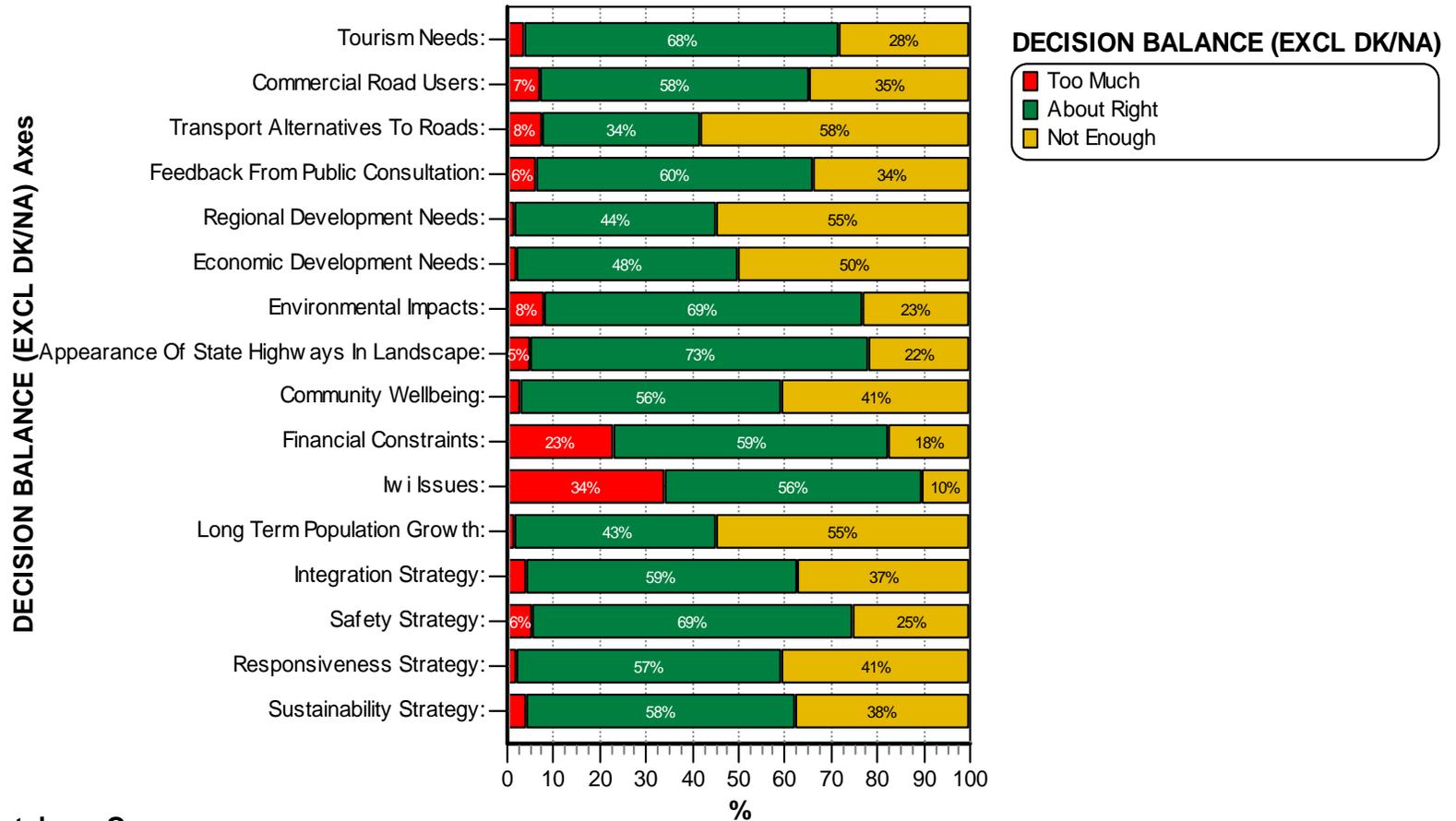


# 2003 Road User Survey



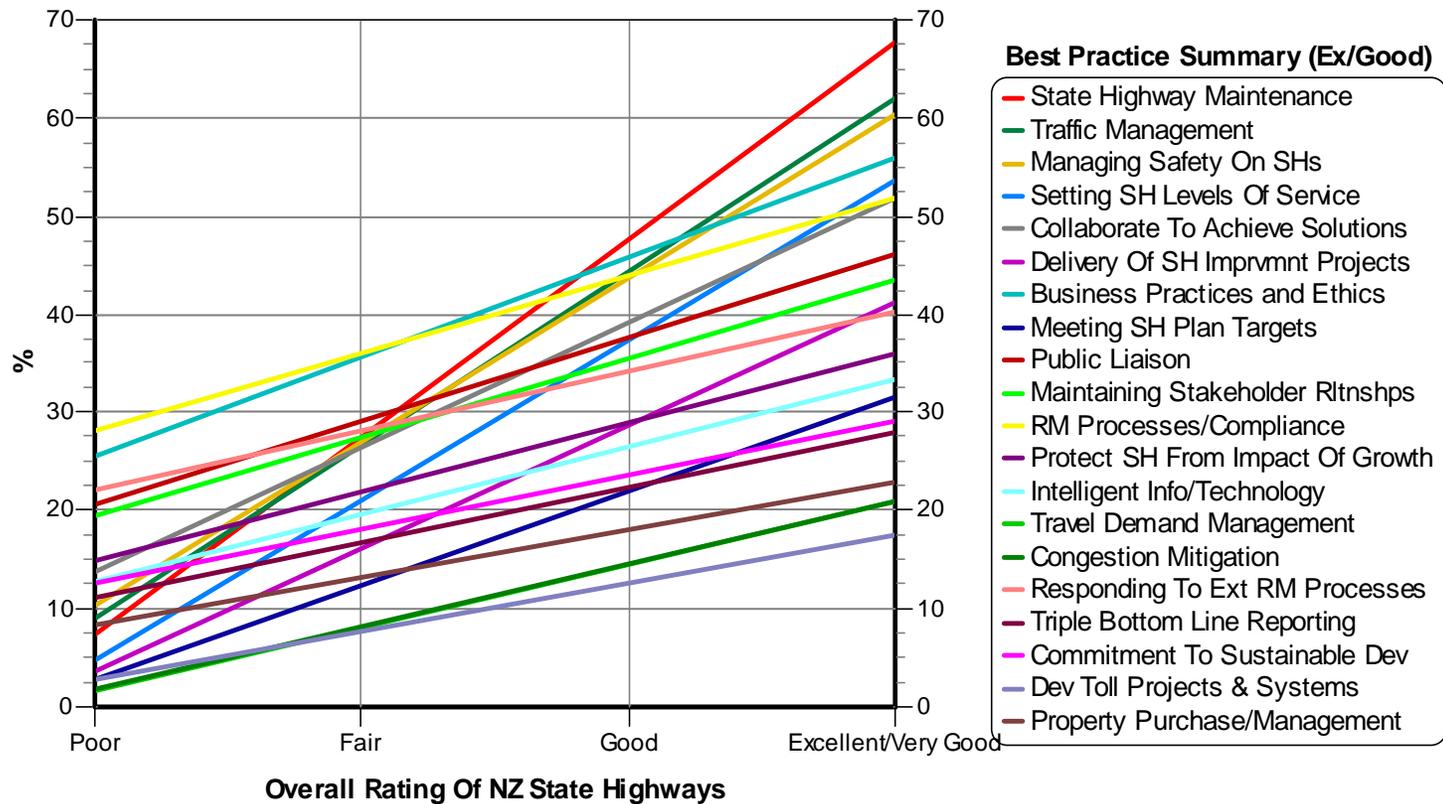
# State Highway User Survey 2006

## Transit NZ Stakeholders 2005



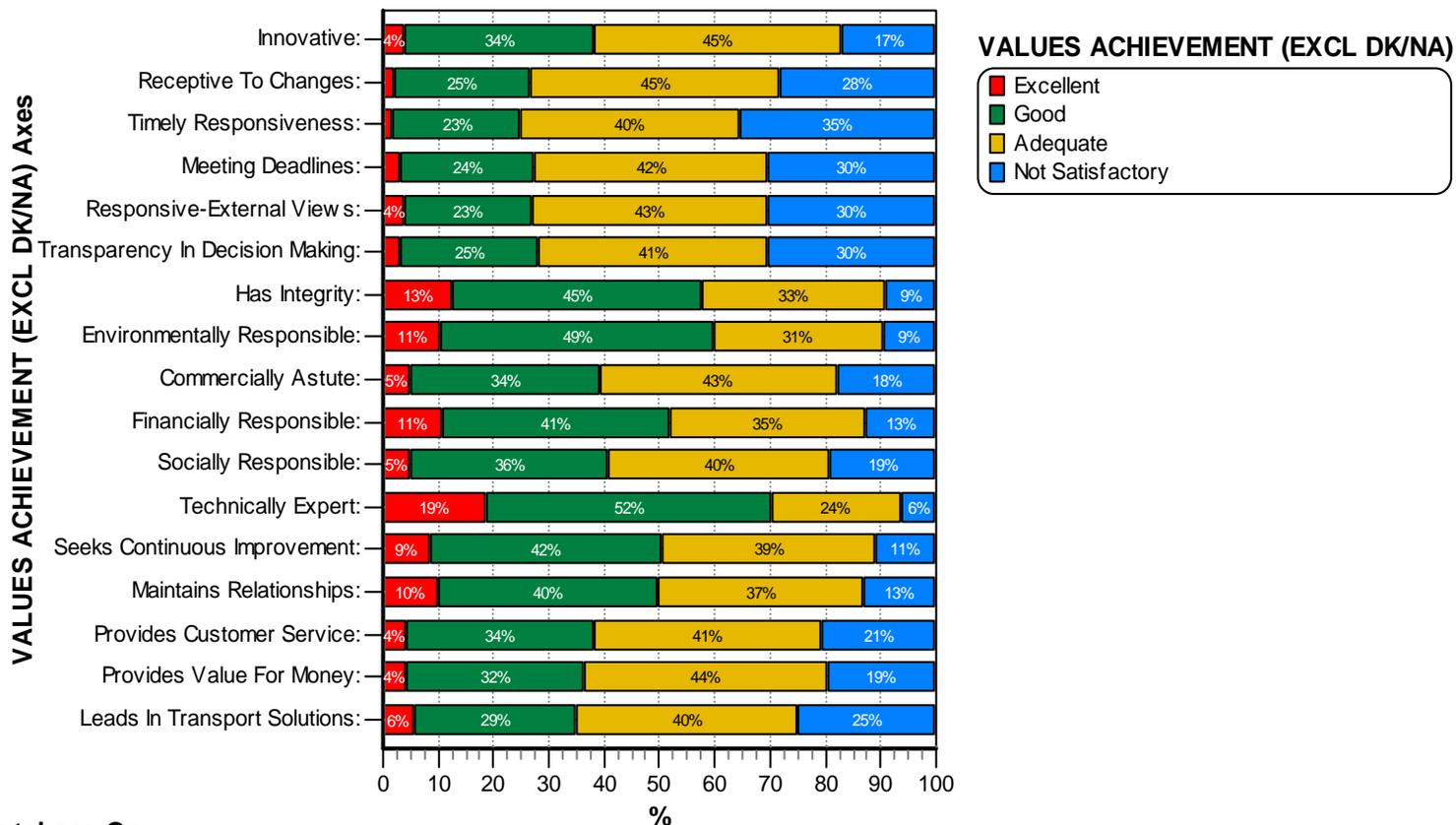
# State Highway User Survey 2006

Overall Rating In Relation to Satisfaction on Best Practice



# State Highway User Survey 2006

## Transit NZ Stakeholders 2005

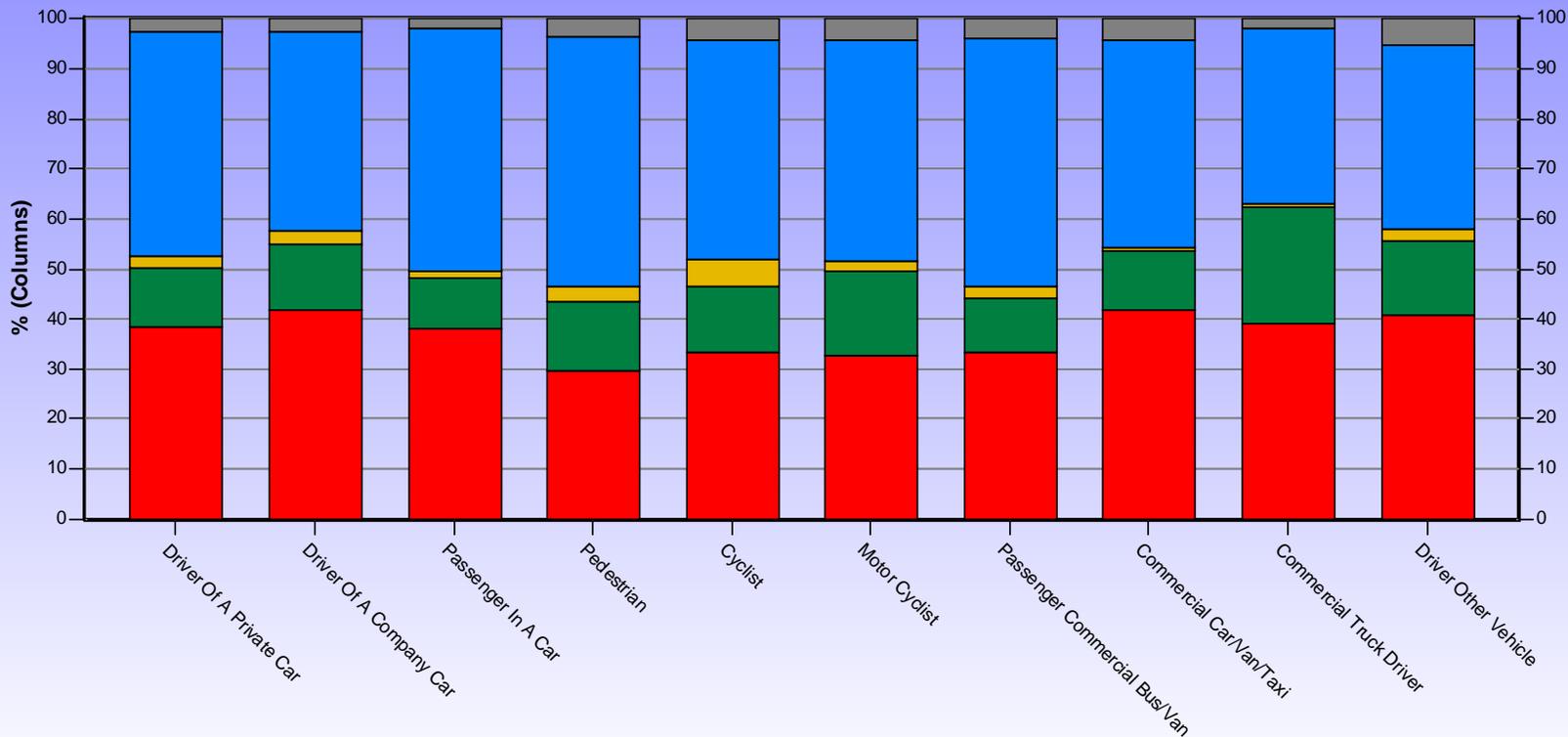


# State Highway User Survey 2006

## Transit NZ - State Highway User Survey 2006

Expenditure State Highways-Most Important

- Improve Traffic Flow /Congestion
- Improve Smoothness/Straightness
- Reduce Impact On Environment
- Improve Safety On The Road
- Something Else More Important



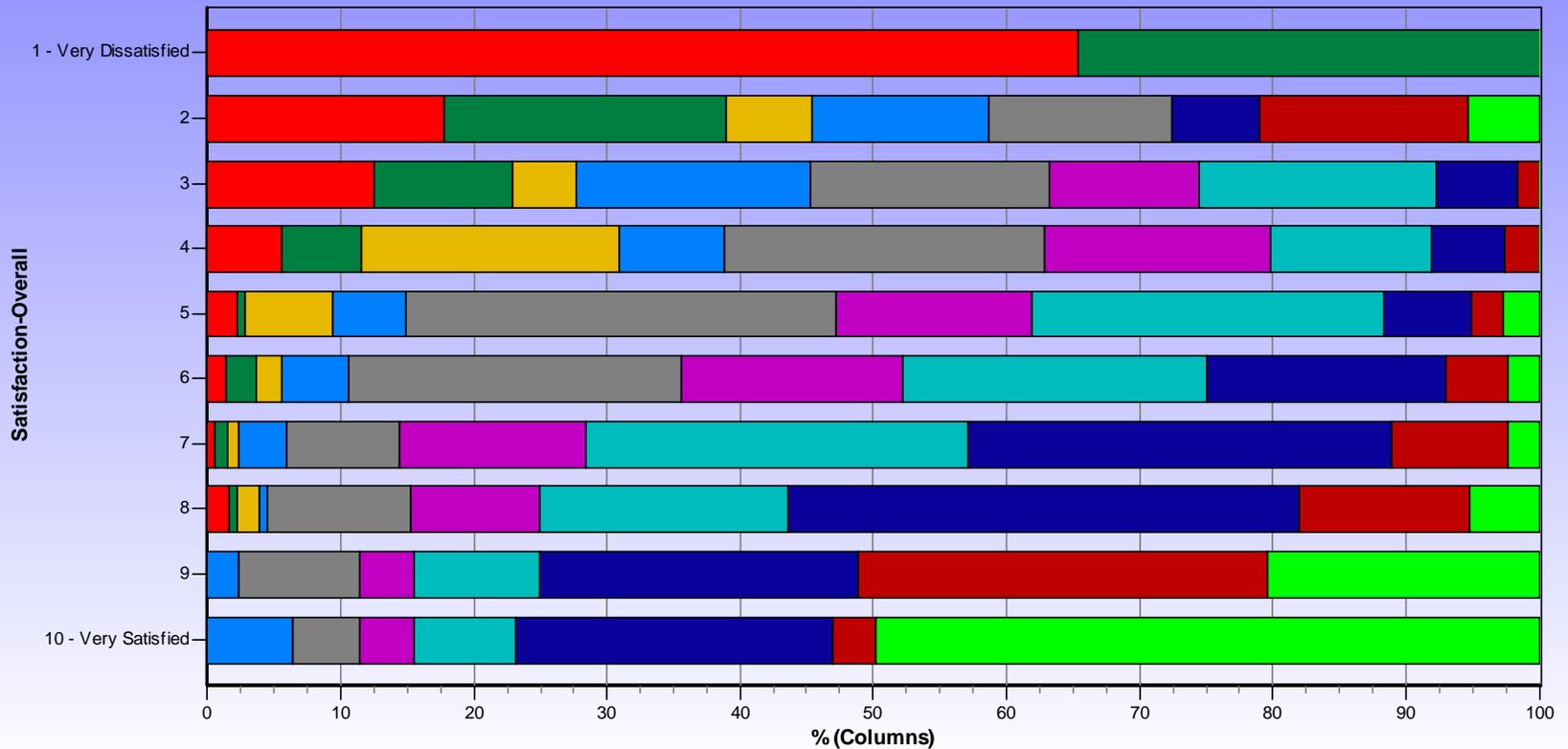
Autobase On

Use Of State Highways

# State Highway User Survey 2006

## Austrroads - New Zealand 2003

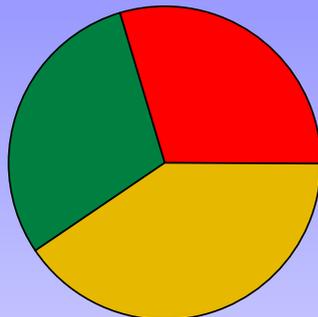
Traffic Mngmnt-Predictability Travel Times



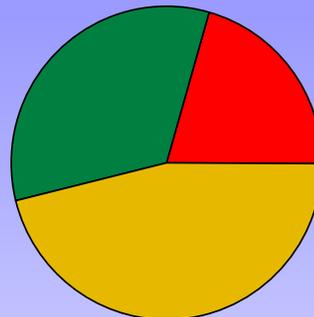
# State Highway User Survey 2006

## Transit NZ - State Highway User Survey 2006

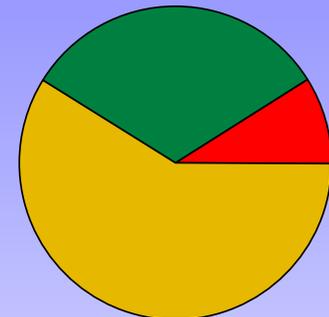
Rating of 2 Years Ago-State Highways(Summ) ■ Worse ■ No Different ■ Better



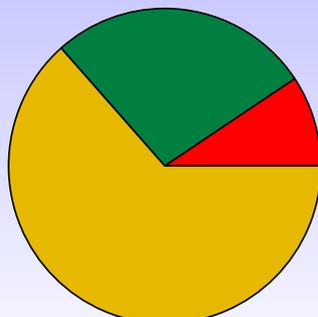
Poor



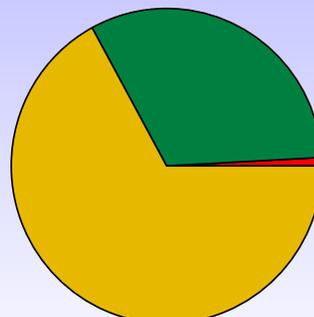
Fair



Good



Very Good



Excellent

Overall Rating Of State Highways, % (Columns), Autobase On

# Stakeholder Survey

- **Minister of Transport**
- **Ministry of Transport**
- **Members of Parliament**
- **Road Users and Road user groups**
- **Iwi and Community groups**
- **Central Government agencies**
- **Local Government**
- **Industry groups and suppliers**
- **Media**
- **General public**
- **Staff and Public Service Association**
- **International roading or transportation organisations**



## Transit emerged in the 2002 survey as

*“ a technically expert business organisation with excellent integrity, good at core areas, but needing to improve in its delivery to the public”*

## In the 2005 survey

*“ Transit is still seen as an organisation that is technically expert, has integrity and is environmentally responsible”*

*“the overall rating of the state highways was comparable to previous measures and a majority of stakeholders rate these state highways as better than years ago”*

*Regional variations less marked than previously.*

*Responsive areas still scored less well than other areas.*

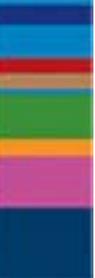


# Stakeholder Survey 2005

*The most important driver of overall satisfaction with the state highways was maintenance*

This was followed by

- *traffic management*
- *managing safety*
- *setting levels of service*



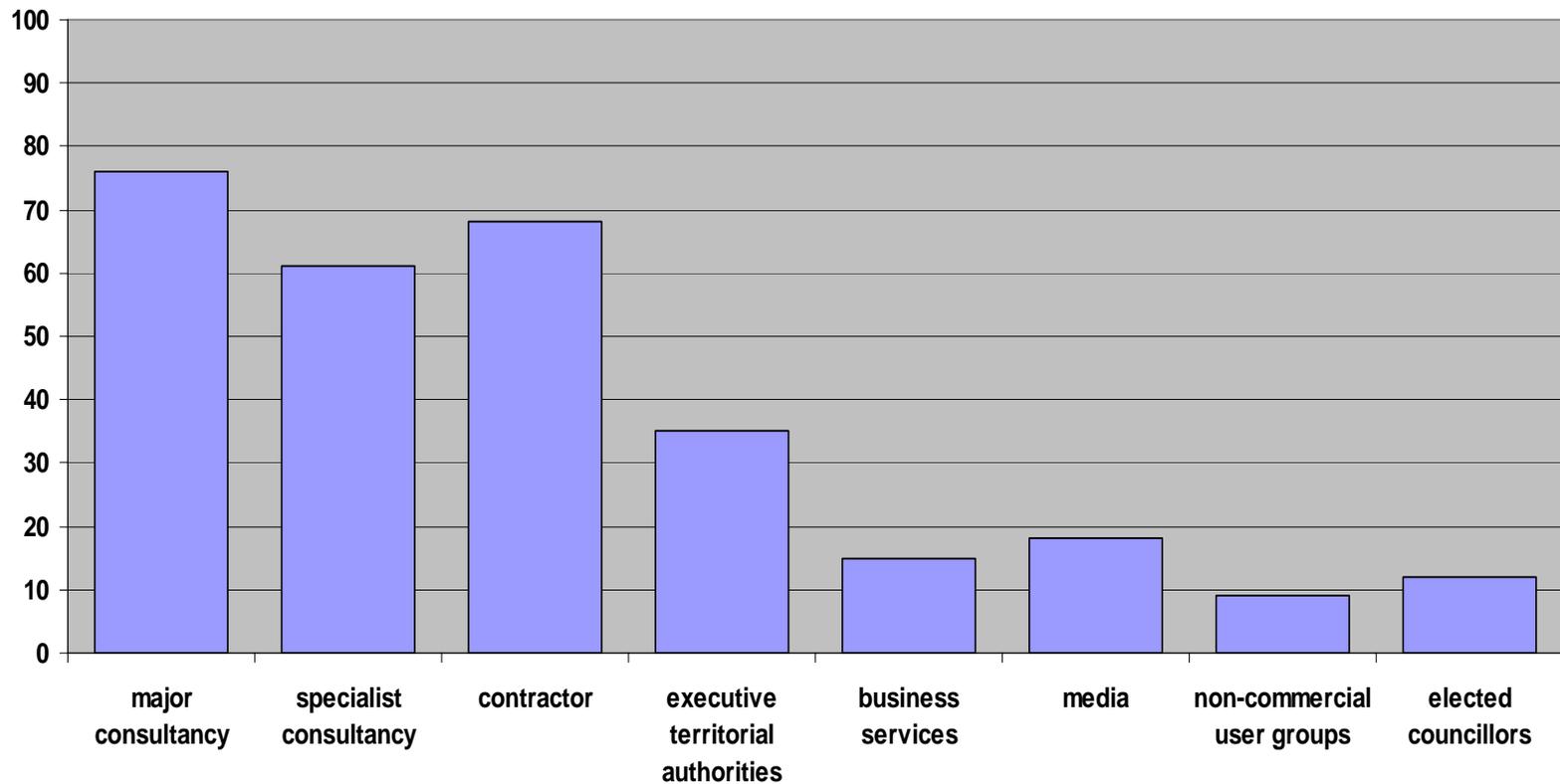
# Stakeholder Survey 2005

*...Contractors, territorial/regional authorities and major engineering consultants were more satisfied...*

*...MPs and non commercial groups less satisfied...*

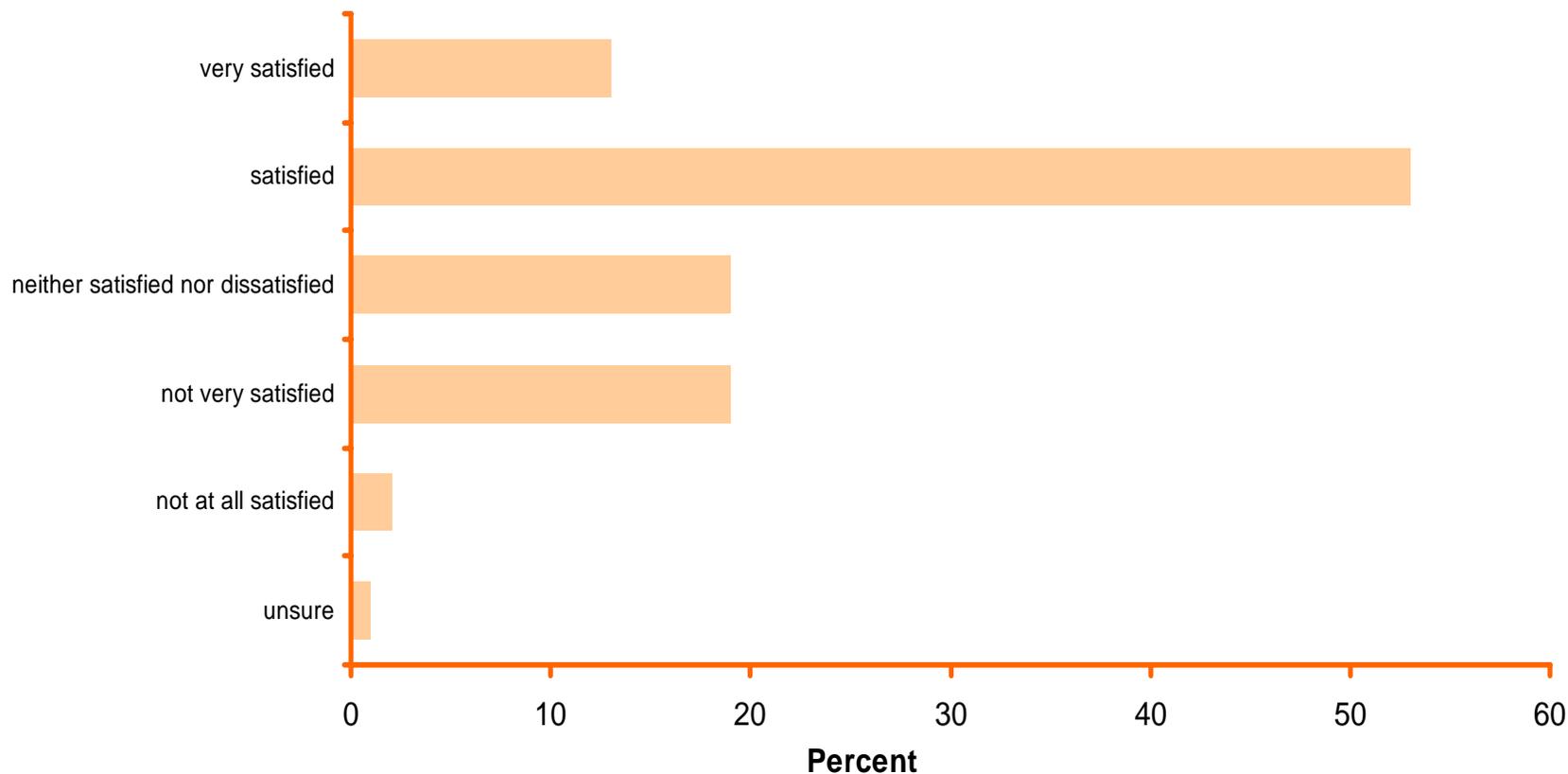
# Stakeholders

Stakeholder by Category  
very good - excellent



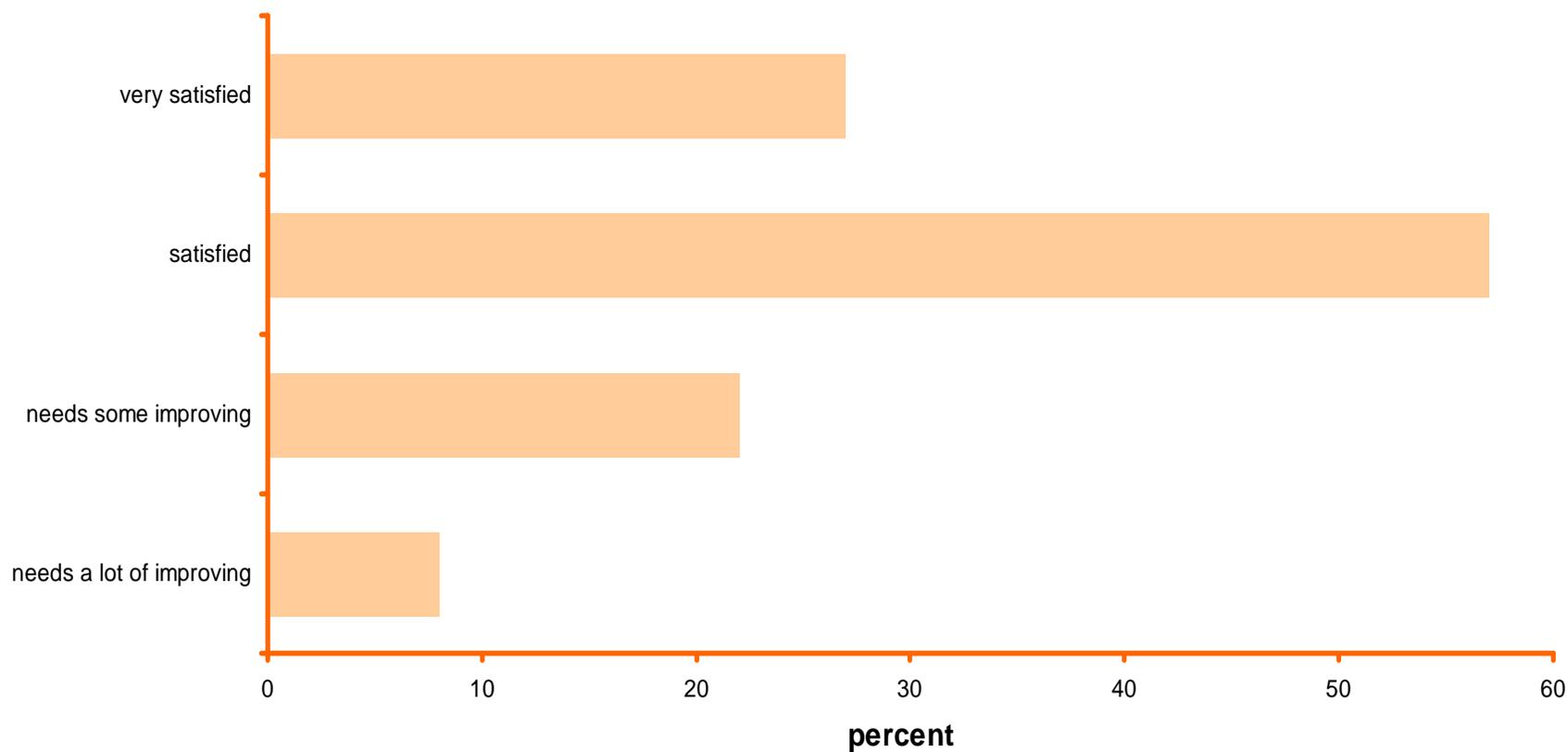
# Staff Survey

## Job Satisfaction (Transit staff survey 2005)



# Staff Survey

## Training (Transit staff Survey 2005)





*Merci Beaucoup*

