

Asset Performance Monitoring

Presentation to RCAF

11 August 2006

Objectives

To create a set of high level benchmarks that:

- Show progress against the objectives of the Land Transport Management Act
- Drive and demonstrate continuous improvement in best practice

The Team

Kaye Clark (convenor)

Transit New Zealand

Balt Gregorius

Land Transport New Zealand

Peter Dudson

NAMS

Siri Rangamuwa

Northshore City Council

Joe Hewitt

Wellington Regional Council

Mark Owen

Transit New Zealand

Rob Daniel

Westland District Council

Peter Cenek (consultant)

Opus International
Consultants

To Recap

- Identified 10 indicators
- Engaged Opus International Consultants
- Proposed to populate the 10 measures
- A few hopped in the too hard basket
- Created project stage 1 and stage 2
- Proceeded to populate first set with sample data

We are now working through the issues that arise

Decisions on Data

- Use publicly available statistics
 - Favour Land Transport NZ annual statistics
 - Use what we have now (original objective)
 - Propose improvements to base data over time
- Where data from local authorities is needed
 - We ask support from RCA to request it
 - Endeavour to use only publicly available data

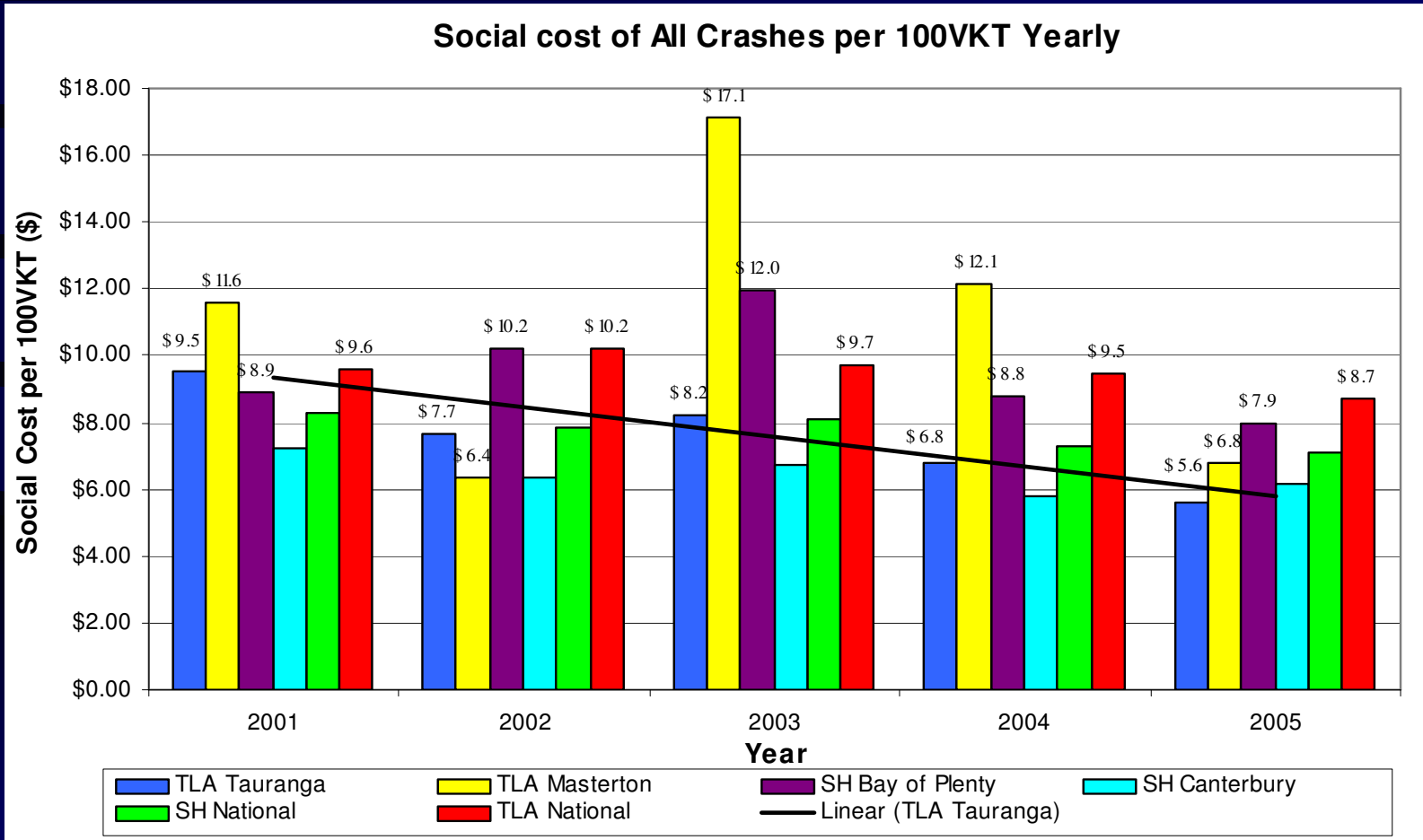
Original 10 measures

1. Safety: social cost/VKT
2. Stakeholder satisfaction: survey
3. Vehicle use: VKT/population
4. Asset condition: STE
5. Investment efficiency: expenditure/VKT

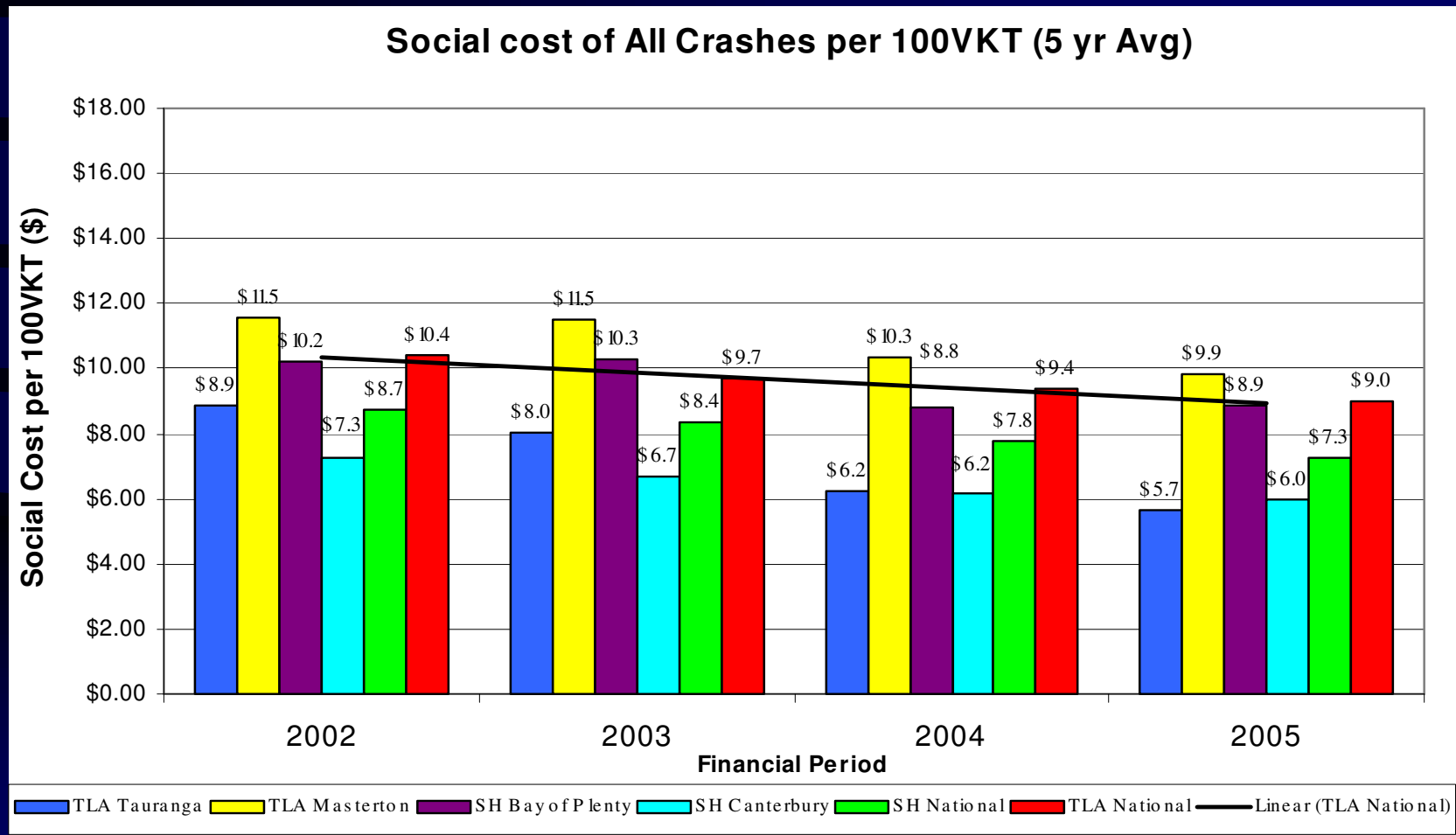
Original 10 measures

6. Customer satisfaction: survey
7. Management ability: EFTE/year/VKT
8. Environment/Energy: green house gas emissions
9. Congestion/route reliability: travel time
OR number disruptions/closures
10. LTCCP achievement: % projects,
expenditure

Safety - social cost per VKT



Safety - social cost per VKT



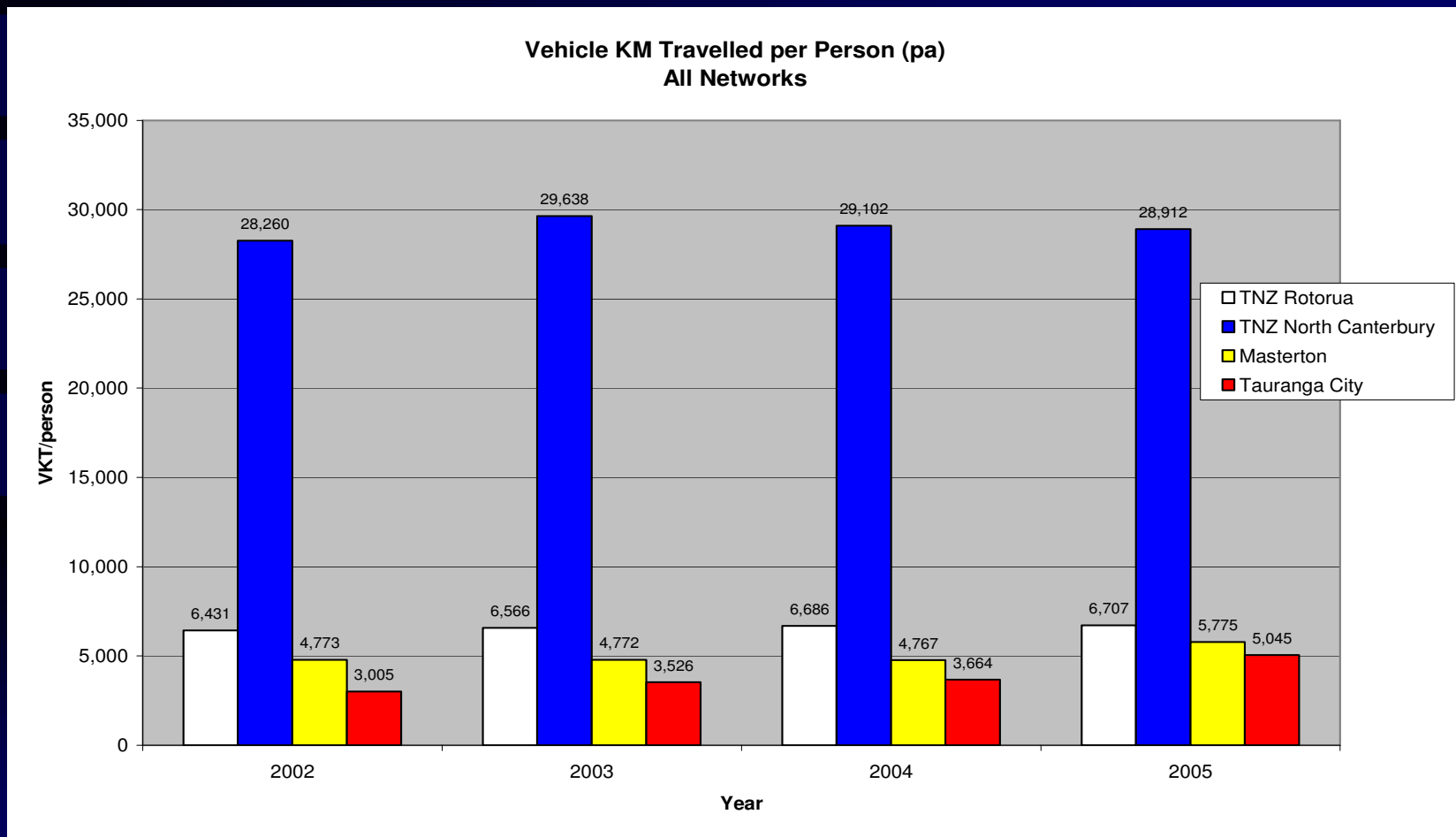
Safety Indicator - refinements

- Use 5 year average
- Social cost data is problematic
- Options
 - Use a weighting based on social cost or
 - Simply report crash numbers
- Contextural trend lines
 - VKT (growing)
 - The trend required to achieve 2010 targets

Stakeholder & Customer Satisfaction

- Stage 2
- Output would be a protocol for a survey
 - Sample sizes
 - Standardised questions
- Decisions for later
 - RCA's complete their own surveys
 - Opportunity for national approach

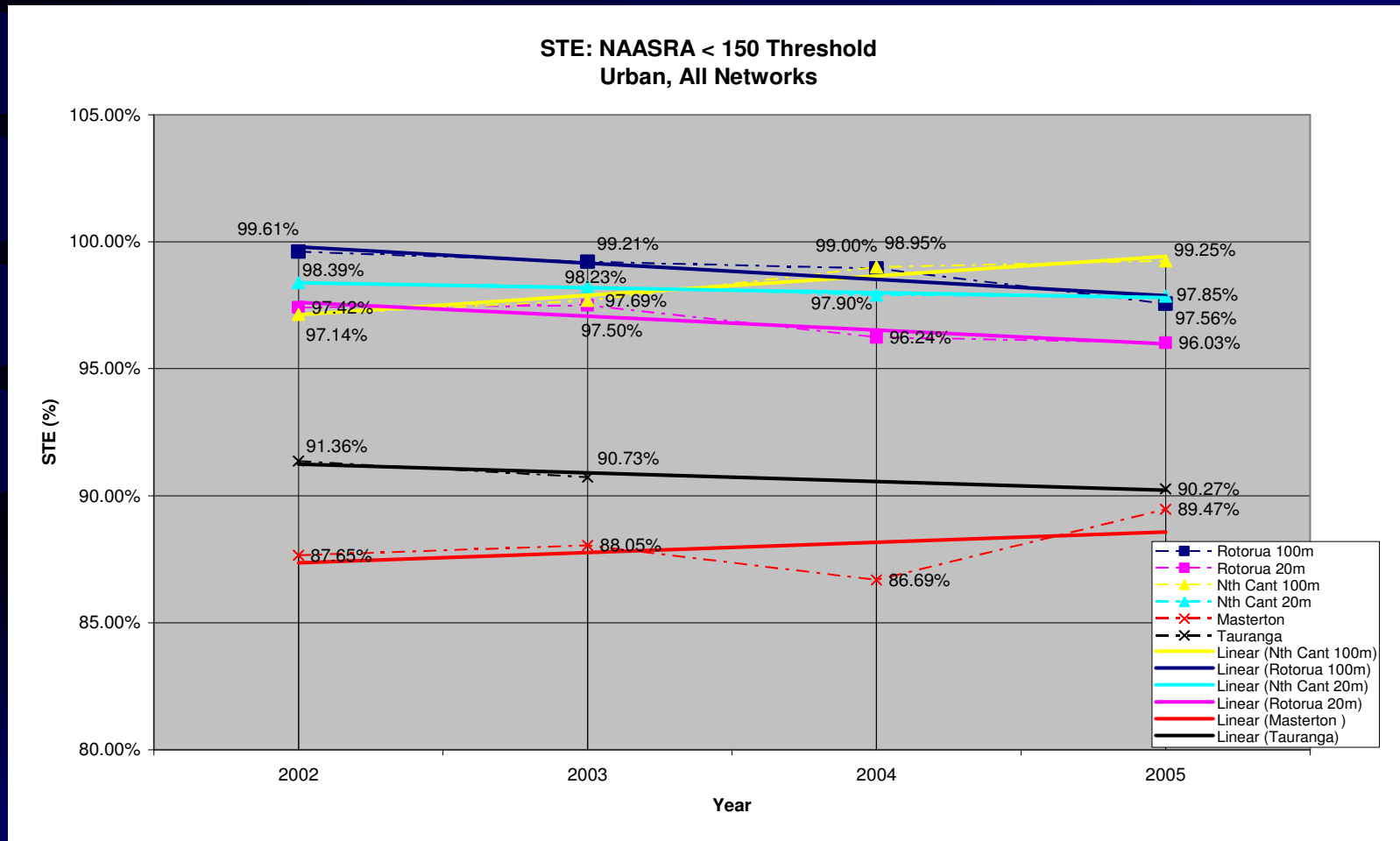
Vehicle Use – VKT/population



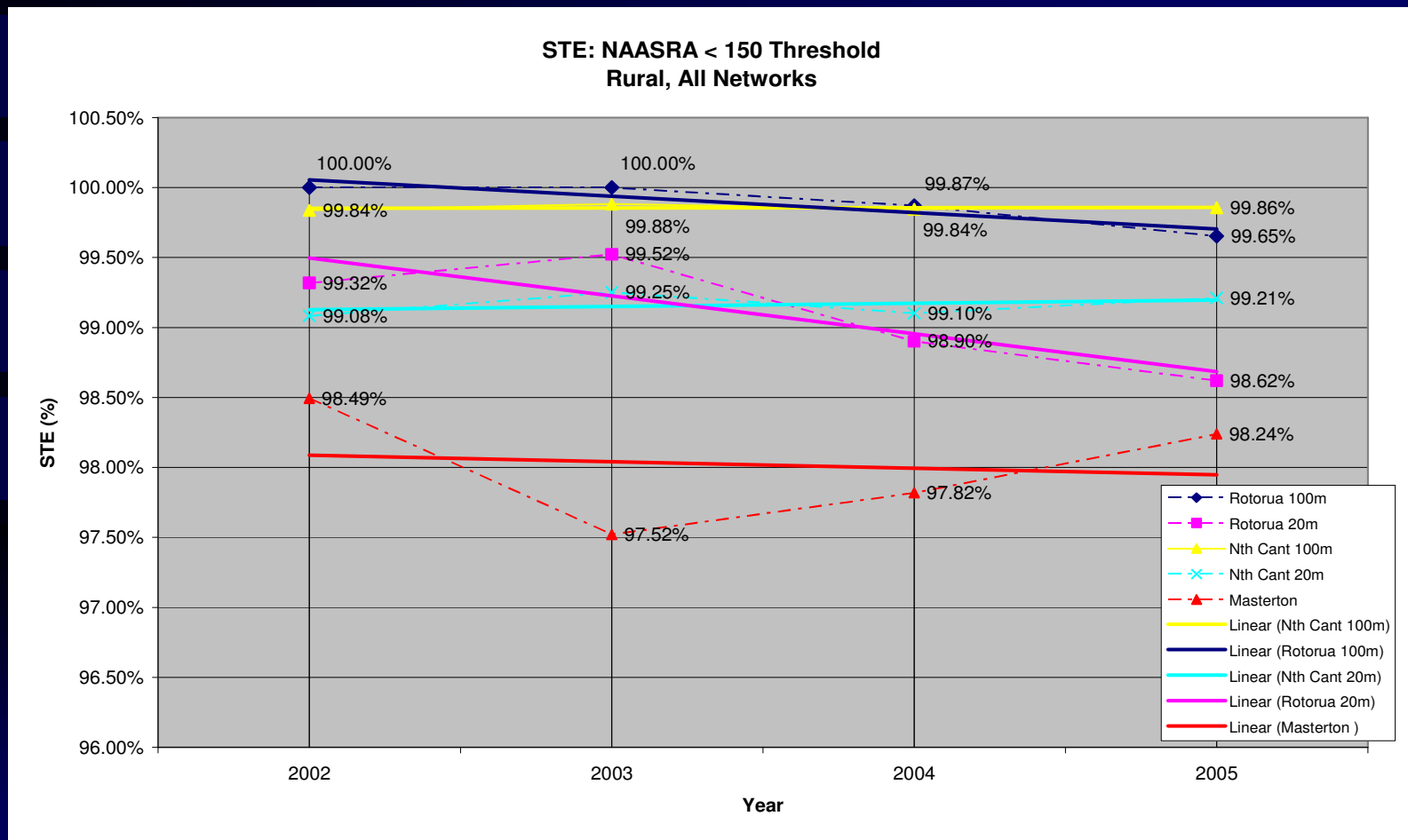
Vehicle Use – VKT/population

- Should trend down
- Contextural trend lines:
 - Population growth
 - National VKT/population
 - HCV/car VKT split
 - HCV VKT growth compared with GDP
- National HCV data incomplete
 - Traffic counting - Land Transport NZ study

Asset Condition - STE



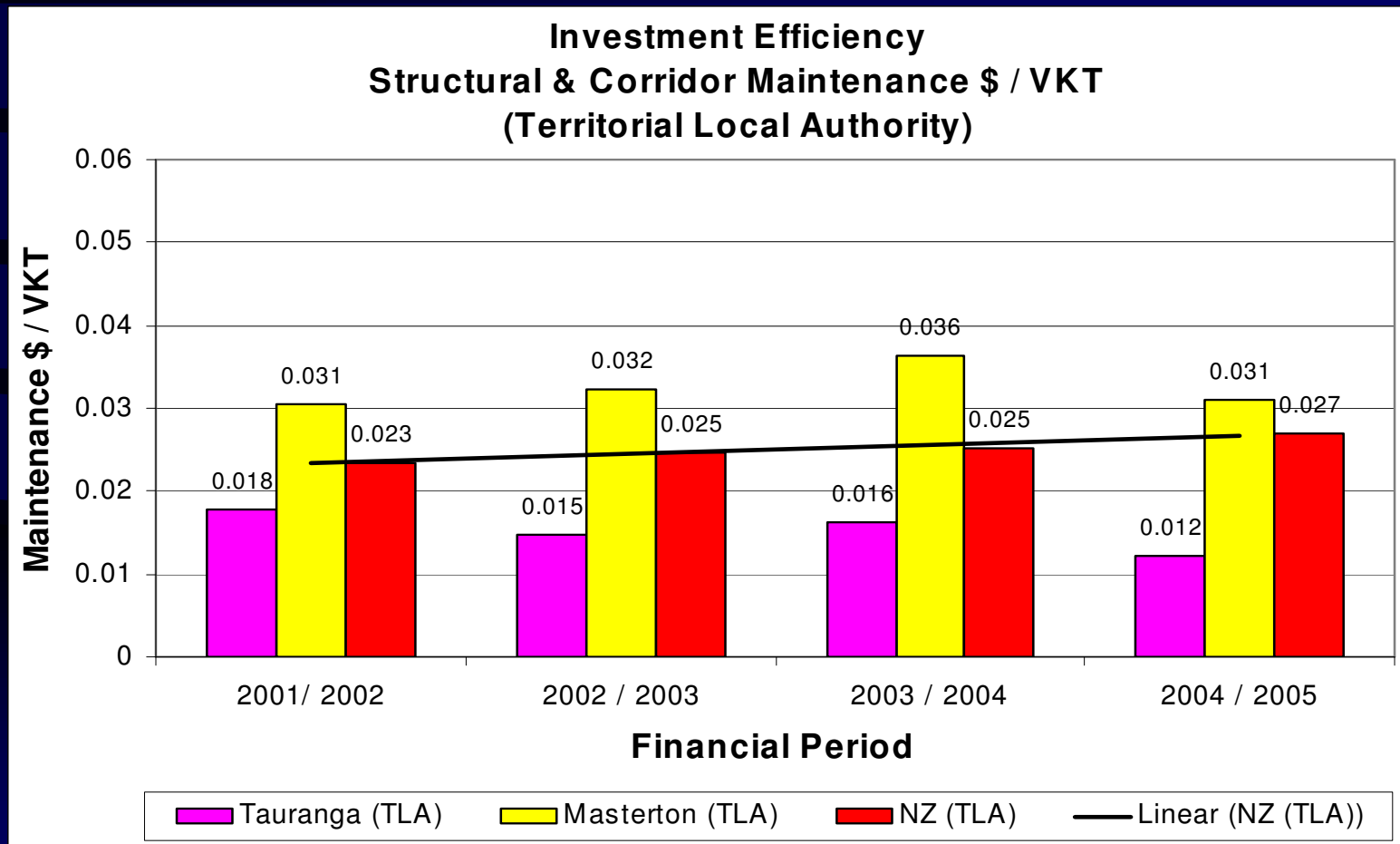
Asset Condition - STE



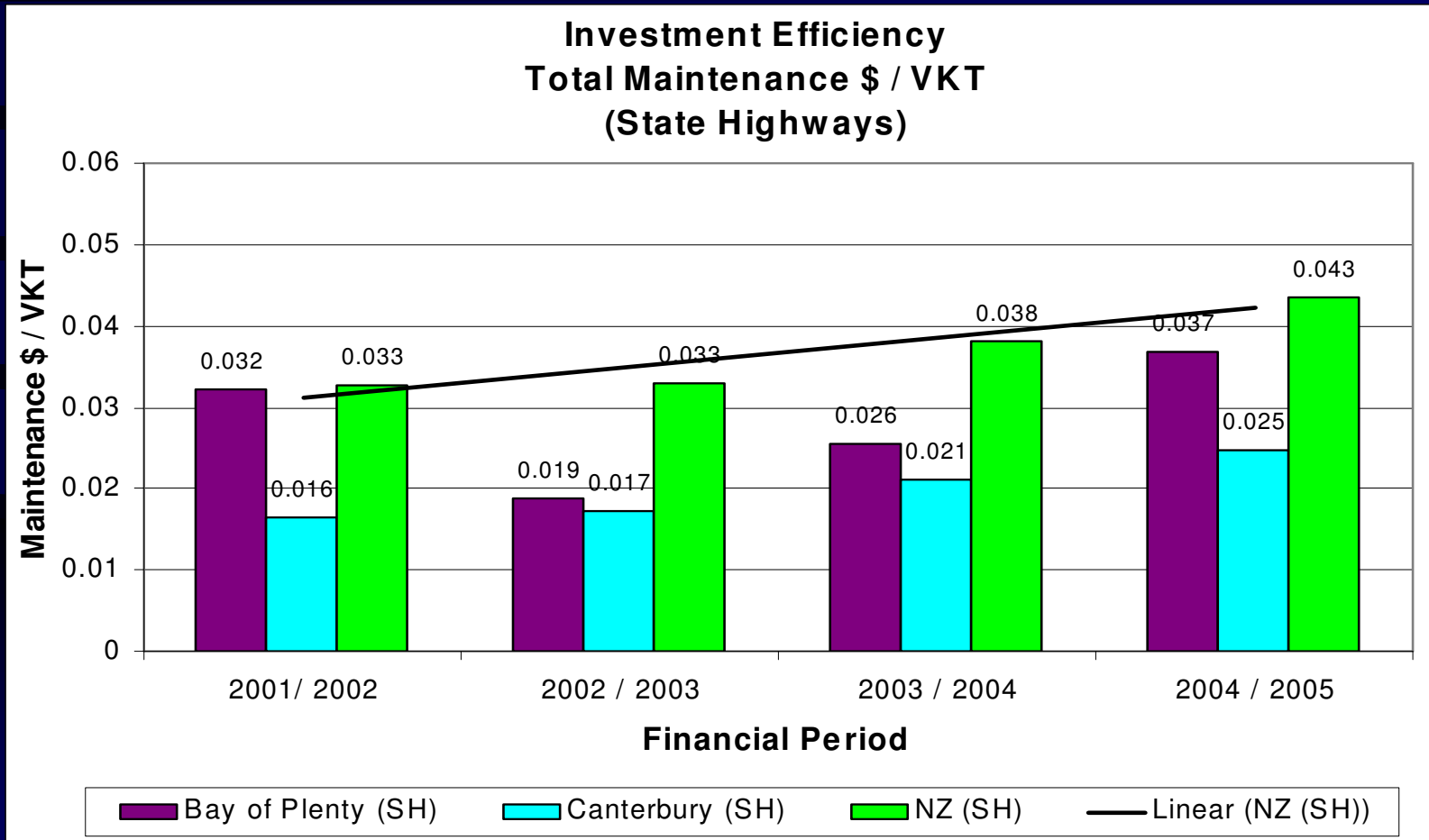
Asset Condition - STE

- Reviewed sampling frequency
 - 100 metres sampling most common
 - 20m sampling adds little value
- Questioning use of roughness as a pavement condition measure

Investment Efficiency



Investment Efficiency



Investment Efficiency

- Need to define expenditure
 - output 1 from Land Transport NZ statistics?
 - Include/exclude professional services?
 - Total maintenance and capital?
- Contextual trend lines
 - VKT (HCV) growth
 - Cost fluctuations
 - GDP

Management Ability

- Stage 2 – “Too hard basket”
- Issues:
 - Will look like the efficiency indicator
 - What makes up management costs/effort?
- How do we
 - Value human capital (varying productivity)?
 - Value people - by salary/skill/ability/knowledge?
 - Equate consulted work with employees?

Environmental/energy efficiency

- Stage 2
- Fundamental questions...
 - Is this a Ministry for the Environment project?
 - Where are the biggest opportunities?
 - Who is best positioned to deal with them?
- E.g. – vehicle emissions/fuel use
 - Do we modify the fleet – or
 - Address longitudinal gradients on all our roads?

Congestion/Route reliability

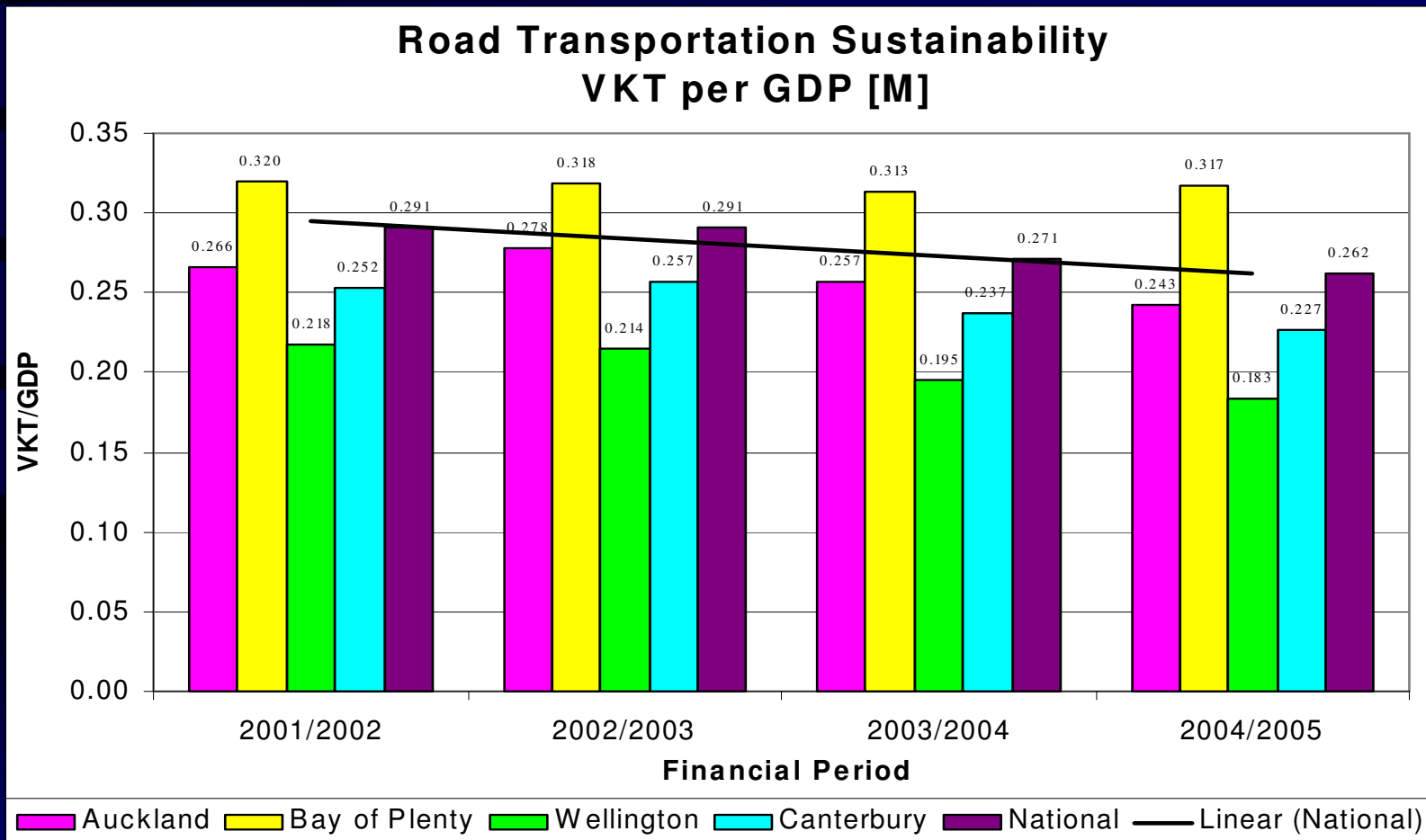
- Stage 2
- Key measures
 - Travel times
 - Road closures and delays

Road Transport Sustainability

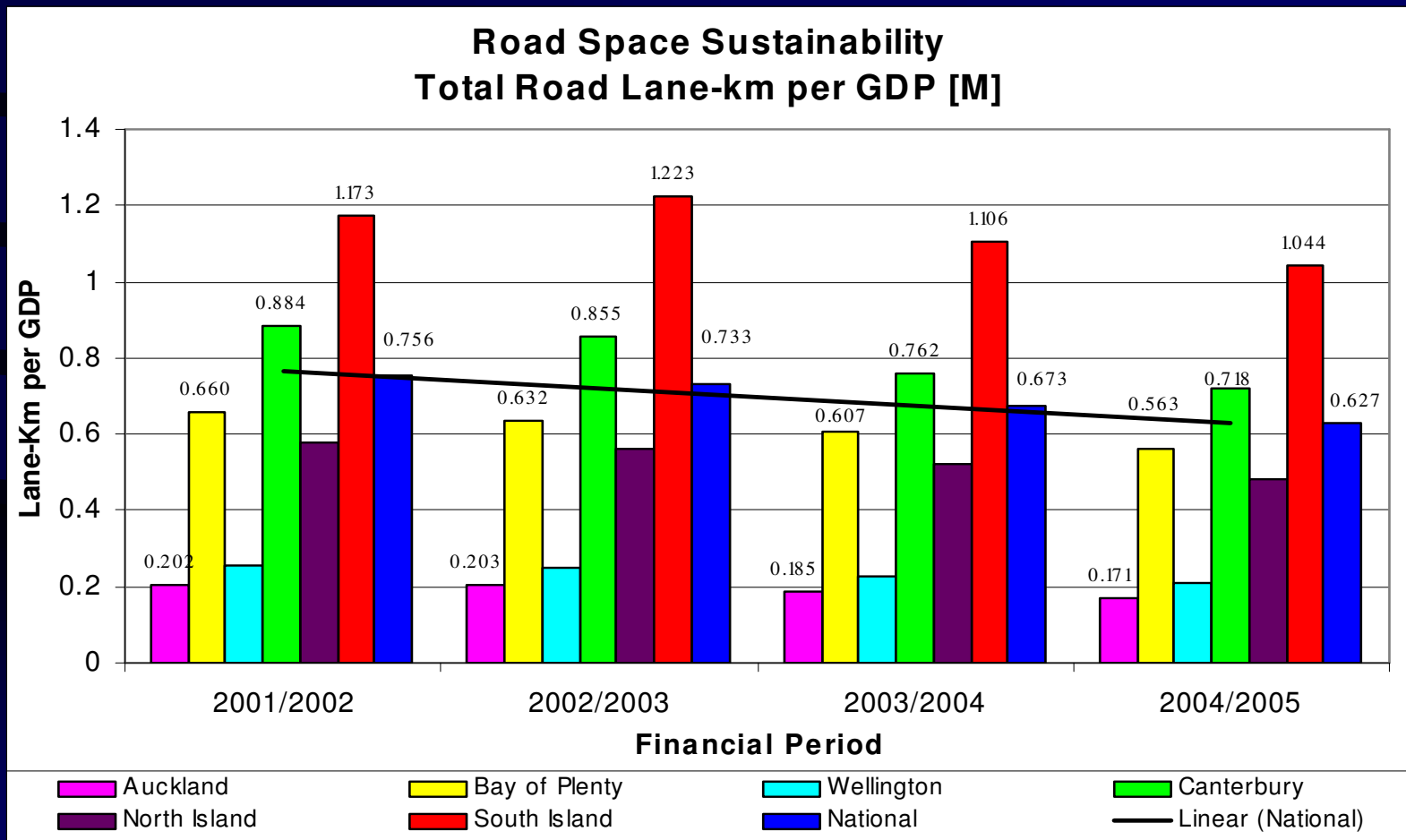
Ideally this would be....

“A measure derived to monitor the sustainability of the network from the perspective of the impact of traffic growth, road condition and the perception of safety and driveability”

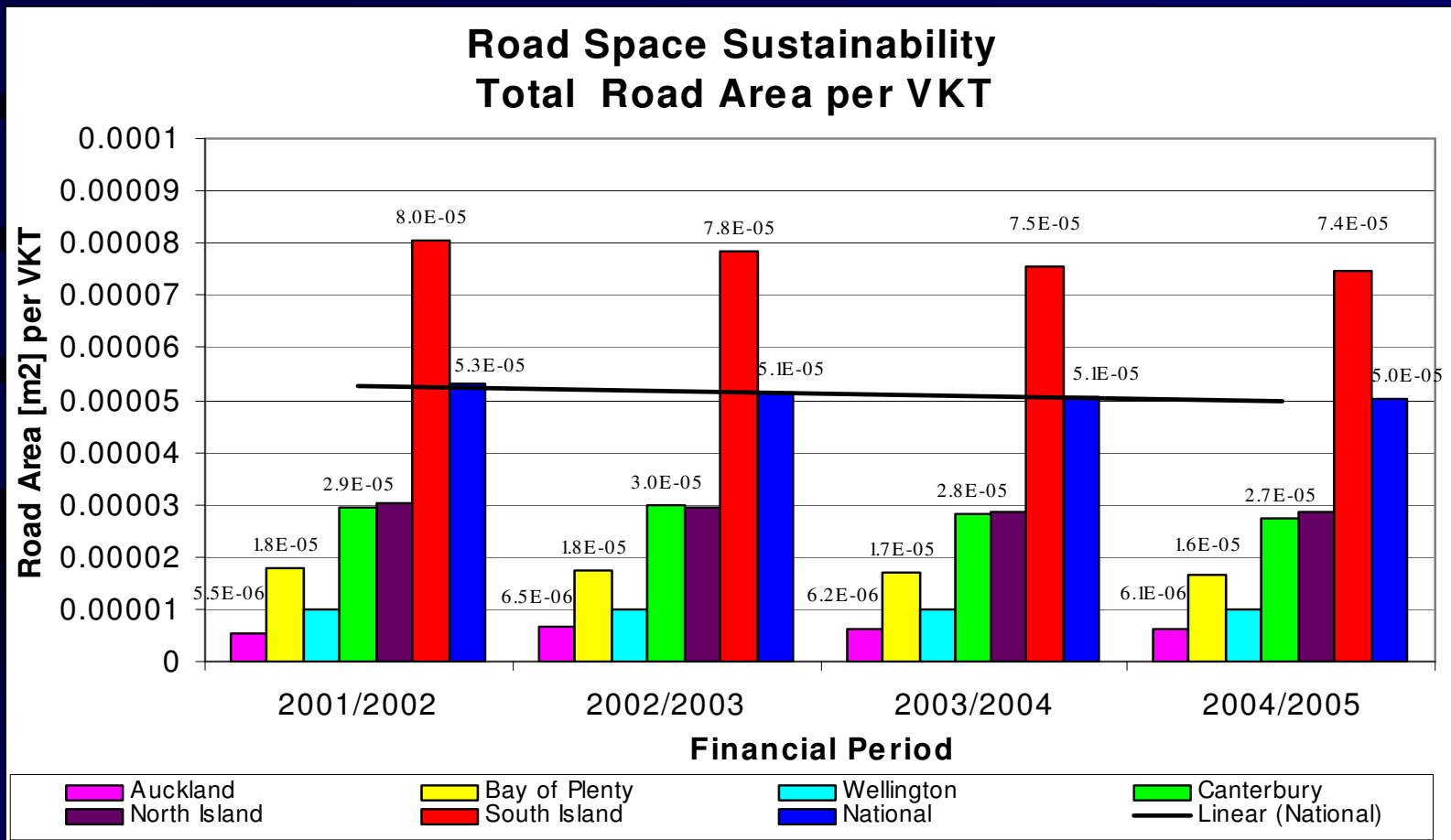
Road Transport Sustainability



Road Transport Sustainability

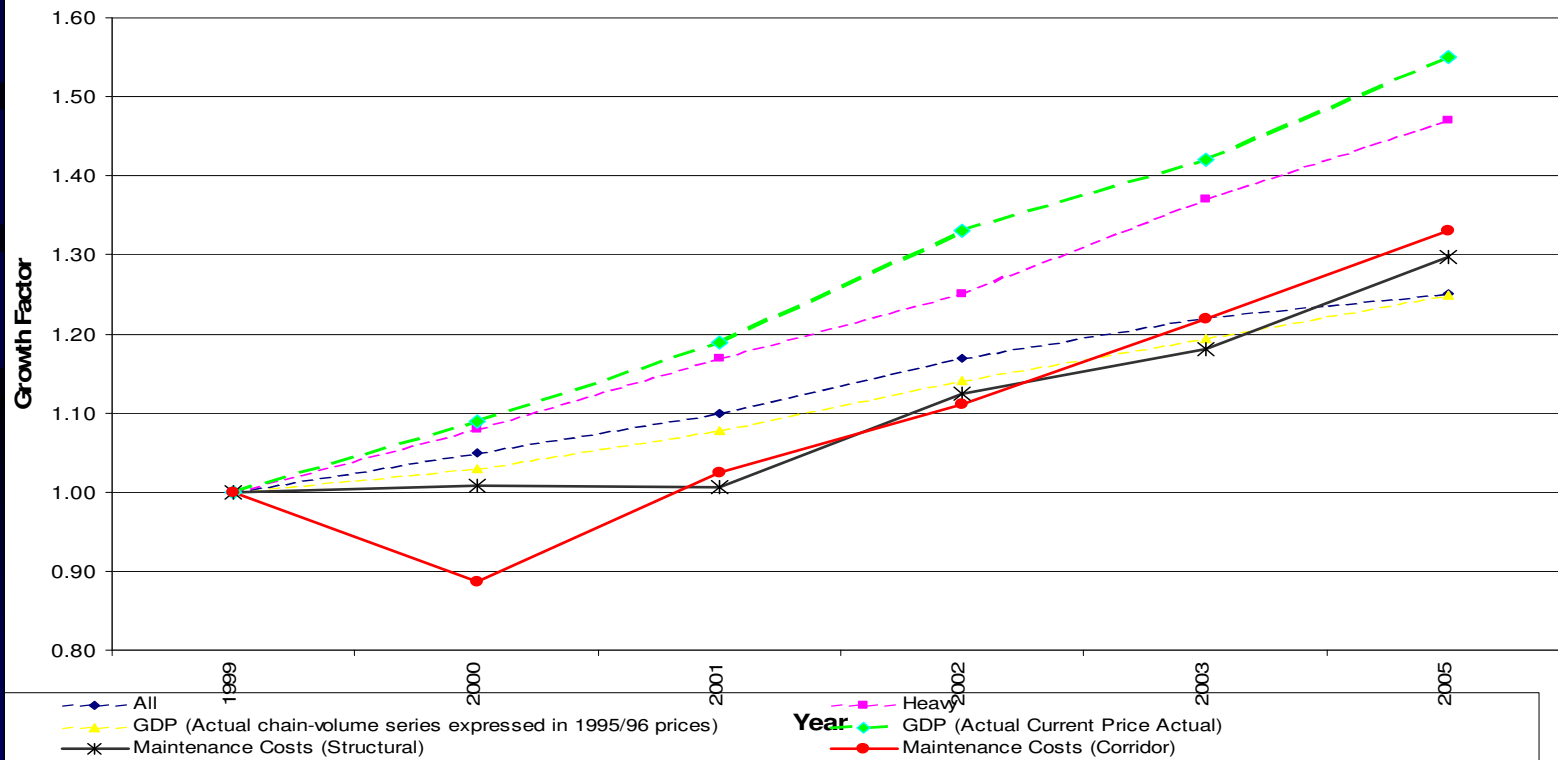


Road Transport Sustainability



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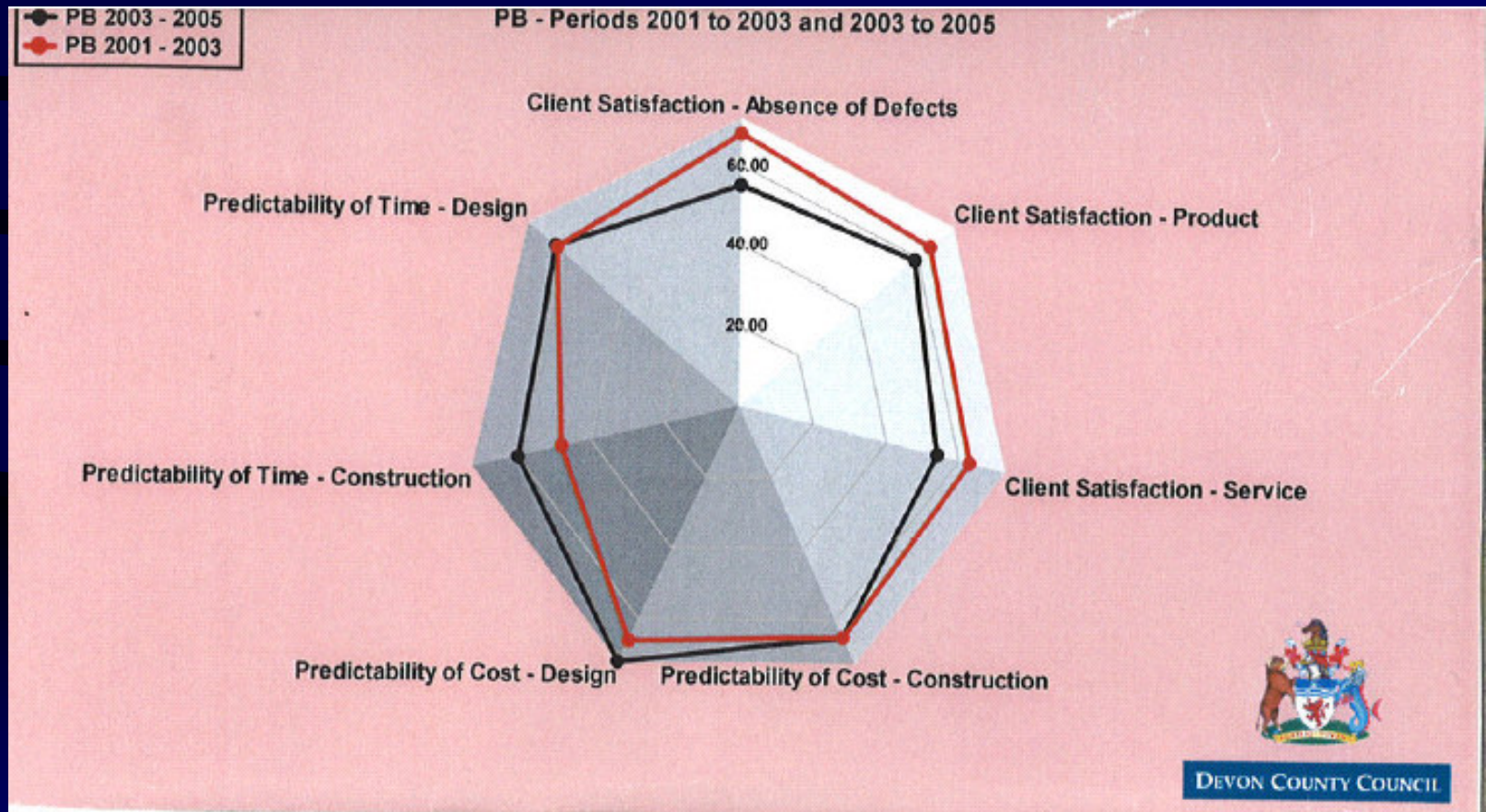
Transit New Zealand - Traffic Growth, GDP and Maintenance Costs
(Structural & Corridor)



UK Benchmarking

- Benchmarking clubs
 - Benchmarking coupled with peer review
 - RCAF is an established benchmarking club
- UK Indicators
 - Did not fully align with legislation
 - Did not tier up to national indicators

UK Radar Diagram



Summary

- Making progress
- We are continuing to
 - develop a full trial set
 - explore presentation formats
 - enhance measures with contextual data
 - present groups of indicators to “tell a story”
 - determine areas where data will need improvement

Questions for you!

- Are we going in the right direction?
- Have you any feed back?
- Do you want to know anything I haven't covered?

See or contact:

 **me or one of the team** 

 **today or later** 