Where will you put your first and last $
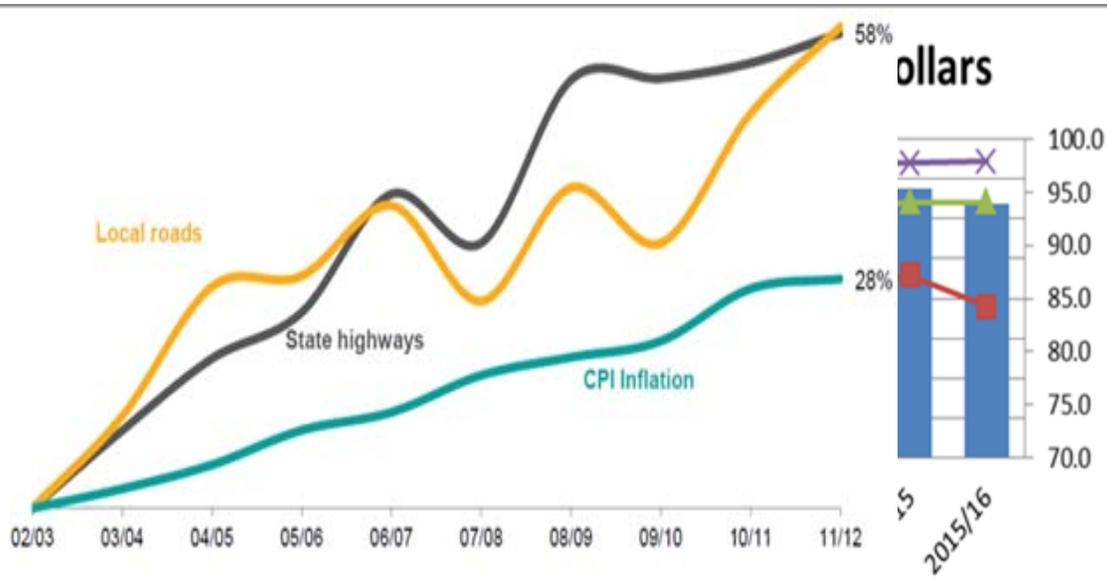
Mark Yaxley

LOW
VOLUME
ROADS
WORKSHOP
2017

Increase in unit cost of maintenance, operations and renewal per km relative to 2002/03

- STE All Roads
- PII All Roads
- CI for All Roads

✓ **Result:**

Improved returns from road maintenance

112. Nationally there has been good progress on improving value for money from road maintenance. The One Network Road Classification has set agreed customer levels of service for each type of road along with relevant performance standards. The collaborative approach taken through the Road Efficiency Group has improved maintenance procurements and operation practices.

113. State highway maintenance expenditure and the cost per kilometre of maintenance are decreasing in many regions, signalling that the efficiency of maintenance investment is increasing.

114. The GPS will support this result through:
- ongoing investment in network maintenance to ensure it provides the appropriate customer levels of service
- fully embedding the One Network Road Classification, Customer Levels of Service Standards, and performance measures.

Low volume roads are important

Local road ONRC distribution

0.3%
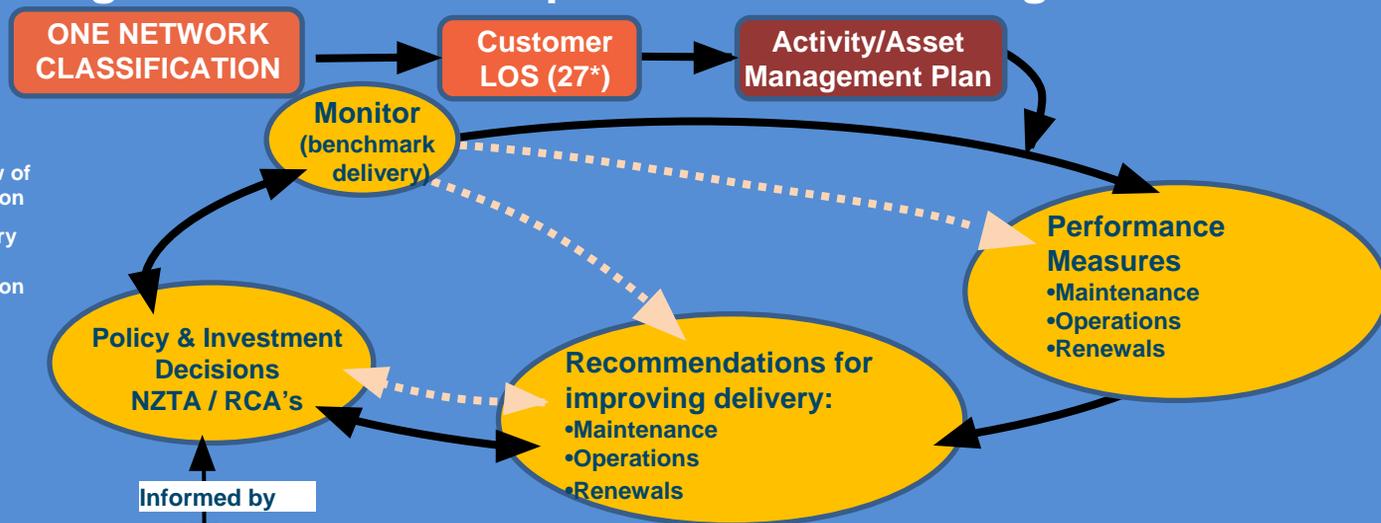
0.01%

3.6%

65.7%

Access &
low volume
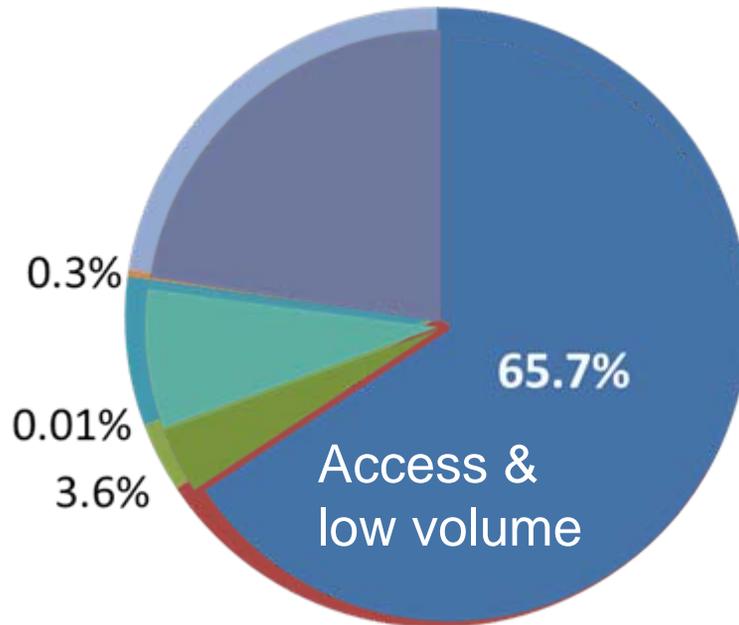
Of the 66%
~ half are unsealed

And account for
~ 20% of spend
(averaged
nationally)

Delivering customer outcomes and value for every $$ through improved performance of NZ's roading network

Responding to the RMTF: Implementation challenges

ONE NETWORK CLASSIFICATION → **Customer LOS (27*)** → **Activity/Asset Management Plan**

Monitor (benchmark delivery)

Performance Measures
- Maintenance
- Operations
- Renewals

Policy & Investment Decisions NZTA / RCA's

Recommendations for improving delivery:
- Maintenance
- Operations
- Renewals

KEY

Main flow of information

Secondary flow of information

- case studies published and more to be prepared:
- Examples of good practice to embed ONRC in Asset Management Planning and delivery
- Guidelines/templates
- Lifting Sector capability
- Procurement practise

Informed by

- GPS (2018-27)
- NZTA Investment assessment framework
- NLTP and input documents, e.g, Regional Land Transport Programs, Council LTP's, State Highway Plan
- Local Government 30 year infrastructure strategies

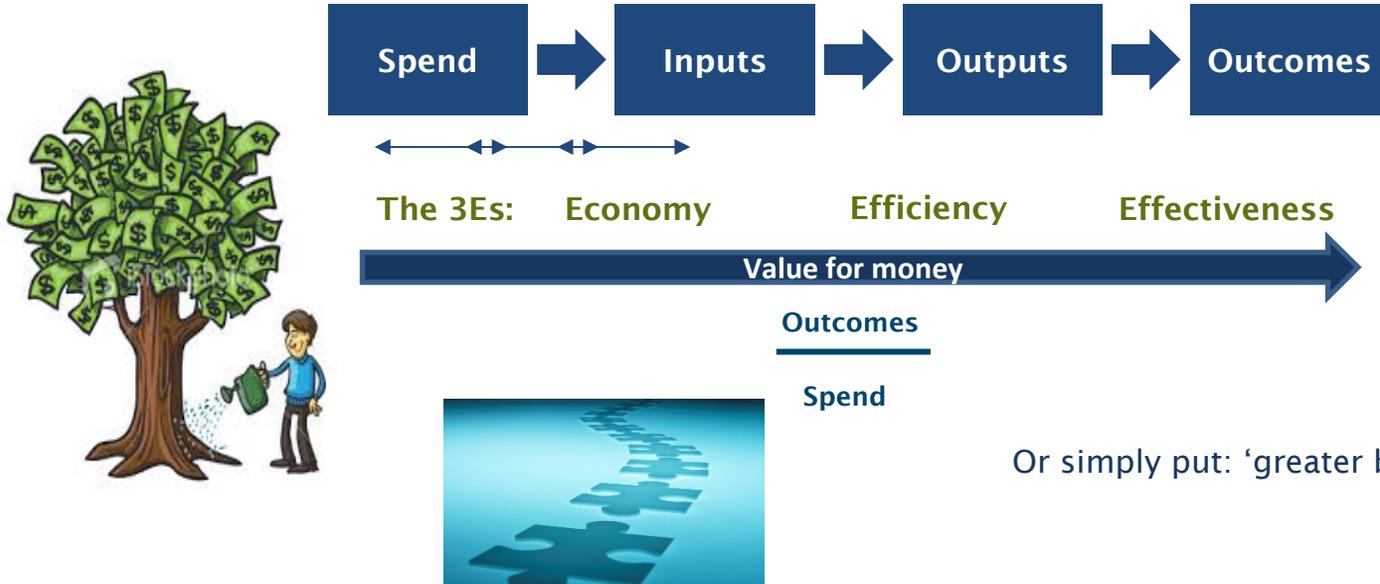**Activity/Asset Management Plan is informed by business case principles and best practice tools including:**

- Whole of life optimised decision making (eg DTIMS)
- Condition assessment
- Risk assessment
- Procurement approach.
- GIS
- Capability building

- Forecasting assumptions
  - Use (now and in future)
  - Vehicle mix
  - Mitigation/mode
  - Population
  - Economic activity
  - Social activity
  - Valuation
  - Maintenance Strategies
  - Financial

Preparation of these tools involves   LGNZ,   REG,   RCA's,   NZTA,   RTU (& Equip),   SOLGM,   IPWEA and suppliers

What is Value for Money?

Not about 'slash and burn' or cost reduction

Is about providing best outcomes given the spend

The VFM formula

| Spend | → | Inputs | → | Outputs | → | Outcomes |

The 3Es: Economy   Efficiency   Effectiveness

Value for money

$$\frac{\text{Outcomes}}{\text{Spend}}$$

Or simply put: 'greater bang for your buck'

'A tough road but the right road'

Supporting informed decisions

"Reflections from our Audits: Investment and asset management"

- a report by the Controller and Auditor-General (July 2017)

|	
[Often] better information is needed about the condition and performance of assets. This information needs to analysed and used to monitor asset performance, and, in the case of physical assets, to make good choices and judgements about maintaining, renewing and replacing assets to optimise the delivery if public assets."	And "Public entities generally need to be better at measuring the performance of their assets and reporting information about assets to governors, so informed decision can be made by those ultimately accountable for the delivery of services."

Build your case for first and last $$ on solid foundations

Solid understanding of issues and opportunities to be addressed

•**Supported by robust data**

•**Do you understand your critical risks?**

•**How does your network and cost of delivery compare to others?**

•**Will your programme deliver a sustainable and affordable network at the right levels of service for your community and consistent with ONRC levels of service in the long-run?**

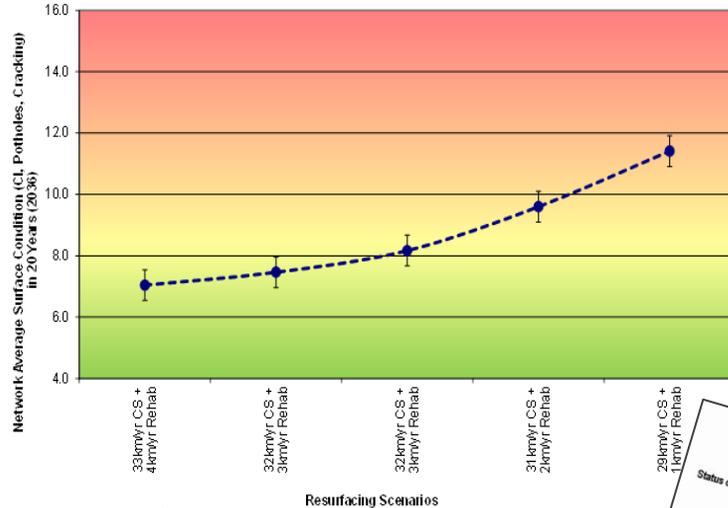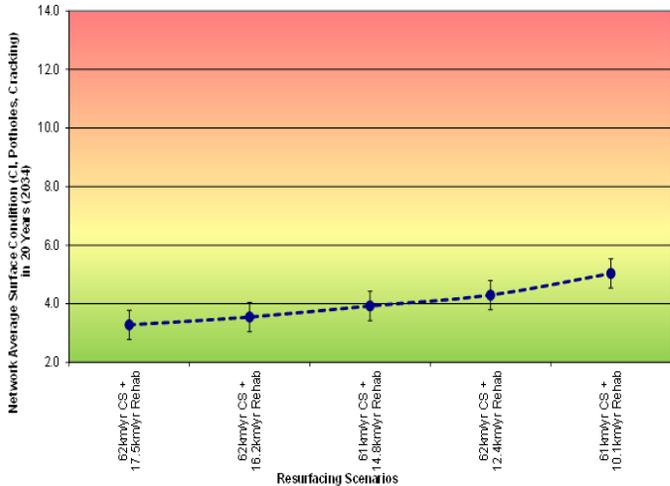What does your REG data quality report indicate?

How good is your u/s data?

30%

48%

22%

KNOWN FLOOD PRONE AREA

New Zealand Government
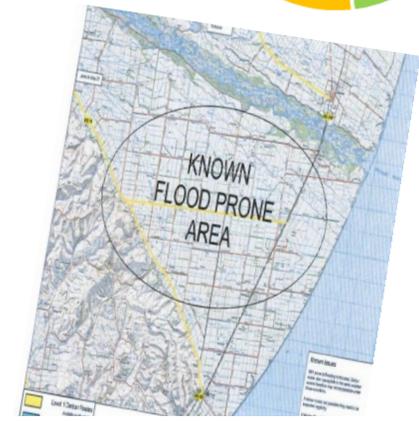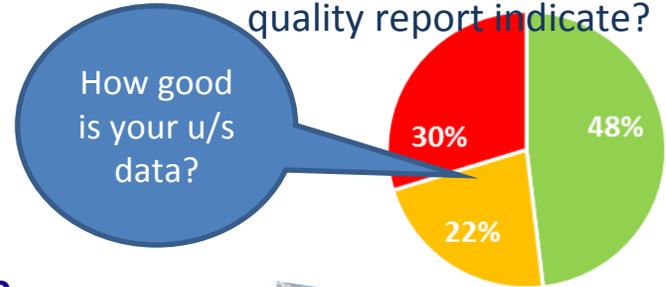
There is lots spent on modelling tools and outputs - BUT

Figure 8: Sensitivity of Two Networks (within RATA group) for Varying Budget Levels

"Optimisation analysis has demonstrated a **15 to 25%** efficiency gain .... and allows councils to develop a roadmap towards achieving certain levels of service expectations on respective ONRC classes"

Observations from the RATA work

Similar issues to the general trends earlier plus;

- traffic data quality and gaps affect ability to model,
- condition related data tends to be visual rating and roughness alone which are poor indicators of pavement health
- over all councils modelled only about 15% have wider FWD type pavement strength data

IDS

Status of Asset Analytics in New Zealand

November 2016

REAAA
Driving Progress
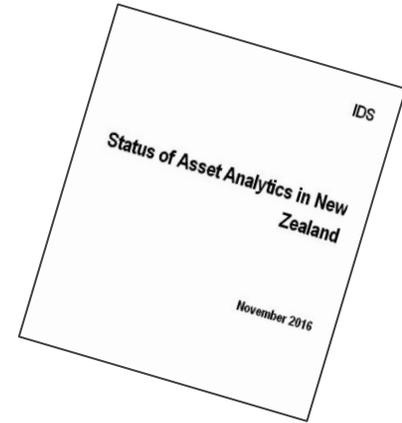
Wil your programme deliver VFM?

An

W

•W
pe

Common tensions

Meeting your customers needs
•the urgent (today - often reactive)

vs

•the important (best WOL)

Affordability

Capacity and capability

NZ TRANSPORT AGENCY
WAKA KOTAHI

New Zealand Government

The art is telling your complex AMP / BC story in simple terms

Paraphrasing Ross Waugh's lecture series on Asset Management

Producing something that's incredibly complex might show that you are masterful at modelling and everything else like that BUT - if nobody else can understand it or wants to buy into it, then you have really just had a lot of fun modelling.

At the end of the day, what produces the action is then reducing that to a simple problem statement that says, we've done all these analyses but this is the problem.

You have to understand something intimately to take it from complex to simple. It's a real challenge

Einstein summed it up: "Make everything as simple as possible, but not simpler"

Applying the fundamentals of the BCA will help you articulate your activity / asset management plan to management / governance and the community

Thanks for listening.

Questions?

References

Controller and Auditor-General	http://www.oag.govt.nz/2017/asset-reflections
REG	http://www.nzta.govt.nz/assets/Road-Efficiency-Group-2/docs/IDS-Report-Status-of-Modelling-Analytics-for-publication.pdf
- case studies	http://www.nzta.govt.nz/assets/Road-Efficiency-Group-2/docs/ONRC-Case-Study-WaitakiDC.pdf
REG – data quality project	http://www.nzta.govt.nz/resources/rca-data-quality-reports/
Inframanage – Ross Waugh	http://inframanage.com/