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Conference*



Sustainable
Communities
Sharing
Knowledge
ROTORUA | 7-11 JUNE 2015

*Using Road Benchmarking to Report on the
Status of Councils' Road Assets*

June 2015

Introduction

❖ What is benchmarking?



❖ Process of measuring what an organisation does

- Identifying
- Understanding
- Adapting outstanding practices from other organisations considered to be best-in-class



❖ Why benchmark?

- Focuses on best practices
- Strives for continuous improvement partnering to share information
- Needed to maintain a competitive edge
- Adapting based on customer needs after examination of the best



Asset reporting



- ❖ How do we currently report on our assets
- ❖ Is it effective
- ❖ Is it for the
 - Engineer
 - Council, or the
 - Community

What is reported?

- ❖ This varies across states and countries
 - Generally we all report on
 - value of assets
 - asset management plans
 - integrated planning and reporting (Aus), Long Term Plan
 - long term community plans
 - NSW
 - Special Schedule 7
 - Backlog (Cost to Satisfactory)
 - Renewals
 - Maintenance
 - New Zealand
 - Report on service level as part of annual report

Example of asset reporting

Note 9a. Infrastructure, Property, Plant & Equipment

\$ '000	as at 30/6/2013					Asset Movements during the Reporting Period					as at 30/6/2014				
	At	At	Accumulated		Carrying	Asset Additions	WDV of Asset Disposals	Depreciation Expense	WIP Transfers	Adjustments & Transfers	At	At	Accumulated		Carrying
	Cost	Fair Value	Dep'n	Impairment	Value						Cost	Fair Value	Dep'n	Impairment	Value
Capital Work in Progress	988	-	-	-	988	2,715	-	-	(980)	-	2,723	-	-	-	2,723
Plant & Equipment	-	11,182	8,561	-	2,621	732	(207)	(409)	-	40	-	11,480	8,703	-	2,777
Office Equipment	-	6,383	5,661	-	722	181	-	(620)	-	(40)	-	6,524	6,281	-	243
Furniture & Fittings	-	1,121	846	-	275	12	-	(89)	-	-	-	1,134	935	-	199
Land:															
- Operational Land	-	196,964	-	-	196,964	4	(806)	-	-	-	-	196,162	-	-	196,162
- Community Land	-	87,453	-	-	87,453	-	-	-	-	-	-	87,452	-	-	87,452
Land Improvements - non depreciable	-	4,588	-	-	4,588	1	-	-	-	-	-	4,589	-	-	4,589
Land Improvements - depreciable	-	15,094	4,550	-	10,544	63	-	(284)	-	-	-	15,157	4,835	-	10,322
Buildings - Non Specialised	-	67,269	36,158	-	31,111	130	-	(2,055)	10	264	-	67,672	38,213	-	29,459
Buildings - Specialised	-	37,539	19,589	-	17,950	24	-	(832)	-	(264)	-	37,299	20,421	-	16,878
Other Structures	-	9,303	3,487	-	5,816	52	-	(394)	-	-	-	9,355	3,881	-	5,474
Infrastructure:															
- Roads	-	652,615	158,163	-	494,452	3,667	-	(4,508)	84	-	-	656,366	162,671	-	493,695
- Bridges	-	181	6	-	174	545	-	(9)	242	-	-	968	15	-	953
- Footpaths	-	9,553	222	-	9,331	595	-	(89)	38	-	-	10,186	312	-	9,874
- Stormwater Drainage	-	76,664	44,219	-	32,445	-	-	(478)	-	-	-	76,664	44,697	-	31,967
- Swimming Pools	-	8,606	4,992	-	3,615	46	-	(258)	-	-	-	8,652	5,249	-	3,403
- Other Infrastructure	-	4,442	83	-	4,359	955	-	(130)	605	-	-	6,002	213	-	5,789
Other Assets:															
- Library Books	-	3,838	2,230	-	1,608	300	-	(513)	-	-	-	4,139	2,744	-	1,395
- Other	-	1,268	928	-	339	-	-	(115)	-	-	-	1,268	1,042	-	226
TOTAL INFRASTRUCTURE, PROPERTY, PLANT & EQUIP.	988	1,194,063	289,696	-	905,355	10,022	(1,013)	(10,783)	(0)	-	2,723	1,201,069	300,212	-	903,580

Additions to Buildings & Infrastructure Assets are made up of Asset Renewals (\$4,496) and New Assets (\$2,559). Renewals are defined as the replacement of existing assets (as opposed to the acquisition of new assets).

Refer to Note 24 - Fair Value Measurement for information regarding the fair value of other Infrastructure, Property, Plant & Equipment.

Example of asset reporting cont.

Special Schedule No. 7 - Report on Infrastructure Assets as at 30 June 2014

\$'000

Asset Class	Asset Category	Estimated cost to bring up to a satisfactory standard ⁽¹⁾	Required Annual Maintenance ⁽²⁾	Actual Maintenance 2013/14 ⁽³⁾	Written Down Value (WDV) ⁽⁴⁾	Assets in Condition as a % of WDV ^{(4), (5)}				
						1	2	3	4	5
Buildings	Other Buildings	192	201	1,084	16,877	0%	4%	76%	18%	2%
	Specialised Buildings	1,994	2,004	171	29,460	8%	20%	50%	17%	5%
	sub total	2,186	2,205	1,255	46,337	5.1%	14.2%	59.5%	17.4%	3.9%
Other Structures	Other Structures	-	183	142	5,474	4%	3%	81%	12%	0%
	sub total	-	183	142	5,474	4.0%	3.0%	81.0%	12.0%	0.0%
Roads	Sealed Roads Surface	6,052	12,312	3,429	428,444	22%	33%	31%	12%	2%
	Bridges	1,000	346	815	953	5%	3%	79%	11%	1%
	Footpaths	1,173	1,464	1,131	9,875	51%	30%	12%	5%	2%
	Kerb and Gutter	1,675	2,091	86	45,777	2%	31%	57%	8%	2%
	Road Furniture	149	472	67	3,101	18%	47%	25%	8%	2%
	Signs	147	350	-	3,771	37%	38%	17%	6%	2%
	Traffic Device	370	146	354	12,601	14%	63%	18%	3%	2%
	sub total	10,566	17,181	5,882	504,522	20.6%	33.6%	32.6%	11.2%	2.0%

Example of asset reporting cont.

\$ '000	Amounts	Indicator	Prior Periods	
	2014	2014	2013	2012
Infrastructure Asset Performance Indicators Consolidated				
1. Building and Infrastructure Renewals Ratio				
Asset Renewals (Building and Infrastructure) ⁽¹⁾	<u>4,496</u>	53.79%	70.13%	97.63%
Depreciation, Amortisation & Impairment	8,359			
2. Infrastructure Backlog Ratio				
Estimated Cost to bring Assets to a Satisfactory Condition	<u>17,420</u>	0.03	0.08	0.13
Total value ⁽²⁾ of Infrastructure, Building, Other Structures & depreciable Land Improvement Assets	607,814			
3. Asset Maintenance Ratio				
Actual Asset Maintenance	<u>7,900</u>	0.38	0.19	0.18
Required Asset Maintenance	20,617			
4. Capital Expenditure Ratio				
Annual Capital Expenditure	<u>9,009</u>	0.83	0.96	1.88
Annual Depreciation	10,820			

Example of asset reporting cont.

TEN YEAR PLAN MEASURES AND LEVEL OF SERVICE

PERFORMANCE MEASURES - ACTIVITY OUTCOME								
What this measure tells us	Measure	Unit	2013/14 Target	2013/14 Results	Comments on 2013/2014 Results	2012/13 Results	Comments on 2012/13 Results	Baseline 06/07 Actual or as otherwise stated
Level of safety for people moving around the city (factual)	Number of people that were injured or killed in crashes across the city (cyclists, pedestrians, vehicle occupants). Data Source: New Zealand Transport Agency (NZTA) Crash Analysis System	No.	Decreasing	Achieved 27 Pedestrians 22 Cyclists 124 Vehicle Occupants (Year to 31/12/13)	Vehicle occupant injuries continue to drop along with pedestrian and cyclist injuries. This is reflected in the perception of the level of safety on the road network.	Partially achieved 31 Pedestrians 25 Cyclists 140 Vehicle Occupants (Year to 31/12/12)	There has been a significant drop in vehicle occupant injuries, however it is disappointing to note that cyclist and pedestrian injuries have remained fairly static.	17 - cyclists 25 - pedestrians 181 - vehicle occupants
Level of safety for people moving around the city (perception)	Of residents who cycle, walk or drive around the city, the percentage that feel "safe" when doing so on the cycleways, footpaths or roads. * safe in its broader sense, including personal safety / security. Data Source: Tauranga City Council (TCC) - annual residents' survey	No.	Increasing	Mainly Achieved Cycling 48% Walking 83% Driving 74%	It is pleasing to note the upward trend for driving and cycling. A number of new cycling and safety projects have been added to the network; approximately 9km of new cycle lanes and/or cycle paths and 18 safety projects.	Partially Achieved Cycling 46% Walking 84% Driving 66%	It is pleasing to note the upward trend for walking and cycling. 7.8km of new cycle lanes and/or cycle paths have been installed in the past 12 months, along with 1.1km of new footpaths which die city improves safety for cyclists and pedestrians. However the significant drop for driving is of concern and does not directly correlate with the reduction in vehicle occupant injury statistics.	18% - cycling 60% - walking 40% - driving 06/07 Actual
Efficiency of the transport network (factual)	All day congestion indicator, which is the minutes of delay* per km of travel on key city routes. *delay is calculated as the actual travel time less what the travel time would be at the speed limit. Data Source: NZTA - Tauranga Traffic System Performance Monitoring Report (Beca - six monthly)	Mins/km	No increase	Not achieved 0.37 (Nov 2013 Report)	The results were influenced by road works sites, particularly in the Papamoa area.	Achieved 0.32 (Nov 2012 Report)	The results were influenced by road works sites around the city. Whilst the travel delay time has reduced slightly it could have been better without so many road works being undertaken at the time of the survey.	0.4 minutes of delay per km travelled (Nov 2005 report)

Example of asset reporting *cont.*

MEASURE

The number of potholes, cycleway faults and footpath trip hazards identified each year.

2013/14 TARGET: NO MORE THAN 750



MEASURE

The number of complaints about the “look and feel” of the network, including cleanliness and landscaping.

2013/14 TARGET: NO MORE THAN 670



How can benchmarking help?

❖ What do we currently measure?

- | | |
|--------------------------------|------------------------------|
| • Provision | What we own or manage? |
| • Investment | How much do we spend? |
| • Operations | How do we manage our assets? |
| • Infrastructure Management | What condition are they in? |
| • Environmental Sustainability | Is what we do sustainable? |

*the
Whole
Story*

What assets do we own / manage?



Council	Road km / 10,000 Residents	Group Mean
	25.66	
	25.70	
Council A	27.16	32.22
	27.70	
	30.45	
	33.76	
	40.54	
	46.80	

Council	Kerb and Channel km / 10,000 Residents	Group Mean
	48.9	
Council A	52.7	57.0
	53.0	
	53.4	
	53.7	
	58.3	
	66.6	
	69.3	

Council	Footpath km / 10,000 Residents	Group Mean
	25.2	
	30.7	
	36.1	
Council A	41.5	39.2
	41.7	
	44.1	
	44.7	
	49.2	

What are our assets worth?

Council	Gross Replacement Cost / km	Group Mean
	\$ 443,749	
	\$ 546,513	
	\$ 736,680	
	\$ 776,869	
	\$ 918,986	
	\$ 1,070,854	
	\$ 1,327,415	
Council A	\$ 2,233,518	\$ 1,006,823

Council	Annual Depreciation / km	Group Mean
	\$ 7,773	
	\$ 7,979	
	\$ 11,078	
	\$ 12,140	
Council A	\$ 13,501	\$ 12,984
	\$ 14,550	
	\$ 16,205	
	\$ 20,644	

Council	Written Down Value / km	Group Mean
	\$ 321,793	
	\$ 412,742	
	\$ 497,280	
	\$ 549,908	
	\$ 695,525	
	\$ 696,900	
	\$ 798,453	
Council A	\$ 1,733,957	\$ 713,320

What do we spend?

Council	\$ M & O / km	Group mean
	\$ 2,748	
Council A	\$ 2,990	\$ 7,892
	\$ 4,808	
	\$ 7,164	
	\$ 8,012	
	\$ 11,329	
	\$ 11,884	
	\$ 14,204	

Council	\$ Renewal / km	Group Mean
	\$ 4,408	
	\$ 6,230	
	\$ 6,981	
	\$ 8,627	
Council A	\$ 11,171	\$ 9,859
	\$ 11,251	
	\$ 11,566	
	\$ 18,637	

Council	M&O as % of CRC	Group Mean
Council A	0.13%	0.93%
	0.62%	
	0.65%	
	0.67%	
	0.90%	
	1.46%	
	1.47%	
	1.55%	

What condition are our assets in?

Council	% of Roads in Condition 4 & 5	Group Mean
	1%	
	1%	
	4%	
	4%	
	8%	
	14%	
Council A	20%	10.11%
	30%	

Council	% of Drainage Assets in Condition 4 & 5	Group Mean
	0.0%	
	1.3%	
	4.0%	
	4.5%	
	10.8%	
Council A	13.7%	12.5%
	24.0%	
	41.4%	

Council	% of Footpath Assets in Condition 4 & 5	Group Mean
	0%	
	1%	
	1%	
	4%	
Council A	4%	5%
	7%	
	10%	
	13%	

Council	% of Kerb and Channel Assets in Condition 4 & 5	Group Mean
	0%	
	0%	
	1%	
	5%	
Council A	9%	6%
	23%	
	9%	
	0%	

How do we manage our assets?

Council	Maintenance in House staff	Group Mean
	2%	
	26%	
	50%	
	71%	
	88%	
Council A	100%	67%
	100%	
	100%	

Council	Capital Work in House staff	Group Mean
	0%	
	0%	
	0%	
	15%	
	26%	
Council A	39%	20%
	57%	
	#	

Council	Operational Staff / 100km of road	Group Mean
	-	6.22
	1.13	6.22
	1.69	6.22
	3.76	6.22
	6.44	6.22
Council A	9.27	6.22
	7.26	6.22
	14.02	6.22

Council	Cost of Road Accidents / Km	Group mean
	\$ 22,879	
	\$ 32,660	
Council A	\$ 34,902	43,139
	\$ 41,309	
	\$ 42,360	
	\$ 44,248	
	\$ 49,723	
	\$ 77,034	

Are we sustainable?

Council	Tonnes of Rubbish per SQID	Group Mean
	-	
	-	
	-	
	-	
	1.56	
	5.18	
Council A	12.27	11.35565
	26.42	

- ❖ There are other environmental measures, however few councils are collecting this data at the moment, and we would encourage them to collect and report on these initiatives
 - Volume or weight of recycled materials
 - Volume of warm mix asphalt
 - Percent of materials reused or recycled etc

Yardstick Roads

- ❖ Is subscription based
- ❖ Is industry driven
 - ❖ What should be benchmarked?
 - ❖ What works and what doesn't work?
- ❖ Benchmarks business inputs
- ❖ Future Improvements
 - Improved online reporting
 - Development of automated improvement plans

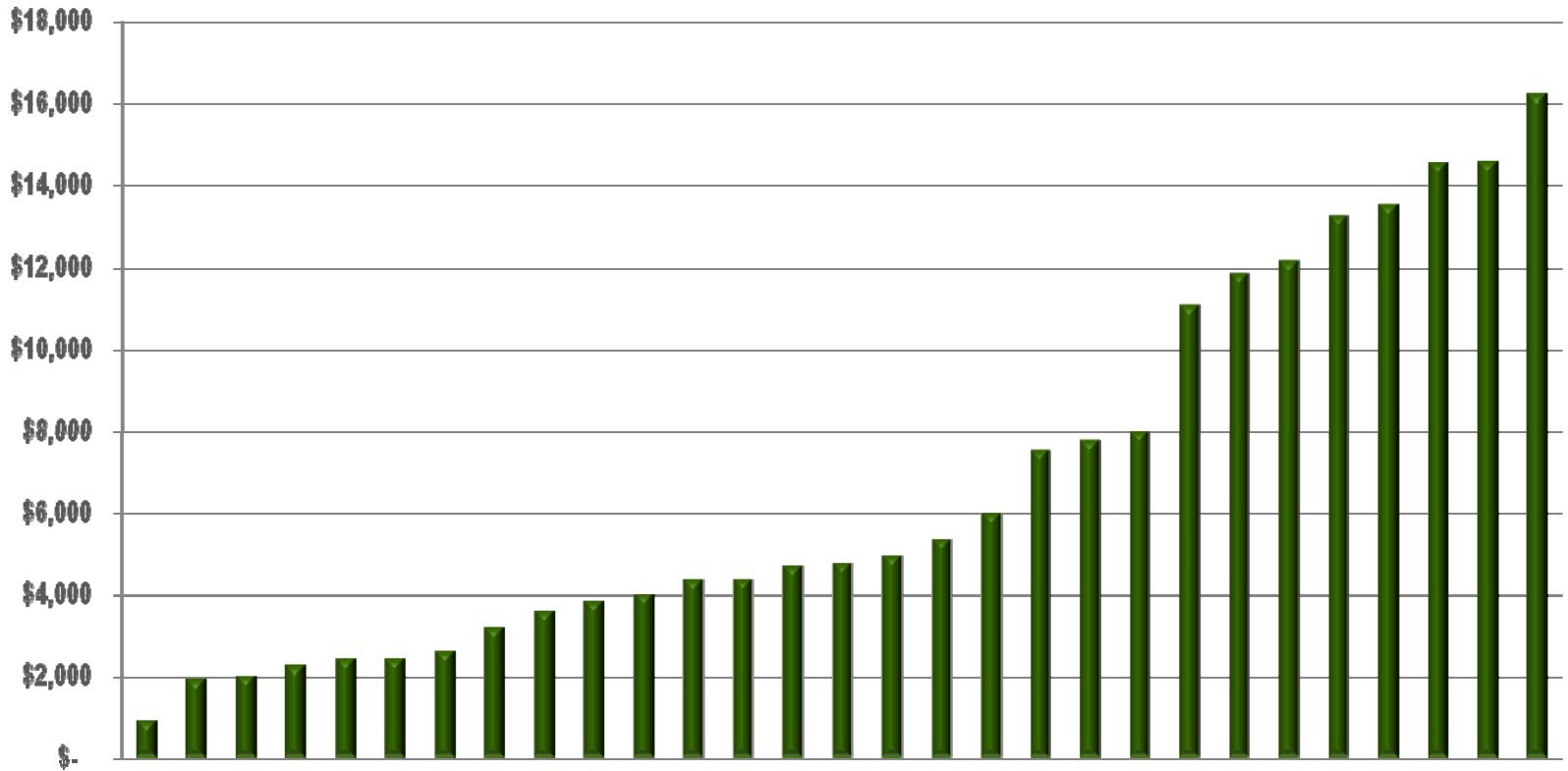
Yardstick Roads (cont.)

- ❖ Overseen by an industry advisory group
- ❖ Annual user group meetings
- ❖ Online benchmark questionnaire is released annually
- ❖ Detailed guidelines
- ❖ Onsite desk based audit
- ❖ No anonymous reporting – information sharing

Yardstick Roads *(cont.)*

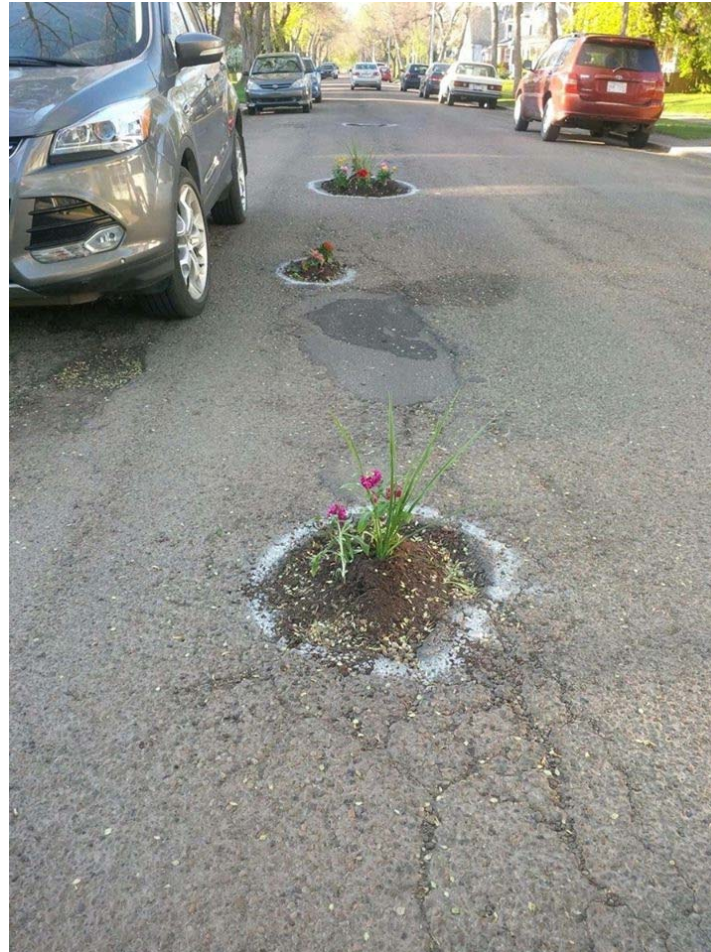
- ❖ Online reporting allows you to compare your council to any council you like
- ❖ Over 200 different graphs and charts
- ❖ Provides an overall picture of your road assets
- ❖ Drives improvement in performance of managing roads
- ❖ Assets are broken down into the various asset components and reported on where information is available

Depreciation / km - Roads



Conclusion

- ❖ Benchmarking is about encouraging best or good practice and avoiding solutions like this





local government
procurement
alliance partnering
long term financial plan
asset management
waste management
governance
financial/feasibility modeling
economic development
sustainability