

Lessons learned from one of New Zealand's most challenging civil engineering projects: rebuilding the earthquake damaged pipes, roads, bridges and retaining walls in the city of Christchurch 2011 - 2016.

Example of PDAT - Calibration Balance

Story: Pipe Damage Assessment Tool (PDAT)

Theme: Design

A diagram which shows outputs from PDAT calibration/validation (with explanations).

This document has been provided as an example of a tool that might be useful for other organisations undertaking complex disaster recovery or infrastructure rebuild programmes.

For more information about this document, visit www.scirtlearninglegacy.org.nz



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Count	CCTV Says			Total		Quantity	Percent
	Renewal	Repair	No Action				
PDA Tool	Renewal	66	0	10	76	80	66.7%
	Repair	30	0	0	30	110	91.7%
	No Action	0	0	14	14	10	8.3%
	Total	96	0	24	120		

Length	CCTV Says			Total		Quantity	Percent
	Renewal	Repair	No Action				
PDA Tool	Renewal	3587.6	0	476.7	4064.3	3895.7	63.0%
	Repair	1809.5	0	0	1809.5	5705.2	92.3%
	No Action	0	0	308.1	308.1	476.7	7.7%
	Total	5397.1	0	784.8	6181.9		

Count (%)	CCTV Says			Total	
	Renewal	Repair	No Action		
PDA Tool	Renewal	86.8%	0.0%	13.2%	100.0%
	Repair	100.0%	0.0%	0.0%	100.0%
	No Action	0.0%	0.0%	100.0%	100.0%

Length (%)	CCTV Says			Total	
	Renewal	Repair	No Action		
PDA Tool	Renewal	88.3%	0.0%	11.7%	100.0%
	Repair	100.0%	0.0%	0.0%	100.0%
	No Action	0.0%	0.0%	100.0%	100.0%

Quantity	Percent
80	66.7%
110	91.7%
10	8.3%

Quantity	Percent
3895.7	63.0%
5705.2	92.3%
476.7	7.7%

Validation - by individual

Validation - by length

Explanation of Validation Results:

- 63% of PDAT predictions exactly matched the actual CCTV survey assessment
- 92.3% of PDAT predictions matched the Action (Renewal or Repair) or No Action (No Action) CCTV