

Improving operational efficiency in public works through a focus on plant & vehicle (fleet) assets

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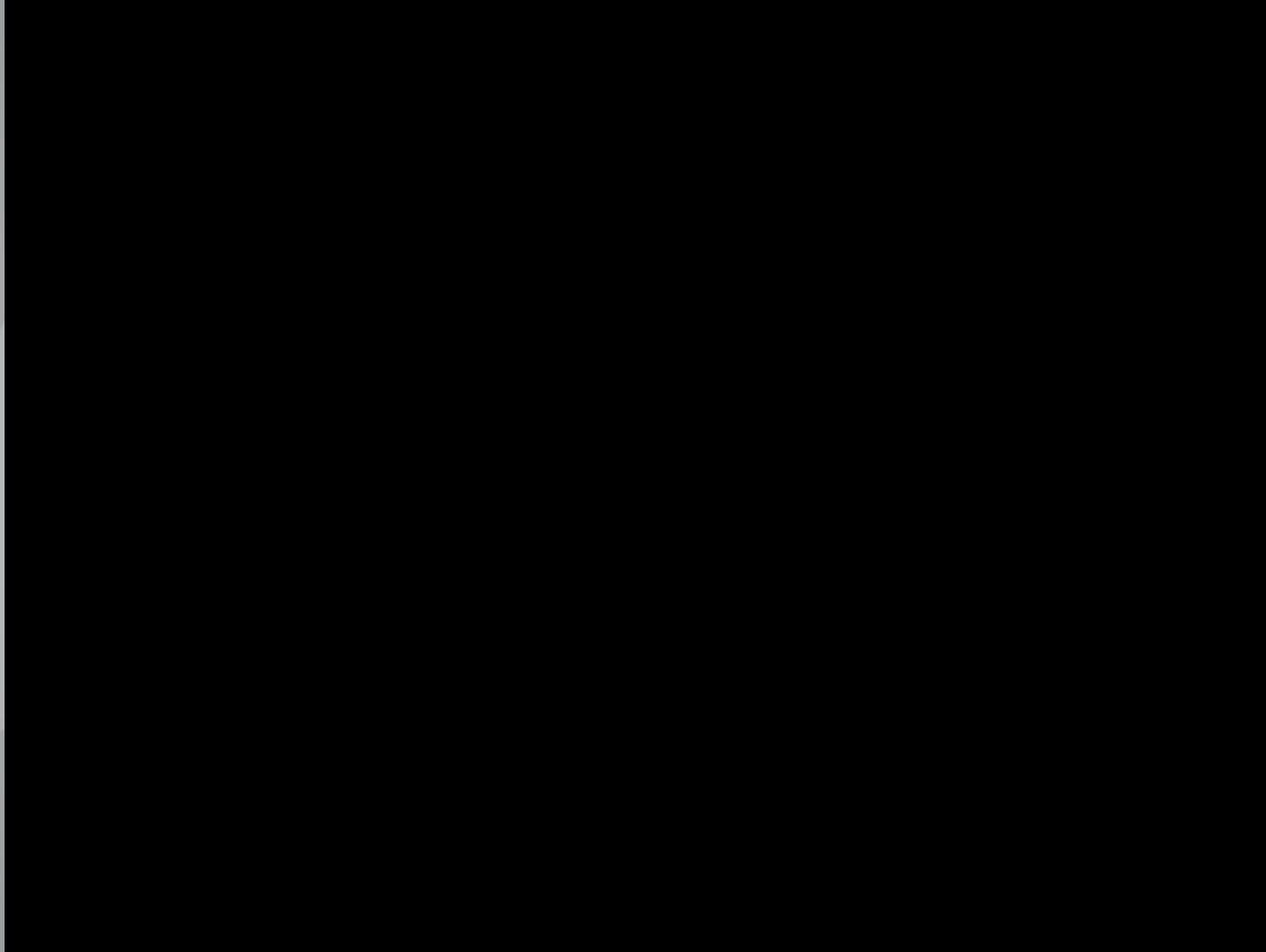


Maximising operational efficiency through a focus on fleet is about:

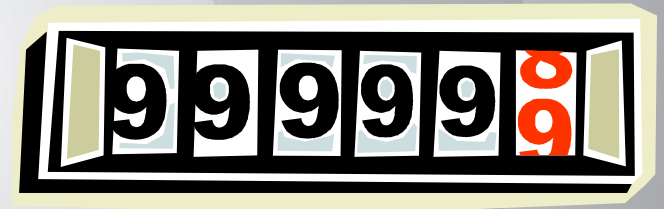
- Knowing fleet utilisation
- Optimum replacement
- Astute buying decisions
- Proactive maintenance
- Investigating failures
- Knowing downtime costs
- Service level agreements



Operational Efficiency



Utilisation



Utilisation Applications

- Compare to IPWEA national benchmarks
- Low utilisation:
 - Delay replacement
 - Replace with hire
 - Exceptions.eg specialist vehicles
- High utilisation:
 - Bring forward replacement
 - More frequent servicing



Are you measuring utilisation?

What is the information being used for?

Optimum Replacement

- Optimum time to replace item to achieve lowest average annual cost during its life
- Triggered by:
 - ✓ utilisation or
 - ✓ Age

.....whichever occurs first



Optimum Replacement Benefits

- reduce annual replacement costs long term
- reduce maintenance costs
- ***reduce downtime in operations and maximising fleet availability***





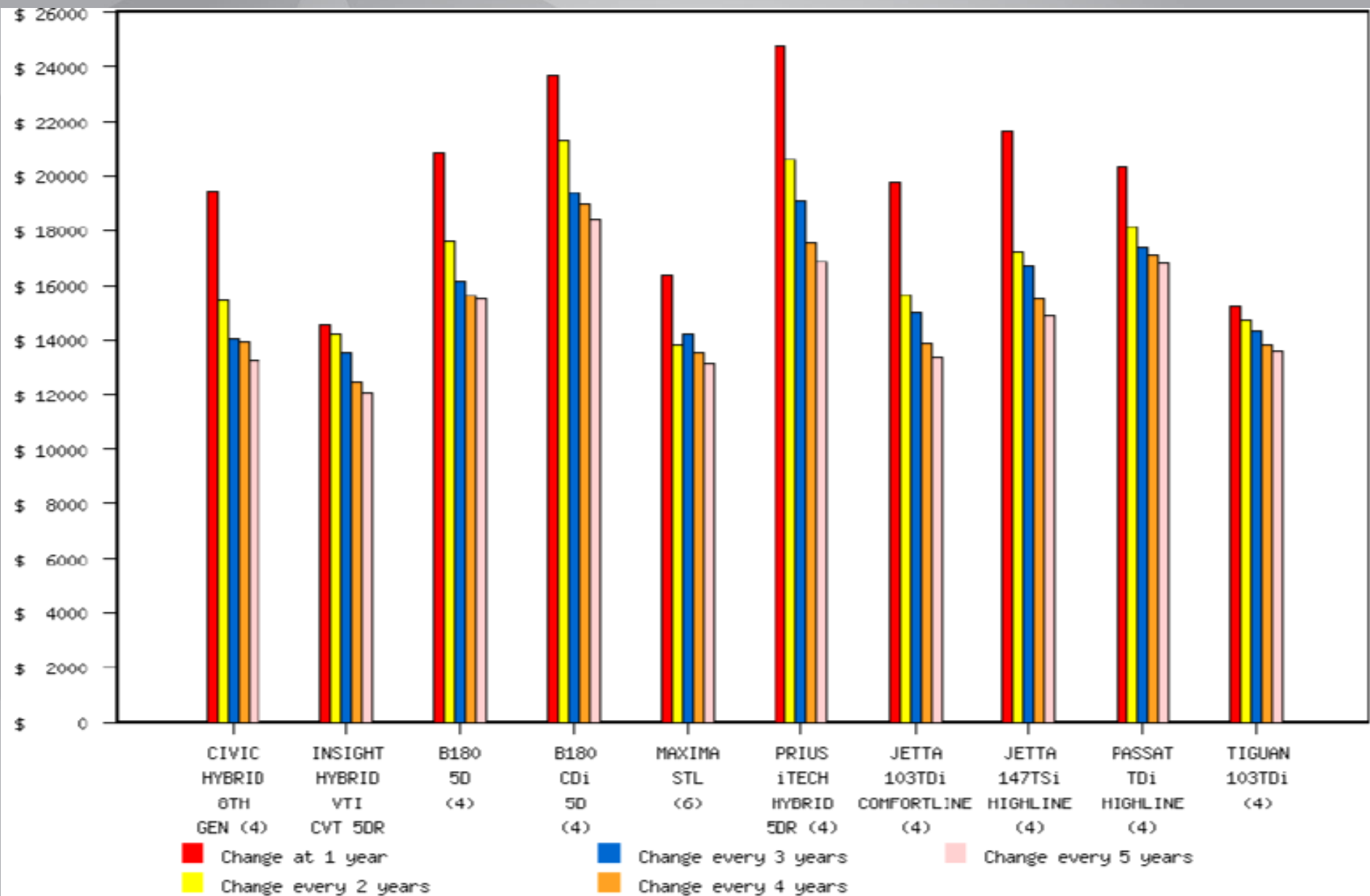
Holding too long

- Breakdowns **UP**
- Maintenance costs **UP**
- **Downtime** **UP**
- Resale values **DOWN**
- Efficiency **DOWN**



Case study

Optimum Replacement - Impact of changing too early



The case for optimum replacement

- One of the major challenges faced by Fleet Managers is getting the support of senior management and elected members for optimum replacement.
- The case for optimum replacement is supported by the cost of downtime and repairs



What is happening at your organisation?

Astute buying decisions

- The right machine for the job
- Based on a best value analysis



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Best Value Assessment Criteria

- Whole of life cost offer
- Operational requirements
- Mechanical assessment
- Warranty, service and parts support
- Environmental issues
- Risk assessment

Allocate weightings and discuss with evaluation panel

Proactive Maintenance

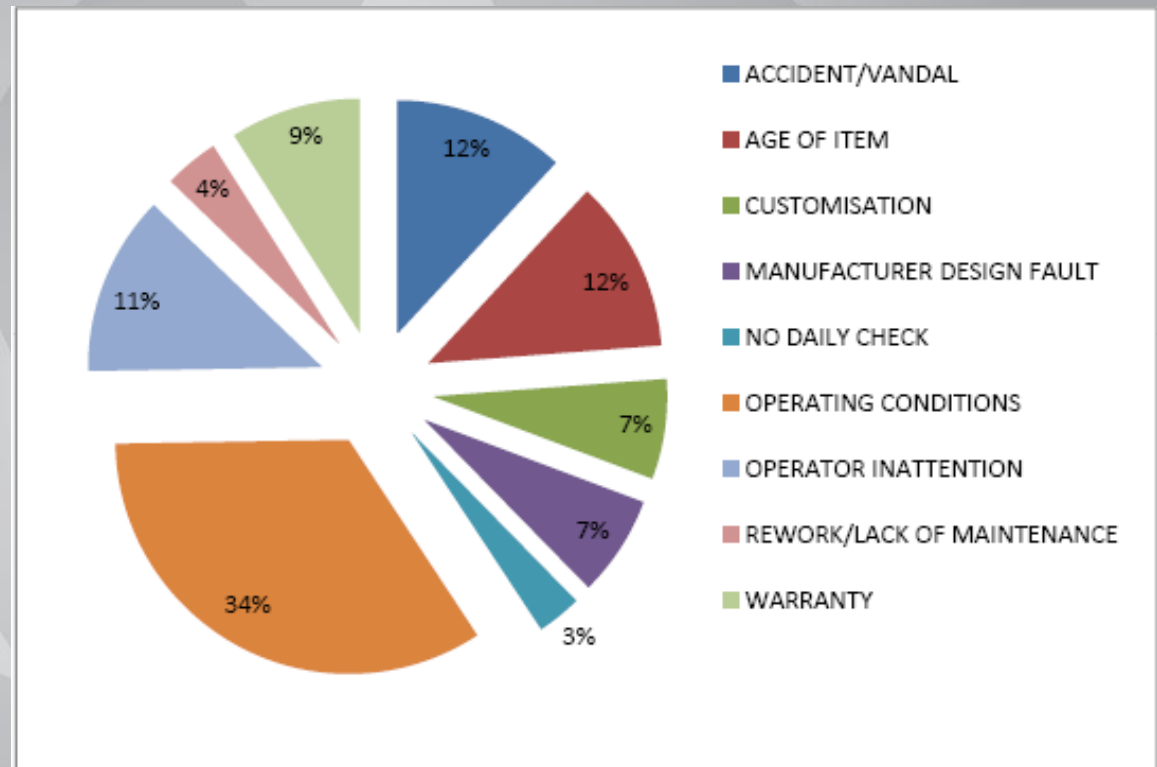
- Manufacturers provide standards for timing (age/utilisation) and specifications for preventative maintenance
- What are the risks of not following these standards?
 - Loss of warranty
 - *Increased downtime*
 - Liability being placed on the asset owner



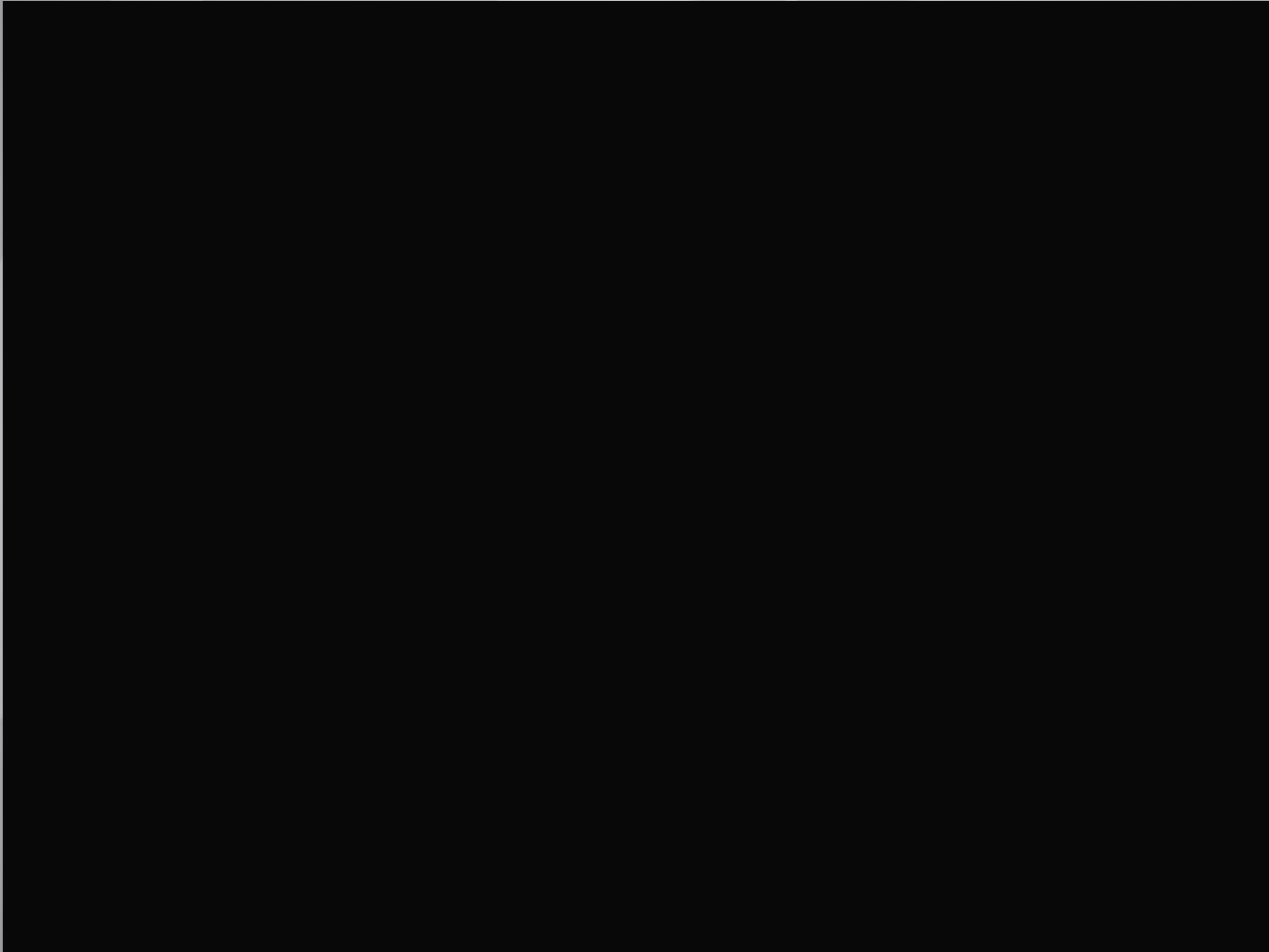
Maintenance Failure Records

Failure Categories

- Lack of maintenance
- The age of the machine
- Driver errors
- Design fault - Manufacturer
- Operator inattention
- Accident



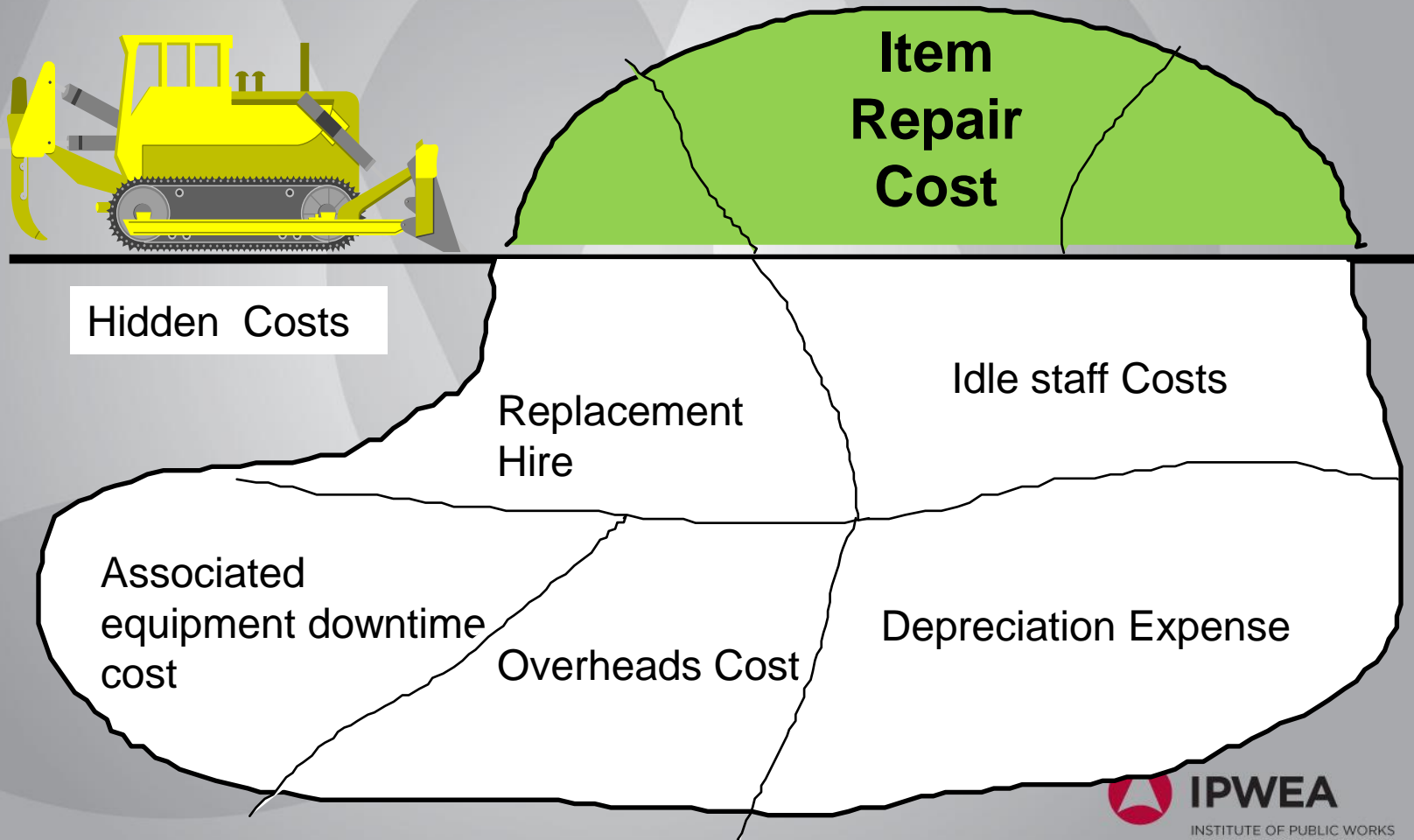
Investigate reasons for failures



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Downtime....the hidden cost of fleet management

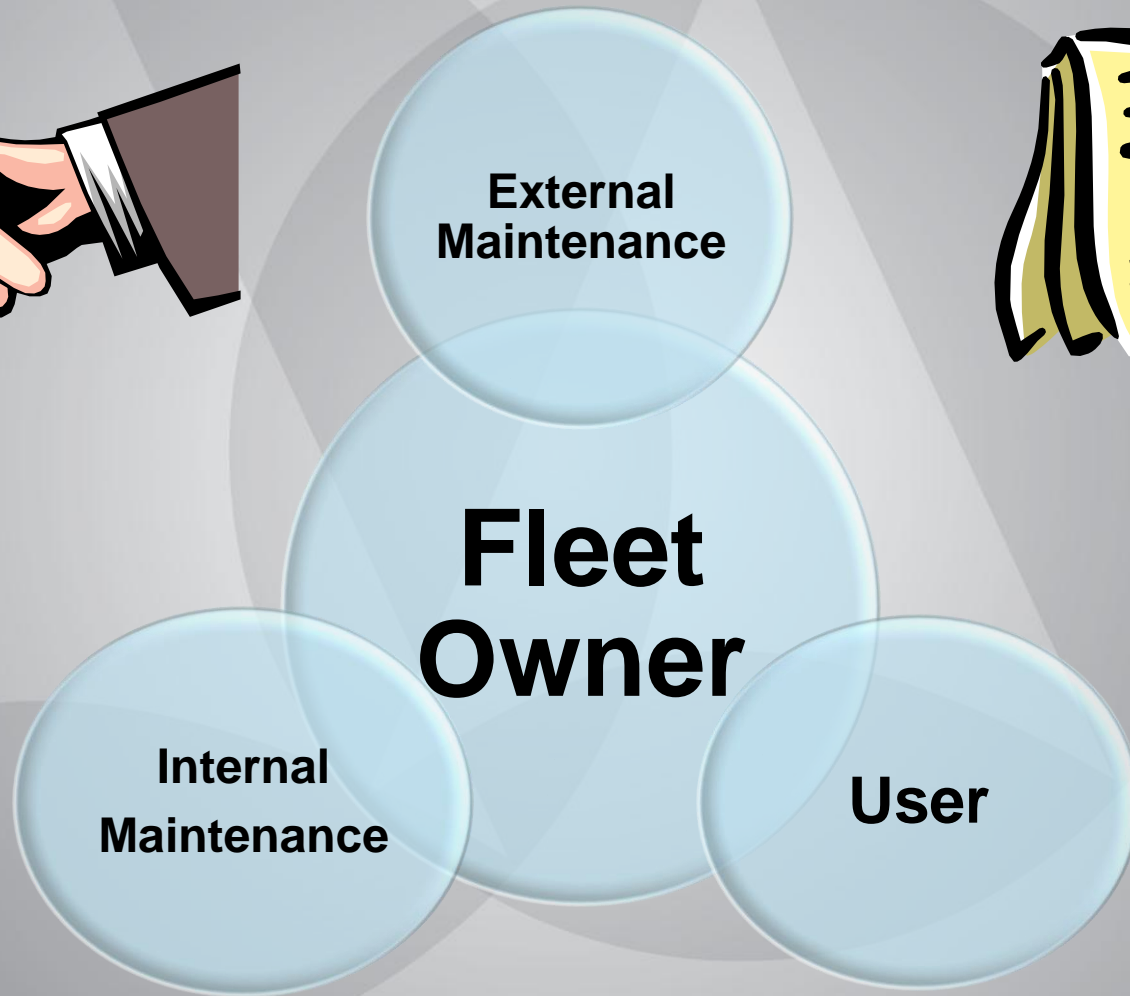


Downtime cost example

Grader breaks down in the field.....what are the impacts?



Service Level Agreements



Maximising operational efficiency through a focus on fleet is about:

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- Proactive maintenance
- Investigating failures
- Knowing downtime costs
- Service level agreements





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for fleet managers

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Fleet Discussion Forum

1.

RE:Driver Fatigue Management



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From: [Pat Whymark](#)
To: [Fleet & Plant Management](#)
Posted: 25 March, 2014 12:53 AM
Subject: RE:Driver Fatigue Management

Message:

We tackled this problem a few years back, and resolved it by including a space on the drivers daily time sheets where they can record their rest breaks i.e morning tea and lunch. This requires a certain punt of honesty on the part of the driver and checking by the supervisor.

Pat Whymark
Fleet Plant Hire Coordinator
Gosford City Council
GOSFORD NSW

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2.

Amphibious Vehicles



From: [Linda J. Behr](#)
To: [Fleet & Plant Management](#)
Posted: 25 March, 2014 12:52 AM

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Wednesday 14th March



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How the new Work Health and Safety laws will affect your fleet teams.

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Fleet Management Certificate

6 Units

- Utilisation
- Whole of Life Costs
- Tendering
- Maintenance
- Service Level Agreements
- Regulatory requirements

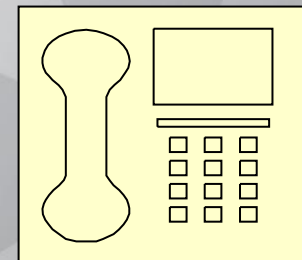


Live online training now included – next series starts June.

Live On-Line Training

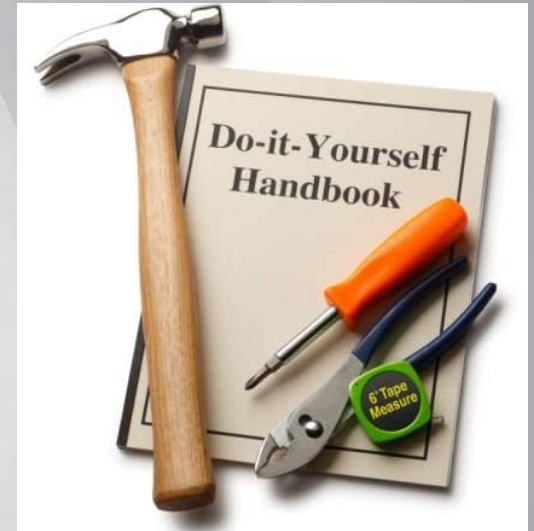
- 6 units over 4 weeks
- 1 hr sessions
- Fast track FM Cert
- Stand alone PD

Next series starts 3 June



Online *Best Practice* Plant & Vehicle Management Tools

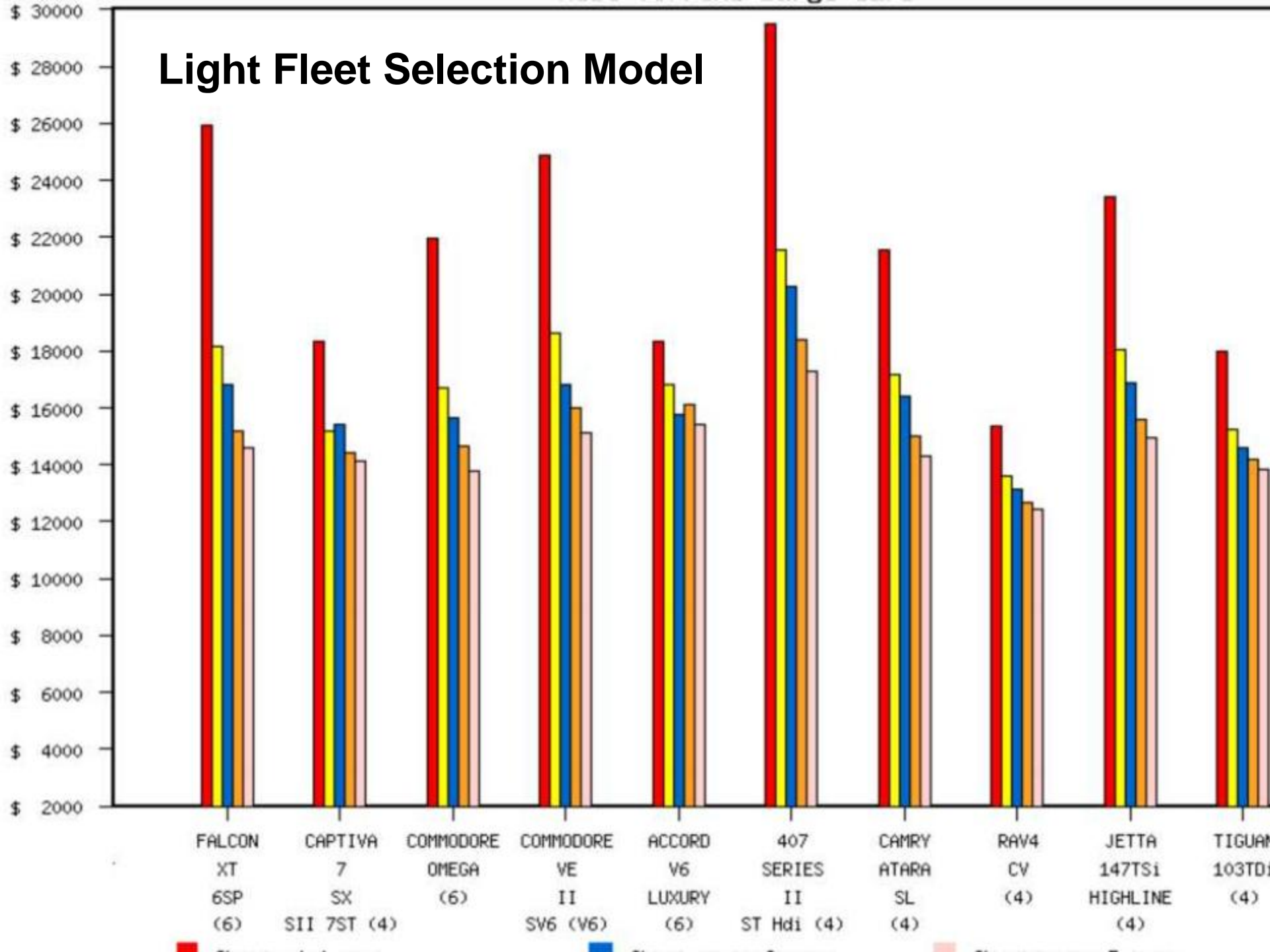
- Light Fleet selection model
- Whole of Life Cost calculator
- Best Value Tender Analysis

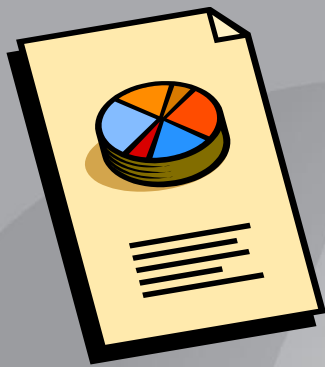


Free online training starts 3 June

Designed to follow best practice, save time and \$\$

Light Fleet Selection Model





Whole of Life Cost Calculator

- In line with IPWEA best practice P&VM Manual
- Provides machine productivity
- Output includes environmental impact
- Operator costs can be included
- Output report suitable for Council submission

Annual Hours	1572	Vehicle	Caterpillar Grader - 12H
Company Tax Rate	0.00%	Rental per Day	185.75
		Fixed Cost per Day	400.00
Purchase Price	346000.00	Tax incl.=0, excl.=1	0

Optimum Replacement Point Calculation

Year	Resale Value %	Not. Int \$	Days Downtime	M & R \$	Loss In Value	Downtime Cost	Not. Interest	Tax \$	Total Cost	Net P Adjust Value	Total	Cumul.	Cumul. Adjust Factor	Average Cost	Optimum Repl. Pnt.
1	78.03	270000.00	7.00 %	3	2500.00	76000	1757	19600.00	0.00	99857.25	1.0000	99857.25	1.0000	99857.25	
2	66.47	230000.00	7.00 %	3	4350.00	40000	1757	15909.09	0.00	62016.34	0.9259	57422.54	157279.79	1.9346	81299.21
3	56.36	195000.00	7.00 %	4	5790.00	35000	2343	13522.73	0.00	56655.73	0.8573	48573.15	205852.94	2.8080	73308.98
4	39.02	135000.00	7.00 %	4	6500.00	60000	2343	10500.00	0.00	79343.00	0.7938	62985.03	268837.97	3.6243	74176.20
5	30.35	105000.00	7.00 %	5	18500.00	30000	2928	7636.36	0.00	59065.11	0.7350	43414.62	312252.60	4.3872	71173.37
6	22.83	79000.00	7.00 %	5	8960.00	26000	2928	5854.55	0.00	43743.30	0.6806	29770.95	342023.55	5.1002	67060.84
7	20.23	70000.00	7.00 %	6	9580.00	9000	3514	4740.91	0.00	26835.41	0.6302	16910.86	358934.41	5.7665	62344.33
8	18.21	63000.00	7.00 %	7	23100.00	7000	4100	4231.82	0.00	38432.07	0.5835	22424.74	381359.15	6.3893	59687.26
9	15.90	55000.00	7.00 %	8	16800.00	8000	4686	3754.55	0.00	33240.55	0.5403	17958.83	399317.98	6.9713	57280.29
10	15.32	53000.00	7.00 %	12	35000.00	2000	7029	3436.36	0.00	47465.36	0.5002	23744.50	423062.48	7.5152	56294.00
10	15.32	53000.00	7.00 %	57	131080.00	293000	33387	89186.36	0.00	546654.11		423062.48	423062.48	Minimum	56294.00





Tender Analysis Template

- In line with best practice P&VMM
- Provides a comprehensive report
- Choose evaluation criteria
- Allocate weightings
- Score submissions
- Output report suitable for Council submission

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