

The true impact of poor Maintenance.

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Traxtion



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Penny wise ...



What does locomotive maintenance cost?

Estimated cost \$350 plpd or \$10 500 plpm

Inclusions (all scheduled maintenance, expatriate labour, consumables, storage, workshop charges, overheads (accommodation, transport, accounting and admin).

Provision for unscheduled breakdowns in excluded.



A worked example

- Locomotives per train 2
- Net tons hauled per train 2160
- Distance 2000 kms
- Rail tariff per ton US\$80
- Trips per month 4



What should we make?

- Revenue per train per month US\$691 200
- Revenue per locomotive per month US\$345 600



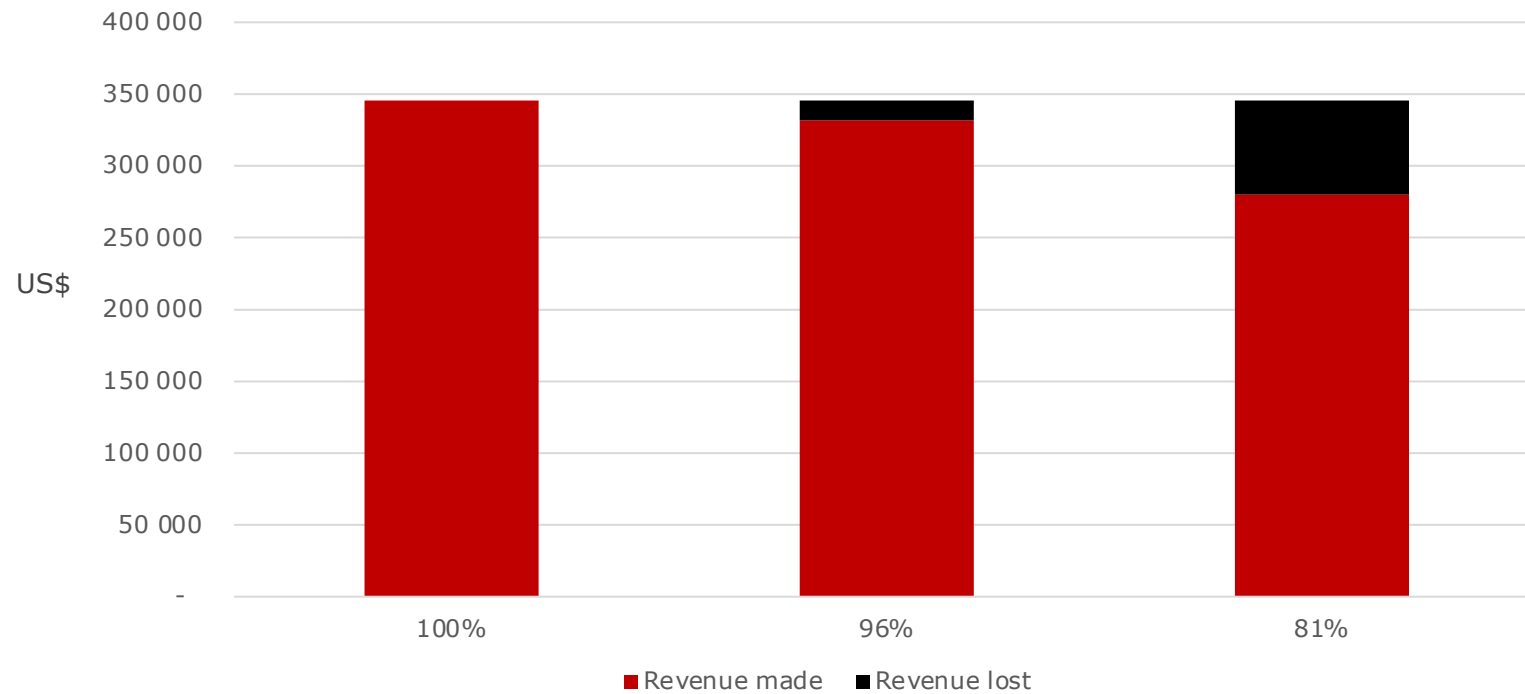
What are the performance benchmarks?

- World class maintenance services 94% (100%)
- Normal contractual threshold 90% (96%)
- Poor maintenance 75% (81%)

Allowed maintenance time is 6%



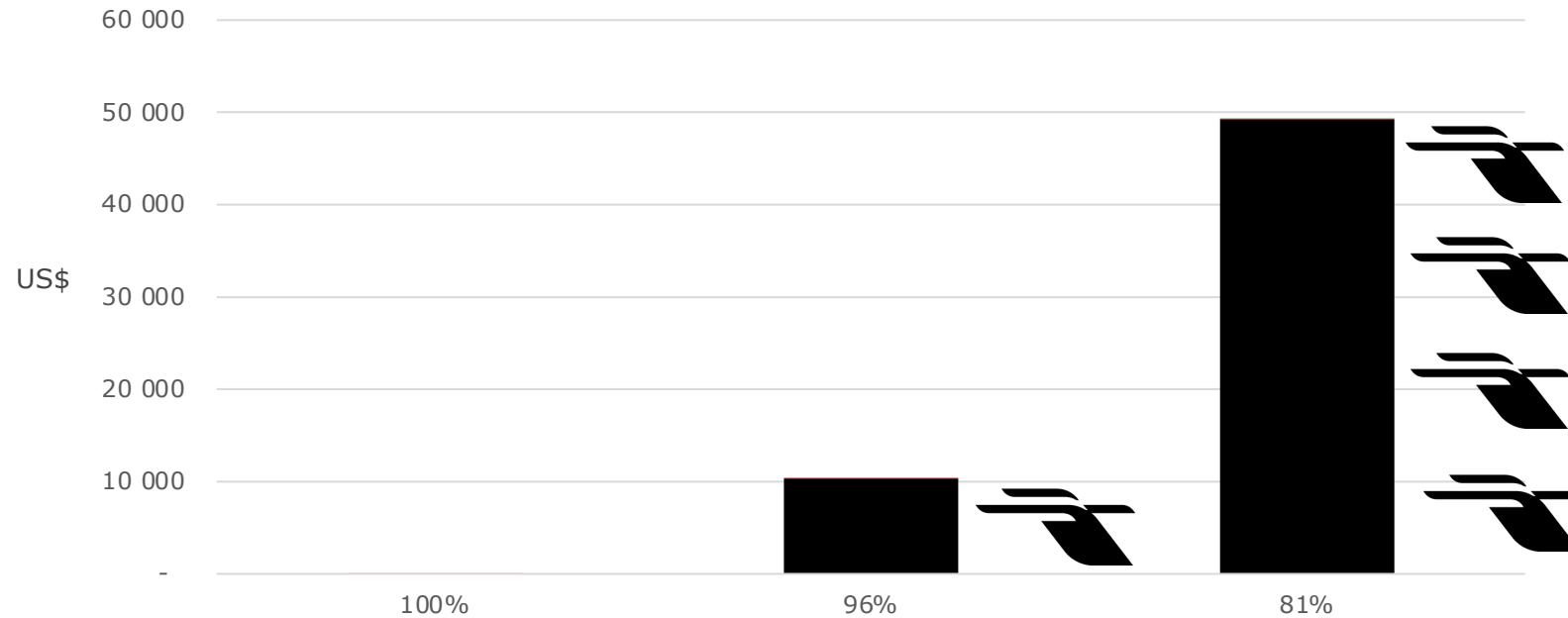
Show me the money



Fuel assumed at 25%



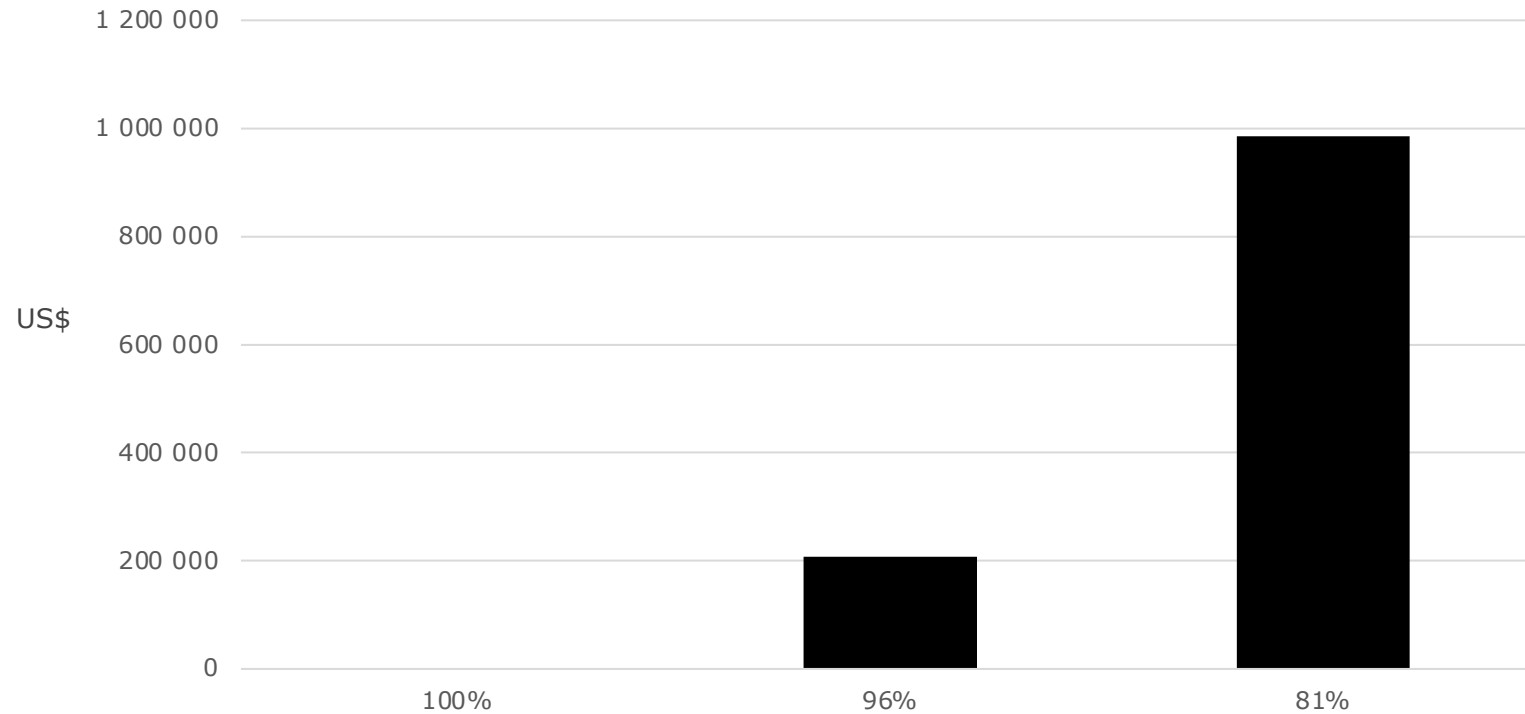
Let's dig deeper



 = Cost of 1 months maintenance (US\$10 500)



Across an assumed fleet



Assumes a fleet of 20 locomotives



Customer cash flow impact



**Freight lost is
sales forgone**

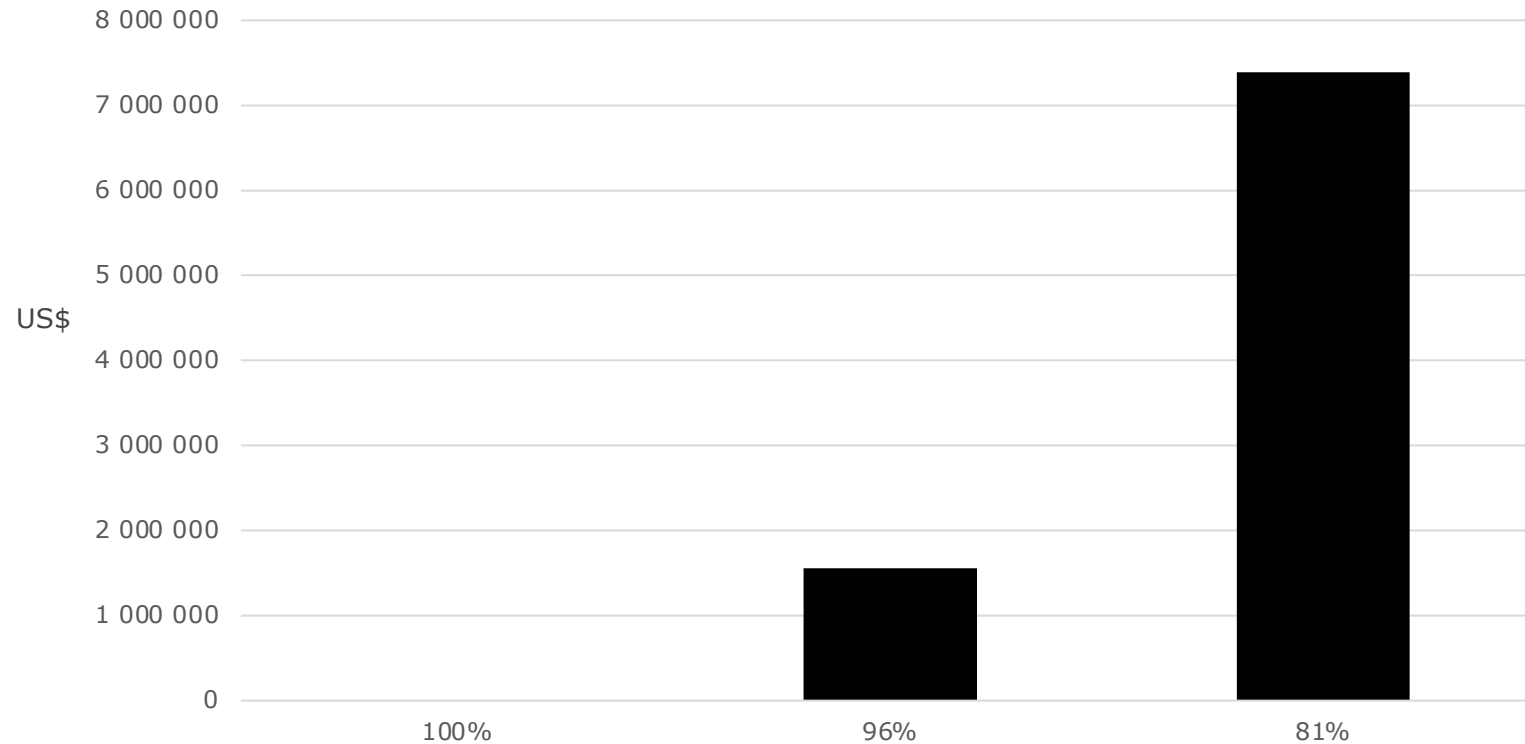


Worked example

- Copper at \$6 000 per ton
- 2160 tons per train
- Value is \$12 960 000 per train



Customers bear the brunt



This assumes just one train doing 4 trips in a month



**But what
about the
asset values?**



**We don't buy
assets. We buy
maintenance
history**



Locomotive asset values

- Locomotives should last for 30 years to 50 years
- Assuming a US\$3.5 million purchase price this is just US\$116 666 to US\$70 000 depreciation a year
- Engine cost \$550 000
- Traxtion motor cost \$80 000



**Well maintained
locomotives
retain their
value**



**So, who loses
the most?**



The rail industry as a whole

- Unreliable freight movements move volumes to road
- Customers do not invest in rail friendly loading and offloading facilities
- Commercial credit lines dry up
- High quality service providers lose market share
- Governments neglect legislation that favours the rail industry and focusses investment and time into road solutions.



**It ALL comes
back to
maintenance**



**A thriving
industry**

**benefits us
all**



TRAXTION



Thank you