



Life Cycle Cost for passenger cars purchase



Niort

- The Greater Niort : **154 160 inhabitants**
- Niort : **58 000 inhabitants**



The City of Niort & its departments



900 council employees

Numerous services are run directly by the council :

- School meals
- Maintenance of public buildings
- Highway maintenance and upkeep of outdoor public properties (parks and gardens, natural areas)
- Maintenance of stadium and other sporting facilities
- Street cleaning, ...



A REAL NEED FOR VEHICLES

The Council's fleet of light motor vehicles



70 passenger cars



33 light commercial vehicles
(mini vans)



90 light commercial vehicles
(vans)

How the fleet is used

- 95 % in urban traffic conditions
- A pool of shared cars (21 Véhicules)
- 4 of the pool cars dedicated to journeys beyond the urban area.
- The council's own garage for vehicle maintenance



Our car purchase strategy

- Purchase versus Long term leasing
- A framework agreement with several suppliers.
- All the mini cars & small cars in the same contract based on the frame work agreement.
- Specific invitation to tender between the 4 suppliers for other kind of cars.
- Same selection criteria for all invitations to tender.
 - Guarantee and after sales service (25 %)
 - Car's technical value (15%)
 - Car safety (5 %)
 - Delivery time (5%)
 - Financial & ecological cost (50 %)



The car procurement procedure

- Multi contractor framework agreement (5 maxi)
- 4 years agreement
- The main contract based on framework agreement for recurring needs (for all the mini cars and small cars)
- Special competitions and contracts based on framework agreement for particular needs (other passenger cars, local police vehicles, VIP vehicles, eco-friendly vehicles ...)
- Basic technical specifications for mini and small cars for basic use (very short journeys – urban traffic use).



The LCC calculation sheet

4 kinds of cost :

- Acquisition cost
- Fuel cost
- Scheduled maintenance cost
- Ecological cost

4 hypotheses of use

- Urban traffic use
- 7000 km (mini cars) per year / 10 000 km (small cars) per year
- Lifetime of use : 10 years
- Local Fuel prices

 Cost per kilometer - CPK



Conditions of use

VEHICLE - A SEGMENT – MINI CAR

VEHICLE MANUFACTURER					
VEHICLE MODEL					
CONFIGURATION					
FIGURATION					

CONDITIONS OF USE

Year = 7 000 kms.

End of use : 10 years or 70 000 kms

Proportion of use : urban traffic 95 %



Acquisition cost

Vehicle price includes the first service & the safety equipment (warning triangle, safety vest).

ACQUISITION COST				
				All taxes incl.
Acquisition cost (environmental subsidy deducted)				0,00
Registration cost				0,00

If applicable, the ecological subsidies are deducted.



Fuel Cost

Fuel (Average price (All taxes included) in Niort (11/05/2016))			
LGP : 0,690 / 0,693 €/l soit	0,692	€/l on average	
Premium Unleaded : 1,219 / 1,259 €/l soit	1,239	€/l on average	
Diesel: 1,019 / 1,050 €/l soit	1,035	€/l on average	
Other (to be specified) :			
Fuel cost = urban cycle consumption/100 km x fuel unit price x 700			
Fuel consumption in urban cycle/ 100 km	0,00		
Fuel price (all taxes included)	0,000		All taxes incl.
Fuel cost for 100 km	0,00	x 700 =	0,00

The fuel price is indicated in the calculation sheet . (Data available on the website of the Ministry of Environment)

The Fuel consumption per 100 km in urban traffic cycle is provided by car's manufacturer (NEDC cycle until 2016 replaced by WLTC cycle in 2017)



Maintenance cost

- The service list for regular maintenance is fixed by our garage
- The frequency in the schedule is either suggested by the manufacturer or determined by our garage.
- The period of time for each service is given by the manufacturer
- The hourly rate of the mechanic's labour is provided by our garage
- Spare parts price : original part with contractual discount deducted
- Number of maintenance during the car ownership : calculated with the frequency of maintenance.



MAINTENANCE					
Maintenance & Repairs in our own garage				Hourly cost	46,81 €
Spare parts : Discounted public price					
Scheduling : According to manufacturer's recommendation if not indicated below					
Maintenance Items	Frequency	Spare part unit price (all taxes included)	Period of time	Nb of maintenance during cars ownership	Total (all taxes included)
Oil & Filter					
Oil filter (frequency to be specified)					0,00
Oil change (frequency to be specified)		4,12			0,00
Oil quantity (to be precised)					
Air filter (frequency to be specified)					0,00
Fuel filter (if applicable) frequency to be specified					0,00
Spark plugs (frequency to be specified)					0,00
Cabin filter (if applicable) frequency to be specified					0,00
Brake system					
Front pads	2 years			4	0,00
Front brake discs	4 years			2	0,00
Shoes of drum brake (if applicable)	4 years			2	0,00
Back pads	4 years			2	0,00
Back brake disc	5 years			1	0,00
Suspension sysem					
Front suspension	5 years				0,00
Back suspension	5 years				0,00
Steering system					
Steering tie rod R & L	4 years				0,00
Steering knuckle R & L	4 years				0,00
Engine timing (if applicable)					
Timing belt (if applicable)					0,00
Battery	5 years			1	0,00
Complete clutch	6 years			1	0,00
Tires					
Front tires	4 years			2	0,00
Back tires	6 years			1	0,00
Wiper blades	2 years			4	0,00
				Total (all taxes incl.)	0,00



Pollutant emissions cost

- Monetisation of pollutant emission in reference to the Directive 2009/33/CE of 23 april 2009
- Pollutant and CO2 emission given by the maker for urban cycle (in reference to NEDC cycle replaced by WLTC cycle in 2017 – Euro 6)

ECOLOGICAL COST

			Cost for emission in road transport
CO ₂ Emission..... (g/km)	<input type="text"/>		0,00003 €/g
HC Emissions.....(g/km)	<input type="text"/>		0,001 €/g
NO _x Emissions..... (g/km)	<input type="text"/>		0,0044 €/g
Particulate Matter Emissions(g/km)	<input type="text"/>		0,087 €/g
Ecological Cost for 70 000 km			-



Costs excluded

- Depreciation or replacement value



Same category of car – no impact on the calculation result

- Deconstruction ou recycling costs



All the old cars are sold after 10 years of use

- Insurance cost



Impossible to individualize for one car – An overall tariff for the fleet

- Repair cost after traffic accident



Unpredictable



Procedure Results – CPK Mini cars (A Segment)

	Supplier 1 – F	Supplier 2 – T	Supplier 3 – P	Supplier 4 – R
SEGMENT A - MINI CAR				
Acquisition cost	8297,38	10 064,76 €	9 526,01 €	8 821,70 €
Material cost	5 724,18 €	4 336,50 €	4 336,50 €	5 463,99 €
Maintenance cost	5 884,29 €	4 765,62 €	4 892,03 €	3 373,99 €
Technological cost	298,83 €	232,72 €	232,72 €	552,03 €
Total cost for 70 000 km	20 204,68 €	19 399,60 €	18 987,26 €	18 211,73 €
Cost per Kilometer (CPK)	0,289 €	0,277 €	0,271 €	0,260 €
Total cost for 18 vehicules	363 684,240 €	349 192,800 €	341 770,680 €	327 811,140 €



Procedure Results — Small cars (B Segment)

MENT B - SMALL CAR				
cost	10467,55	11 687,76 €	10 331,21 €	10 583,
el cost	8 920,80 €	6 442,80 €	6 442,80 €	8 920,
intenance cost	6 769,99 €	3 954,39 €	5 152,40 €	3 381,
ological cost	447,90 €	358,60 €	357,58 €	631,
al cost for 100 000 km	26 606,24 €	22 443,55 €	22 283,99 €	23 517,
st per Kilometer (CPK)	0,266 €	0,224 €	0,223 €	0,2
st for 7 vehicules	186 243,68 €	157 104,85 €	155 987,93 €	164 620,




Procedure Results – Global Results


	Supplier 1 – F	Supplier 2 – T	Supplier 3 – P	Supplier 4 – F
CPK	549 927,9 €	506 297,7 €	497 758,6 €	492 43
Financial score (50 points)	44,2	48,6	49,5	
Quality (25 points)	20	23,5	21	
Technical value (15 points)	9	10,5	13	
Efficiency (5 points)	4,5	4,5	4,5	
Delivery Time (5 points)	3	5	4	
TOTAL	80,7	92,1	92,0	
CPK	4	1	2	



The limitations of the method

- Data availability
- Data reliability
 - Fuel consumption with NEDC cycle controversial
 - Pollutant and CO2 emissions criticized
 - Directive cost for emissions never updated
- Part of emission cost in the total cost (<2%)
- Difference between forecasted and actual conditions of use

 It is a method to compare tenders

 It is NOT :

- A budget forecast device
- An environmental impact tool.



Conditions for succes

- Manufacturer's informations available

- Good knowledge of your fleet and how it is used



Vehicle booking software (mileage on lifetime, average mileage per journey, destination,...)

- Good knowlegde of car maintenance



Maintenance software used by our garage (maintenance frequency, checking of the manufacturer's information consistency,...)

