

<b>Decision Support System (DSS)</b>			
<i>Tramways and Light Rail Transit Projects</i>			
<u>1. Data Entry</u>			
<b>Project Name</b>			
<b>City</b>			
<b>Country</b>			
<b>Project Technical Life</b>		Years	
<i>Demand</i>		M Passenger per Year	
<i>Supply</i>			
<b>Capacity per Train</b>		Passengers	
<b>Peak Hour Capacity</b>		Pax/Hour/Direction	
<b>Capacity per Year</b>		M Passengers	
<i>Costs</i>			
<b>Investment Cost</b>		M EUR	
<b>Project Unitary Cost</b>		M EUR per Km.	
<b>Rolling Unitary Stock</b>			
<b>Train Cost</b>		M EUR per Unit	
<b>Place Cost</b>		EUR per Place	
<b>O&amp;M Cost</b>		EUR/Train-Km/Year	
<i>Benefits</i>			
<b>Total Benefits</b>		M EUR	
<b>Benefits per Year</b>	#DIV/0!	M EUR per Year	
<b>Time Gain (Savings)</b>			
<b>vs. Bus</b>		Minutes per Journey	
<b>vs. Car</b>		Minutes per Journey	
<i>Economic Profit</i>			
<b>Average Revenue</b>		EUR per Passenger	
<b>Economic Rate of Return</b>		Over Technical Life	
<b>M &amp; O Cost Cover Ratio</b>			

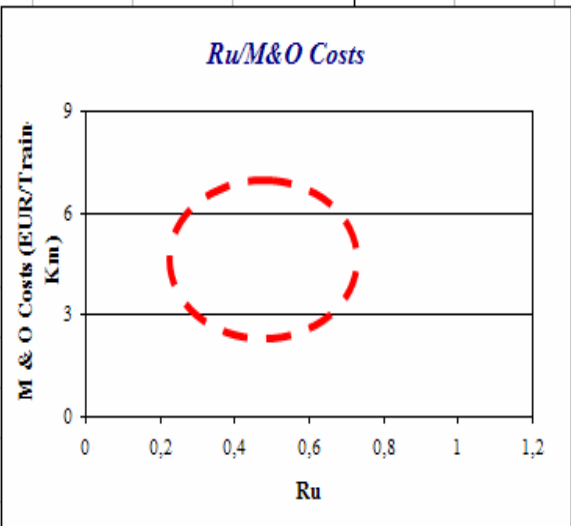
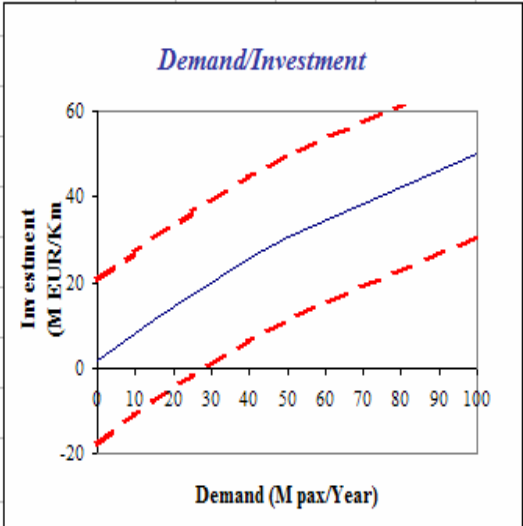
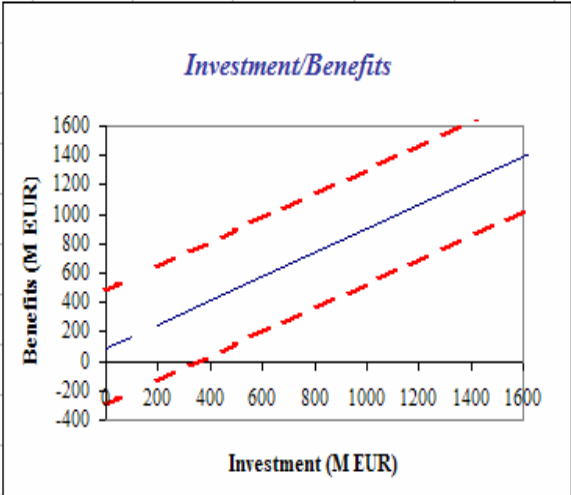
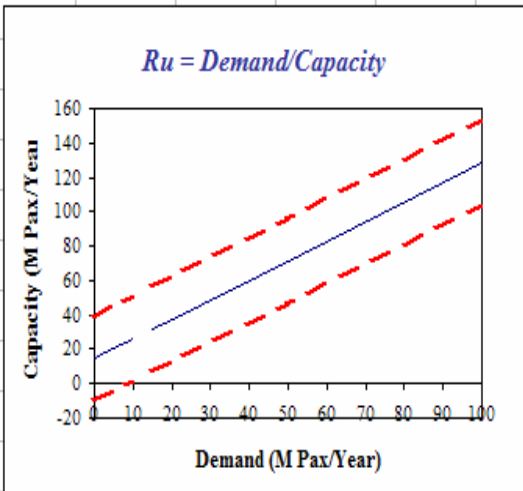
Decision Support System (DSS)					
<i>Tramways and Light Rail Transit Projects</i>					
<u>2. Range of Values of Parameters</u>					
<u>0</u>					
<i>2.1 Individual Variables</i>					
Variable	Value	Range of Acceptability		Condition	Description (If Outrange)
		Minimum	- Maximum		
Demand per year	0,0 M	10,0 M	- 26,0 M	outrange	▼
Capacity per Train	0	205	- 360	Outrange	▼
Peak Hour Capacity	0	2.300	- 3.850	Outrange	▼
Project Unitary Cost	0,0 M	9,0 M	- 21,0 M	Outrange	▼
Rolling Stock Unitary Cost	0,0 M	1,5 M	- 2,4 M	Outrange	▼
Rolling Stock Place Cost	0	6.300	- 8.500	Outrange	▼
M & O Cost	0,00	3,50	- 5,70	Outrange	▼
Time Gain vs. Bus (Savings)	0	7	- 15	Outrange	▼
Time Gain Vs Car (Savings)	0	5	- 11	Outrange	▼
Average Revenue	0,00	0,35	- 0,77	Outrange	▼
Economic Rate of Return	0,0 %	3,6 %	- 8,8 %	Outrange	▼
M & O Cost Cover Ratio	0 %	40 %	- 78 %	Outrange	▼
<i>2.2 Comparative Ratios</i>					
Variable	Z Value	Condition	Interpretation		
Ru (Demand/Capacity)	-14,4	In Range	▼		
Investment/Benefits	-88,1	In Range	▼		
Demand/Investment	-1,6	In Range	▼		
Passenger Profits	#DIV/0!		Note: Pax Profit = Rp(Demand/Benefits) - Avg Revenue		

Decision Support System (DSS)

*Tramways and Light Rail Transit Projects*

3. Project Performance

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Decision Support System (DSS)			
<i>Metro Projects</i>			
<u>1. Data Entry</u>			
<b>Project Name</b>			
<b>City</b>			
<b>Country</b>			
<b>Project Technical Life</b>		Years	
<i>Demand</i>		M Passenger per Year	
<i>Supply</i>			
<b>Capacity per Car</b>		Passengers	
<b>Peak Hour Capacity</b>		Pax/Hour/Direction	
<b>Capacity per Year</b>		Passengers	
<i>Costs</i>			
<b>Investment Cost</b>		Million Euros	
<b>Project Unitary Cost</b>		M EUR per Km.	
<b>Rolling Stock</b>			
<b>Unitary Cost</b>		M EUR per Car	
<b>Occupation Cost</b>		K EUR per Place	
<b>M &amp; O Cost</b>		EUR/Car-Km	
<i>Benefits</i>			
<b>Total Benefits</b>		Million Euros	
<b>Benefits per Year</b>	#DIV/0!	M EUR per Year	
<b>Time Gain (Savings)</b>			
<b>vs. Bus</b>		Minutes per Journey	
<b>vs. Car</b>		Minutes per Journey	
<i>Economic Profit</i>			
<b>Average Revenue</b>		EUR per Passenger	
<b>Economic Rate of Return</b>		%	
<b>M &amp; O Cost Cover Ratio</b>		%	

Decision Support System (DSS)					
<i>Metro Projects</i>					
<u>2. Range of Values of Parameters</u>					
<u>0</u>					
<i>2.1 Individual Variables</i>					
Variable	Value	Range of Acceptability		Condition	Description (If Outrange)
		Minimum	- Maximum		
Demand per year	0,0 M	30,0 M	- 100,0 M	Outrange	▼
Capacity per Car	0	160	- 225	Outrange	▼
Peak Hour Capacity	0	13.000	- 26.000	Outrange	▼
Project Unitary Cost	0,00 M	32,0 M	- 80,0 M	Outrange	▼
Rolling Stock Unitary Cost	0,0 M	1,0 M	- 1,9 M	Outrange	▼
Rolling Stock Place Cost	0	6.000	- 8.600	Outrange	▼
M & O Cost	0,00	1,70	- 2,80	Outrange	▼
Time Gain vs Bus (Savings)	0	7	- 17	Outrange	▼
Time Gain Vs Car (Savings)	0	7	- 17	Outrange	▼
Average Revenue	0,00	0,30	- 0,70	Outrange	▼
Economic Rate of Return	0,0 %	3,9 %	- 8,1 %	Outrange	▼
M & O Cost Cover Ratio	0	41 %	- 79 %	Outrange	▼
<i>2.2 Comparative Ratios</i>					
Variable	Z Value	Condition		Interpretation	
Ru (Demand/Capacity)	-14,4	In Range		▼	
Investment/Benefits	-88,1	In Range		▼	
Demand/Investment	-1,6	In Range		▼	
Passenger Profits	#DIV/0!		Note: Pax Profit = Rp(Demand/Benefits) - Avg Revenue		

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*Metro Projects*

3. Comparatives Ratios

