

Design Project = **RSL Rover**System= **Lidar Configuration**

	TARGET or FACTOR	DESIGN IDEAS																	
CRITERIA	1 = Baseline	Top & Rear	Hood & Read	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time – Design	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Time – Build	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Time – Test	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Time Score	10	10	10.00	10.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cost – Prototype	1	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00														
Cost – Production	1	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00														
Cost Score	10	10	10.00	10.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Implementation Time	4.5	3	13.5	2	9	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Forward FOV	7	3	21	2	14	3	21	1	0	0	0	0	0	0	0	0	0	0	0
Reverse FOV	4.5	3	13.5	4	18	3	13.5	1	0	0	0	0	0	0	0	0	0	0	0
Side FOV	1.5	3	4.5	3	4.5	3	4.5	1	0	0	0	0	0	0	0	0	0	0	0
Blind Spots	7.5	3	22.5	1	7.5	3	22.5	1	0	0	0	0	0	0	0	0	0	0	0
Weight	0.5	3	1.5	3	1.5	2	1	1	0	0	0	0	0	0	0	0	0	0	0
Material Cost	4.5	3	13.5	2	9	0	0	1	0	0	0	0	0	0	0	0	0	0	0
Perspective Height	4.5	3	13.5	3	13.5	1	4.5	1	0	0	0	0	0	0	0	0	0	0	0
Vertical Clearance	1.5	3	4.5	3	4.5	5	7.5	1	0	0	0	0	0	0	0	0	0	0	0
0	9	3	27	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0	10	3	30	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
0	11	3	33	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
TOTAL		198.0	81.5	74.5	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
RANK																			
% MAX		100.0%	41.2%	37.6%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%

NOTE: User fills in Purple areas, gold areas are calculated or fixed
Light blue areas filled from prioritizing matrix

BASELINE = **Top & Front**

Design Idea Descriptions

2	Top & Rear
3	Hood & Read
4	
5	
6	
7	
8	
9	
10	

$$\text{Timescore}(i) = \text{Timescore}(B) * (\text{TD}(i)/\text{TD}(B) + \text{TB}(i)/\text{TB}(B) + \text{TT}(i)/\text{TT}(B)) / 3$$

$$\text{Costscore}(i) = \text{Costscore}(B) * (\text{Cprot}(i)/\text{Cprot}(B) + \text{Cprod}(i)/\text{Cprod}(B)) / 2$$

$$\text{Total}(i) = \text{SUM}(\text{Factor}(j) * \text{Comparison}(i,j)) + (\text{Timescore}(B) - \text{Timescore}(i)) + (\text{Costscore}(B) - \text{Costscore}(i))$$

Comparison(i,j) = 5 if idea "i" is much better than baseline for criteria "j"

Comparison(i,j) = 4 if idea "i" is better than baseline for criteria "j"

Comparison(i,j) = 3 if idea "i" is same as baseline for criteria "j"

Comparison(i,j) = 2 if idea "i" is worse than baseline for criteria "j"

Comparison(i,j) = 1 if idea "i" is much worse than baseline for criteria "j"