International University Rocket Competition

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Evaluation methodology

Decide on categories of rockets by engine

Specify constraints (components, legal, etc.)

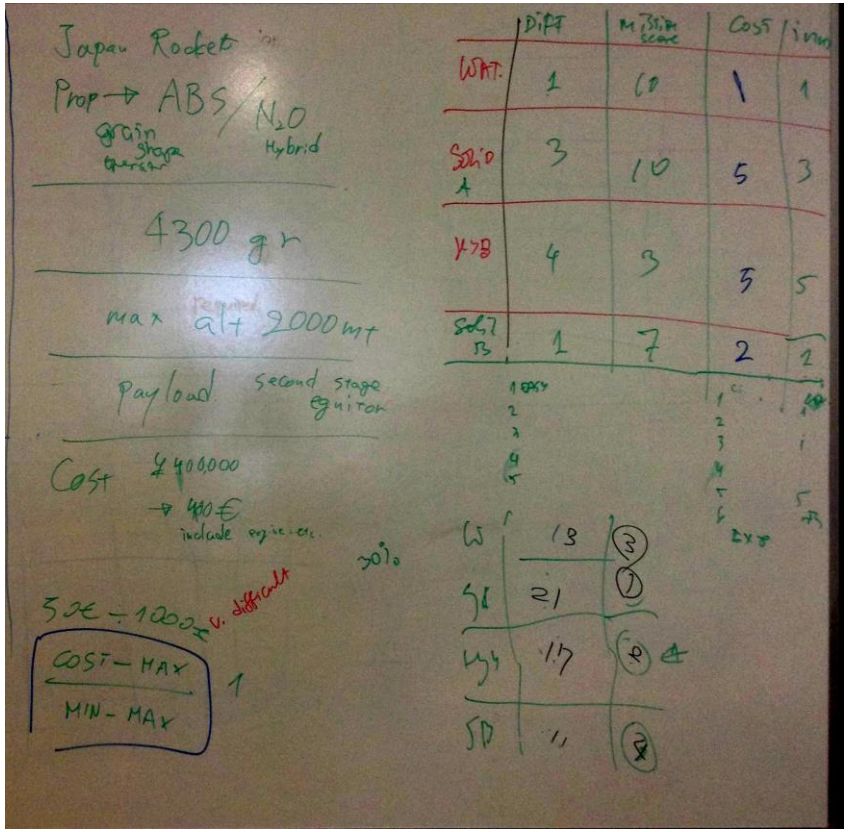
Evaluate the performance against criteria

- Mission performance
- Cost
- Carrier ability
- Degree of innovation
- Other

Assign normalized points (bell curve, rank by jury, performance constraints etc.)

Example


ITALIAN ROCKET
Prop → SUGAR / KNO3
Potassium Nitrate
Max. Weight 300 gr
Max Altitude 150 mt
Payload
SHAKY
full Hd Photography
Pollution Sensor
Cost Electronics
P.Sensor
Camera
15€
50€
1 kg of sugar
0,50 €
KNO3
almost free
Other Components
30€
tot
Mexican Rocket
Prop → water / Air
Max Weight 500 gr
Max altitude 200 mt
Payload
sensors
CANSAT
AEM-1
Cost CANSAT
100 €
Cost Rocket
10 €


Japan Rocket
Prop → ABS / N2O
Hybrid
4300 gr
max alt 2000 mt
Payload
second stage
Cost
¥ 400000
→ 400 €
include
30%
5€ ÷ 1000 €
v. difficult
COST - MAX
MIN - MAX
DIFF
COST
WHT.
Solid A
Solid B
SD

Example

	Italy1	Italy2	Mexico	Japan
Name	Sugar rocket	Sugar rocket	Water rocket	Hybrit Rocket
Max Weight[g]	300	300	500	4300
Max attitude[m]	150	150	200	20000
Pay load	Polution sensor	Camera	Cansat AEM-1	Second stage
Cost[€]	4550	8050	100	10000

Difficulty	1	1	3	4	1~5
Missions	7	7	10	3	1~10
Cost	6	2	5	5	1~7
Inovation	1	2	3	5	1~5
Total	15	12	21	17	27
Rank	**3rd**	**4th**	**1st**	**2rd**	