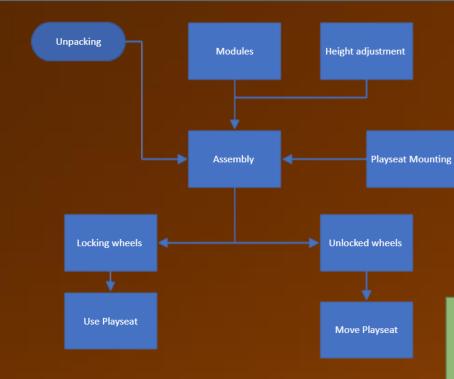
Concept Development



Swaraj_Patra(2021-22) (201596665)

Functional Structure



Mounting- Screws, Magnetic mount, Clamping with mounts, Special joints.

Height – Fixed height, Rack and pinion, Screw lift, Stacking, Crossbar mechanism Modules- Keyboard holder, VR headset Holder, Motion simulator, Game lighting, Side table.

Functional Solutions

Wheel locking-Gear locking, Caster locking, Off centre locking Mobility typesmall wheels, Hub less wheels, Belt tracks, Rubber ball. Eco friendly options-Recycled aluminium, recycled HDPE, Recycles shoe soles for griping, wood for main body.

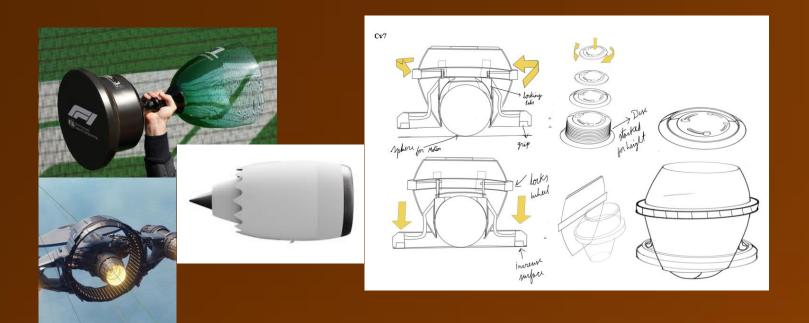
Materials-HDPE, Aluminium, Stainless steel, Rubber, PP (transparent)

Configuration-One large base, Two Bases for each end, Four bases for each corner.

Inspiration Board



Swaraj_Patra(2021-22) (201596665)







Inspiration Board



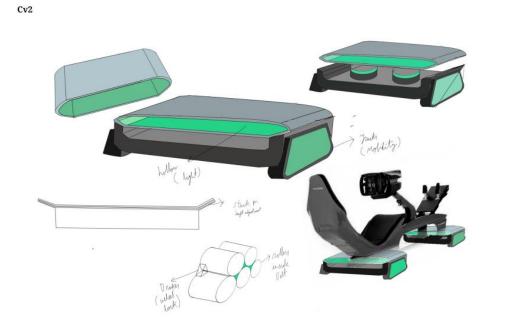
Swaraj_Patra(2021-22) (201596665)

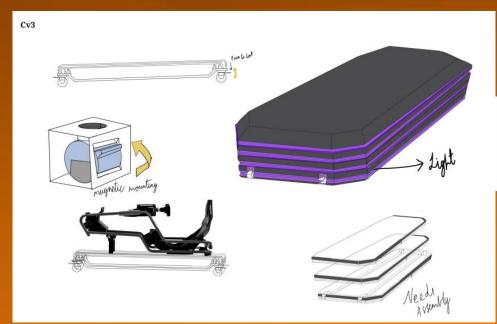














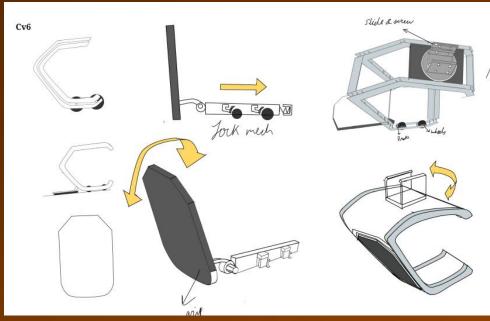
Inspiration Board



Swaraj_Patra(2021-22) (201596665)



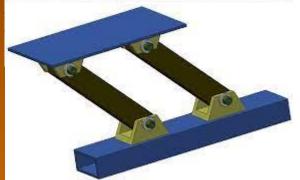














Concept Variant Analysis



Swaraj_Patra(2021-22) (201596665)

Sr No.	Parameters	Cv1	Cv2	Cv3	Cv4	Cv5	Cv6	Cv7	Cv8	Cv9	Cv10
1	Stability	1	1	1	0	1	1	1	1	1	0
2	Reliable mobility	1	1	1	1	1	1	1	1	0	1
3	Reliable locking	1	1	1	1	1	1	0	1	0	1
4	Easy Manufacturing	0	0	1	0	1	1	0	0	1	0
5	User Assembly	1	0	0	0	1	1	1	0	1	0
6	Modularity	1	0	1	1	0	0	0	1	1	1
7	Branding Visibility	1	0	1	0	0	0	0	0	0	0
8	Height	1	1	1	0	0	0	1	1	1	1
9	Portability	1	1	0	0	1	1	1	0	1	0
Total		8	5	7	3	6	6	5	5	6	4
Rank		1	6	2	10	3	4	7	8	5	9
Value	Scheme										

Value	Scheme
0	Bad
1	Good

According to analysis the concept with highest ranks are short listed for further design stage.

Final Design



