

Robot Utility Tank (R.U.T.) 100% Build

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Design Efforts: CAD Assembly

- Last Presentations Assembly

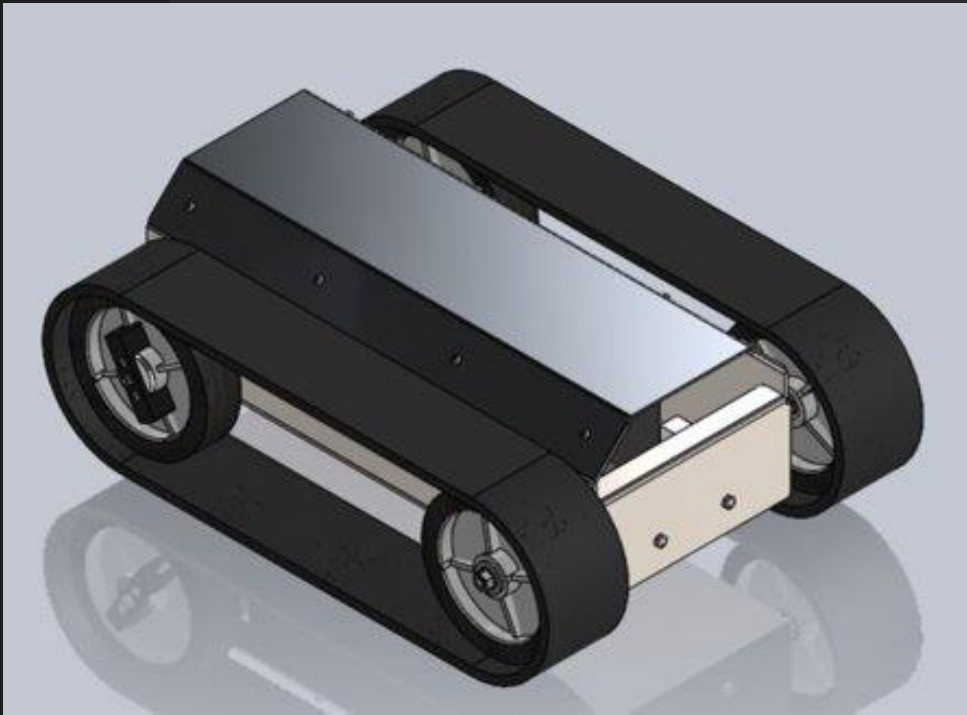


Figure 1: Old CAD Design

- Current State of Assembly

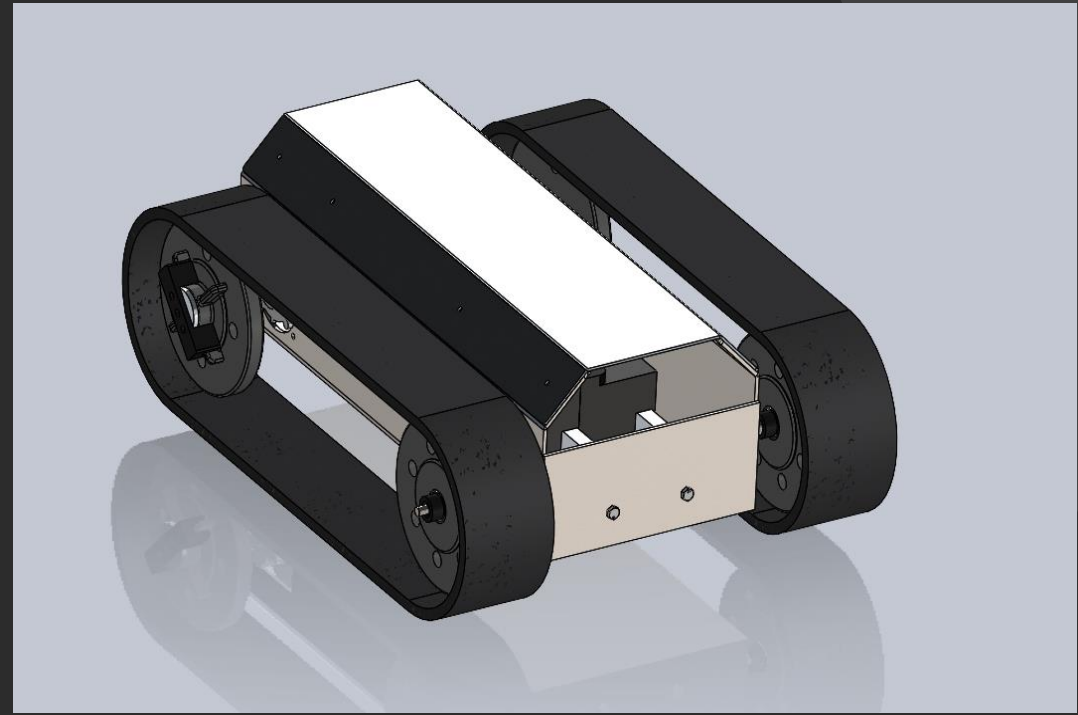


Figure 2: New CAD Design

Build Progress

Figure 3: Current Build



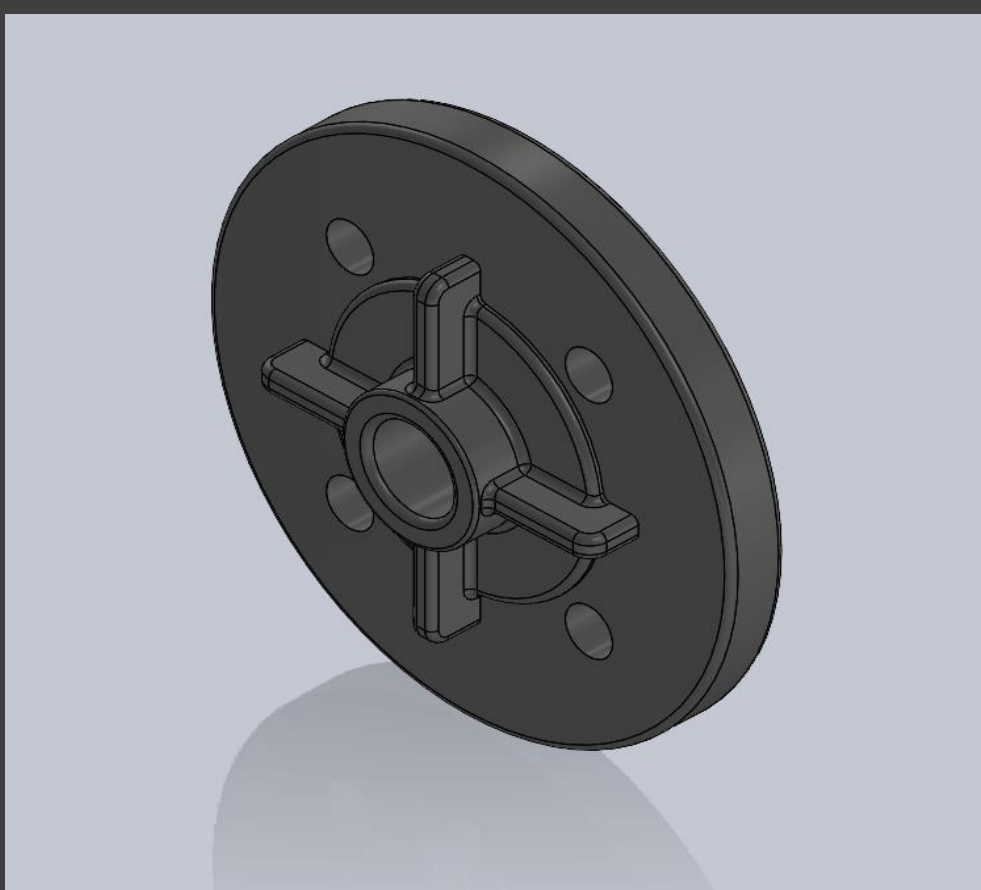


Figure 4: New Rear Wheel Design

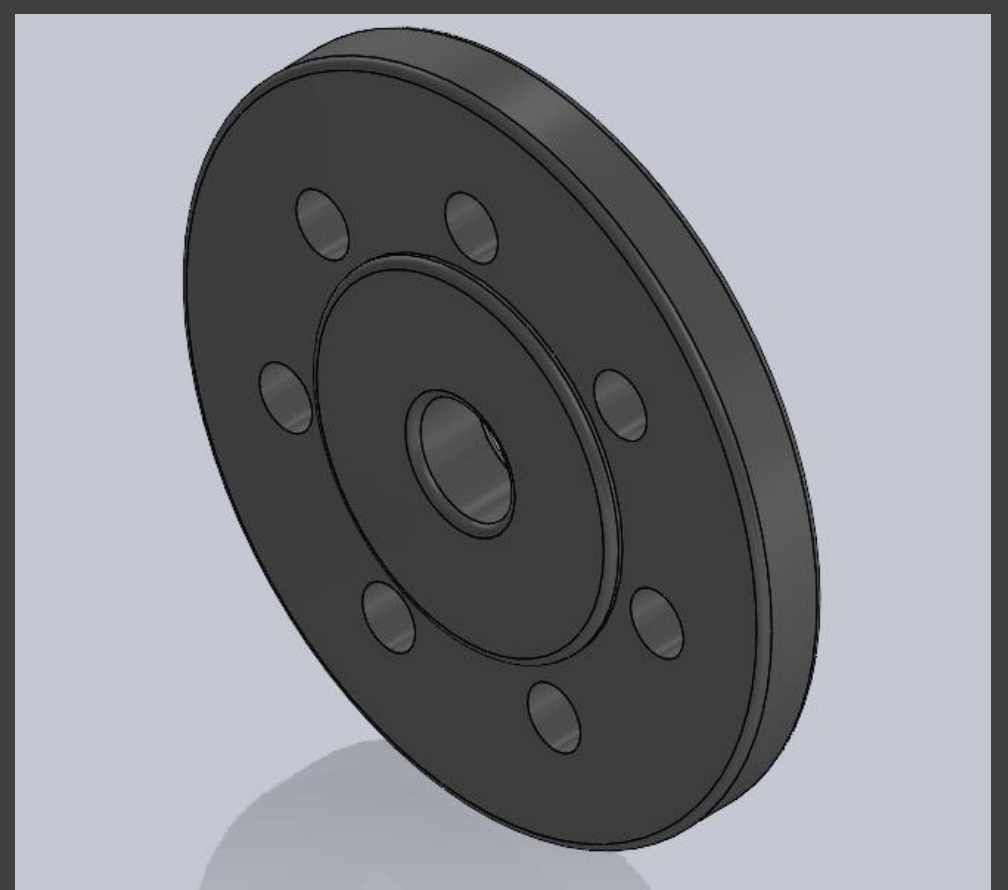
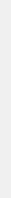


Figure 5: New Front Wheel Design

Design Iteration



- Table 1: Purchasing Plan

Subsystem	Manufacturer/ Component Name	Quantity	Price	Total	Lead Time	Make Vs. Buy	Status on part
Electrical	Amazon Motors	2	130	260	0	Buy	On hand
Electrical	Sabertooth Dual 60Amp motor driver	1	189.99	189.99	0	Buy	On hand
Electrical	Fly sky fs-1a6b	1	60	60	0	Buy	On hand
Electrical	Battery	2	40	80	0	Buy	On hand
Electrical	Circuit Breaker	1	26.99	26.99	0	Buy	On hand
Electrical	Power and Ground Wires	1	40	40	1 wk	Buy	Ordered
Frame	Osh Cut Frame	1	326	326	0	Buy	On hand
Frame	Battery Tie down	1	10	10	0	Make	On hand
Axle	Axle Shaft	1	10	10	1 wk	Buy	On hand
Axle	Axle Bearings	4	5.5	22	1 wk	Buy	On hand
Axle	Axle Blocks	2	20	40	2 wk	Make	On hand
Drive	Wheel Adapter	2	25	50	2 wk	Make	On hand
Frame	Frame Bolts	1	30	30	0	Buy	On hand
Drive	Tracks from Verco Track	1	400	400	2 wk	Buy	On hand
Drive	Harbor Freight 8 inch Wheels	4	7	28	0	Buy	On hand
Misc	Spray paint	2	7	14	0	Buy	On Hand
			Total USD \$	1586.98			

Purchasing Plan

• Table 2: Manufacturing Plan

Manufacturer/ Component Name	Quantity	Price	Total	Lead Time	Make Vs. Buy
Power and Ground Wires	1	40	40	1 wk	Buy
Electrical Box Wiring	1	12	12	1wk	Make
Nutserts for frame	1	10	10	1 day	Buy
Frame Welding	1	0	0	2 wk	Make
Axle Shaft machining	1	10	10	1 wk	Buy
Axle Bearings pressed into wheels	4	5.5	22	1 wk	Buy
Axle Blocks machining	2	20	40	2 wk	Make
Front Axle Assembly	1	0	0	2 wk	Make
Wheel Adapter machining	2	25	50	2 wk	Make
Tracks from Verco Track	1	400	400	2 wk	Buy
Paint and Finishing					

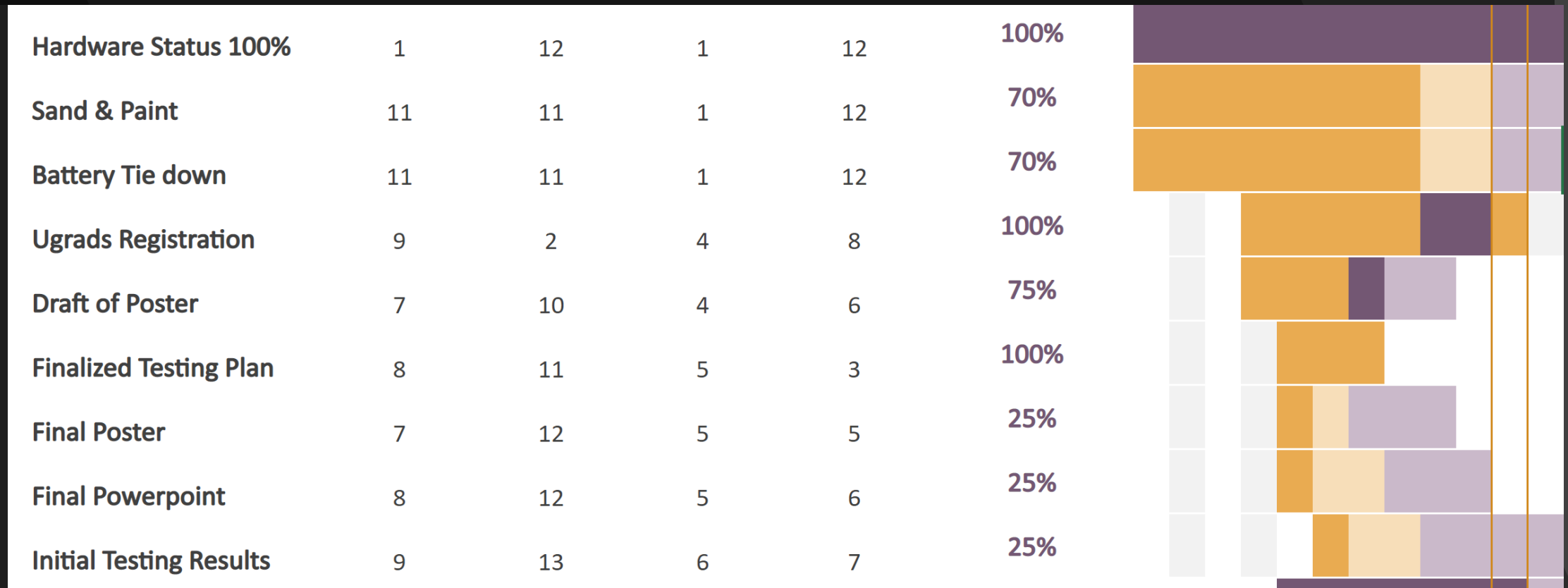
Manufacturing Plan

Demonstration



Gantt Chart Update

Table 3:Gantt Chart



A 3D rendering of a field of dark grey question marks. In the center, one question mark is highlighted in a bright yellow color. The word "Questions" is written in white, sans-serif font across the yellow question mark.

Questions