

GoBabyGo-C



Team 22: Alwaleed Alhamra, Asrar Alkhabbaz, Fawaz Almutairi, Sultan Almutairi, Eric Trieu

- Department of Mechanical Engineering
- Project Sponsor: W.L Gore and Associates
- Faculty Advisor and Advisor Mentor: Dr. Sarah Oman
 - Instructor: Dr. David Trevas
 - Date: April.28.2017

Project Description

- Go Baby Go is a non-profit organization that provides modified ride-on-cars for children ages 3 to 6 who experience limited mobility.
- Many volunteers started the program in different states around the US that expanded throughout the world.
- Goal: Help children with mobility challenges and enable them to interact with others.
- Thinking and building a new and creative version of ride-on-cars.

Sultan Almutairi



Customer Requirements

Customer Requirement

1. Low Cost
2. Ease of Assembly
3. Safety
4. Aesthetic
5. Comfortability
6. Lightweight
7. Durable

Weighting

Safety	5
Durable	4
Ease of Assembly	3
Low Cost	3
Lightweight	2
Aesthetically pleasing	2

Scale: 0-5 (5 most important)

Design Description



Vehicle used as base design

Initial Features:

(3) Motors

12 V Battery

Variable speed control (2 mph & 4 mph)

Forward and reverse control

Seat belt

Operated through foot pedal or remote control

Design Description:

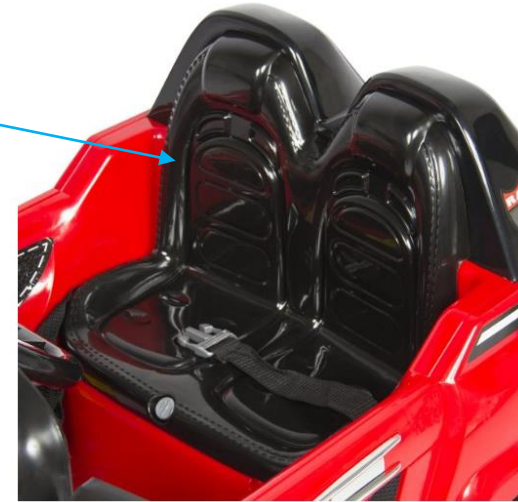
Joystick/Button Steering: For the child to easily maneuver the vehicle



5 Pt. Seatbelt: To secure child in the vehicle



Cushioned Seating: Provide softer seat than the hard plastic

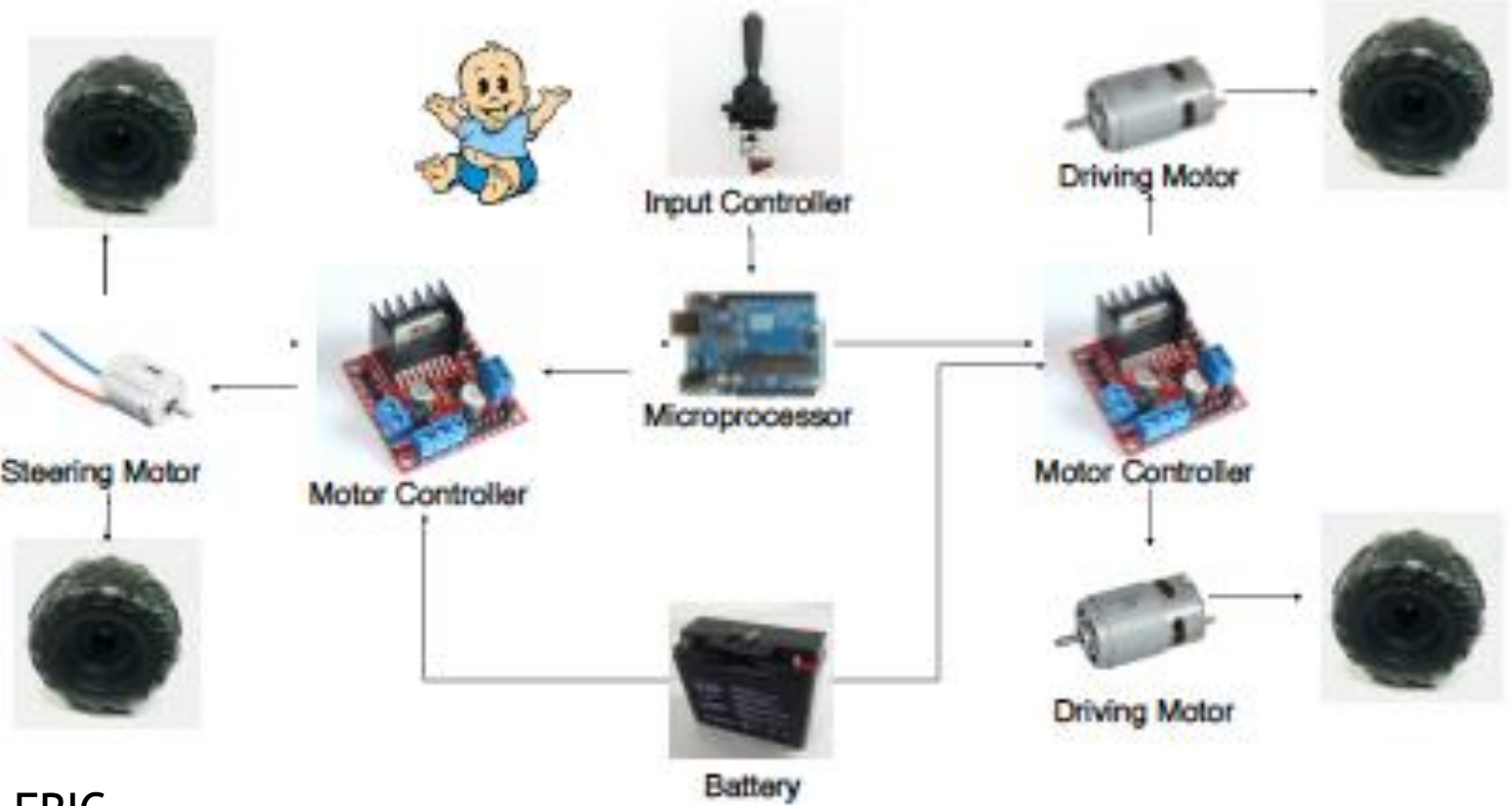


Power Steering & Window Motors: DC-Motor and Servo Motor



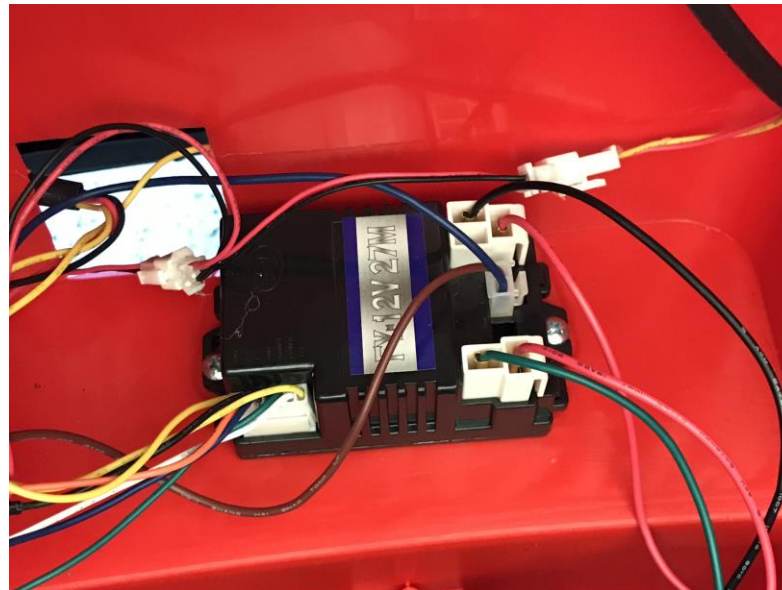
PVC + Foam: Prevent child from rolling outside of the vehicle

Design Solution



ERIC

Manufacturing



Eric Trieu

Final Testing



- ▶ We couldn't use a child due to liability

Asrar Alkhabbaz

Budget

Budget		
Part Categories	Pricing	Source
Safety	\$ 61.24	Home Depot
Electronics	\$ 66.97	Amazon
Steering	\$ 24.95	Amazon
Vehicle	\$ 187.67	Amazon
Total Vehicle Cost:	\$ 340.83	

Outcomes

- ▶ We got exposure to utilizing a micro-processor
- ▶ We were able to implement the new steering system while keeping the pre-existing part.
- ▶ The team created a safety measure to secure a child.

Special Thanks!



Dr. Trevas (instructor)



Dr. Sarah Oman (Client)



Dr. Yaramasu



Michael Bair