

# LIGHT WEIGHT MOBILITY VEHICLE

**ASHISH  
AVINASH  
POOJITHA**

# *What is Light Weight Mobility Vehicle?*

Typically a light weight mobility vehicle is one that can be dismantled to be transported or stored and is designed for use on pavements or within shopping areas.

The reduced weight is often created by use of materials in construction and the smaller footprint. It seems fairly obvious to say but this reduction in weight allows the user greater freedom and maneuverability within the intended environment, providing more choice and control.

## *Our Aim*

- To design a vehicle that is capable of moving on road
- Human centric
- Easy to use
- Reliability
- Easy to manufacture
- Multi-purpose

# *Specifications*

- Steering system
- Braking system

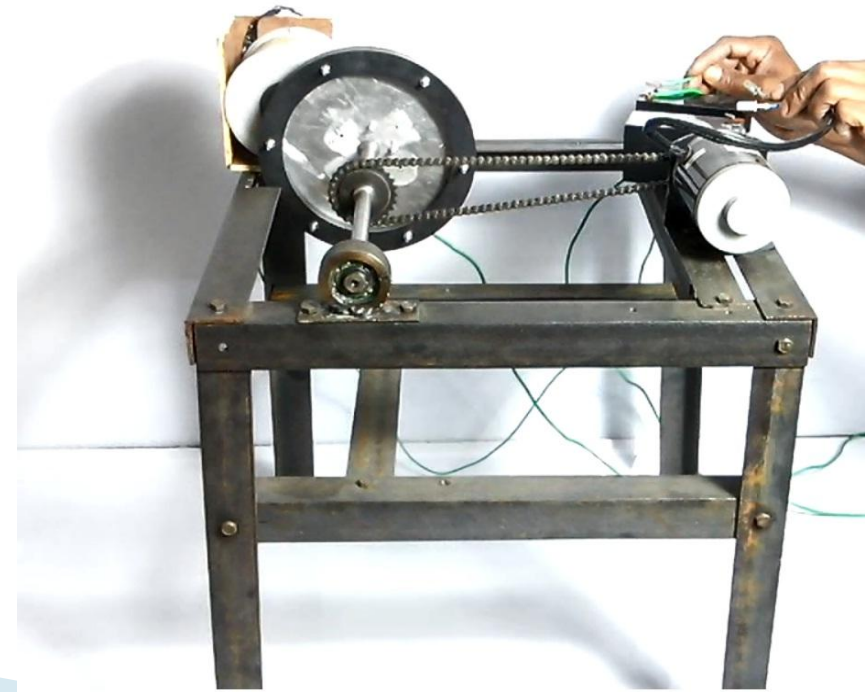
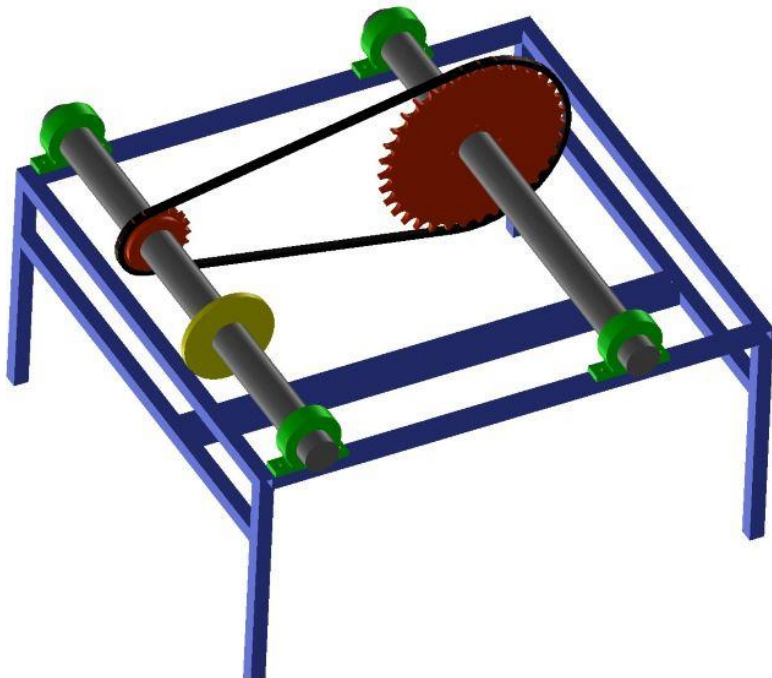
# *Steering system*

- The **purpose of steering system** is to allow the driver to **control** the direction of vehicle by turning the front wheel
- A universal joint is attached between the handle link and front wheel with **maximum steer angle of 65 degrees**



# *Braking system*

**Electromagnetic braking system**: Electromagnetic braking means applying brakes using electronic and magnetic power. Here we use the principle of electromagnetism to achieve friction less braking. So without friction or need of lubrication this technology is a preferred replacement for traditional braking. Also it is quite smaller in size compared to the traditional braking systems.



# *Materials*

## **The vehicle is made up of AISI-1020**

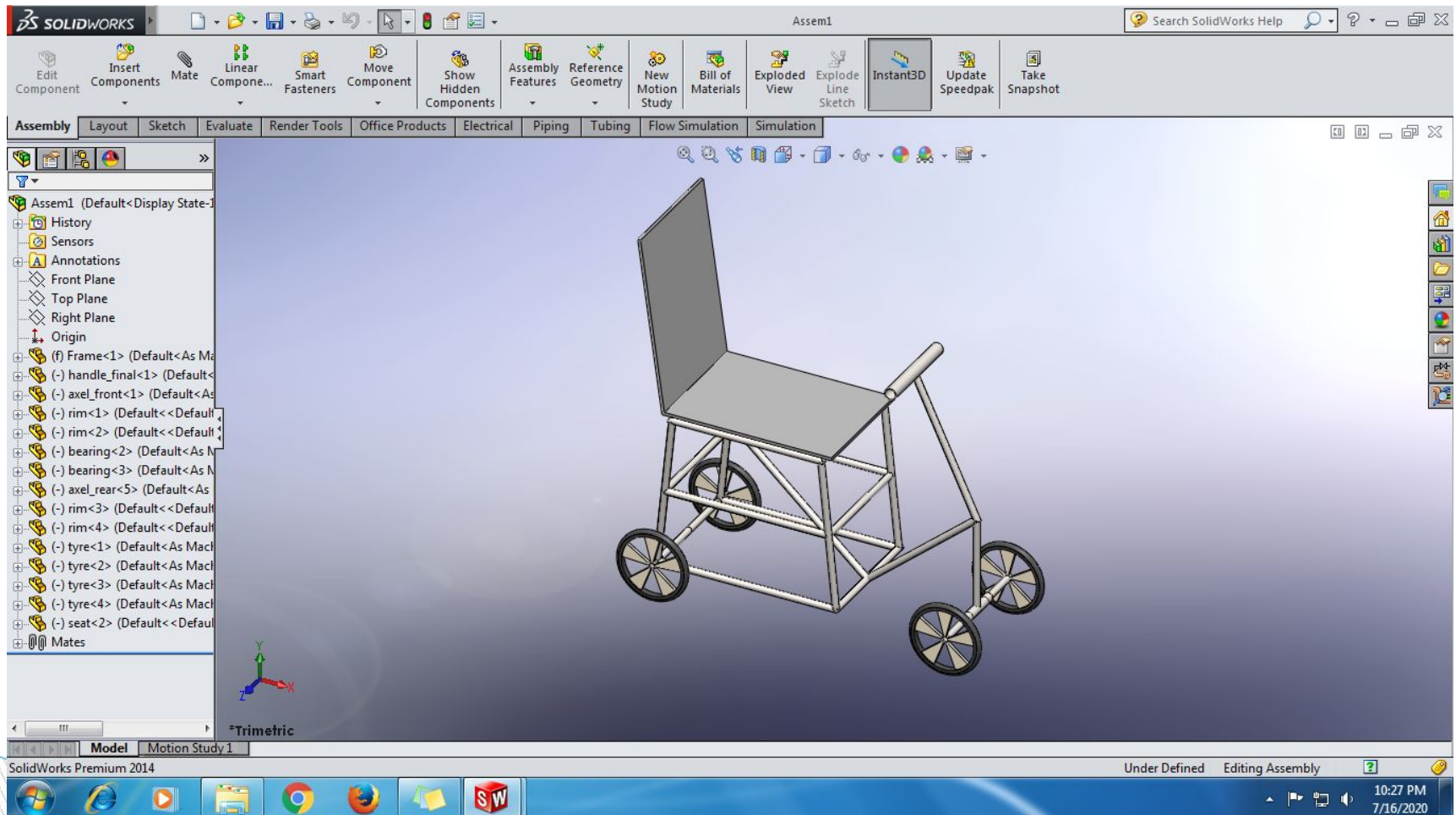
- The body parts are made up of FRP with long and short length glass wool
- The pipes are galvanized to prevent corrosion

## **WELDING**

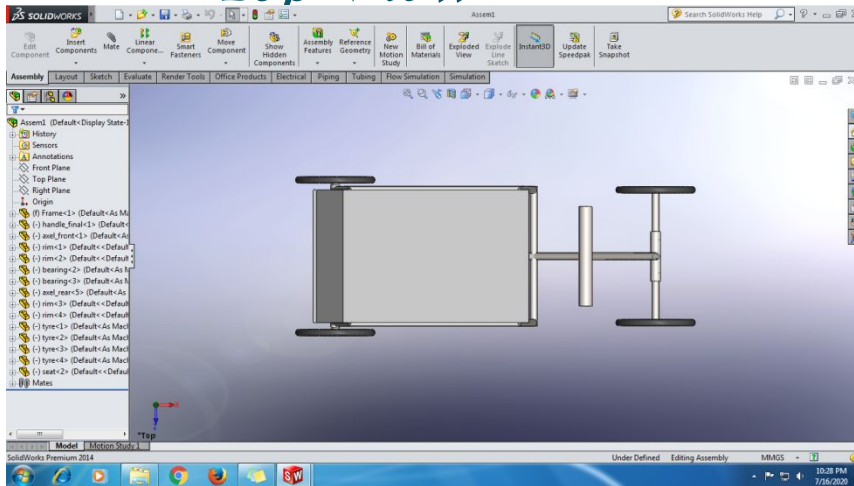
### **ARC WELDING**

- Low equipment required.
- Easy availability of labour.
- Low cost.

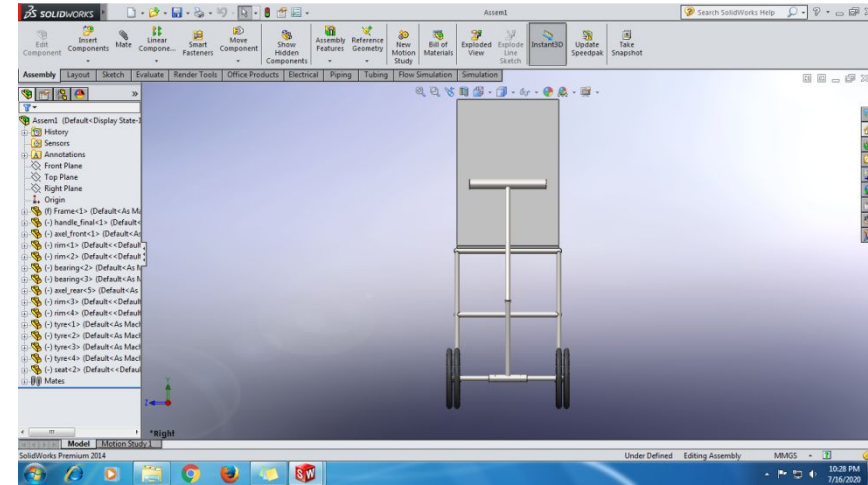
# Isometric view



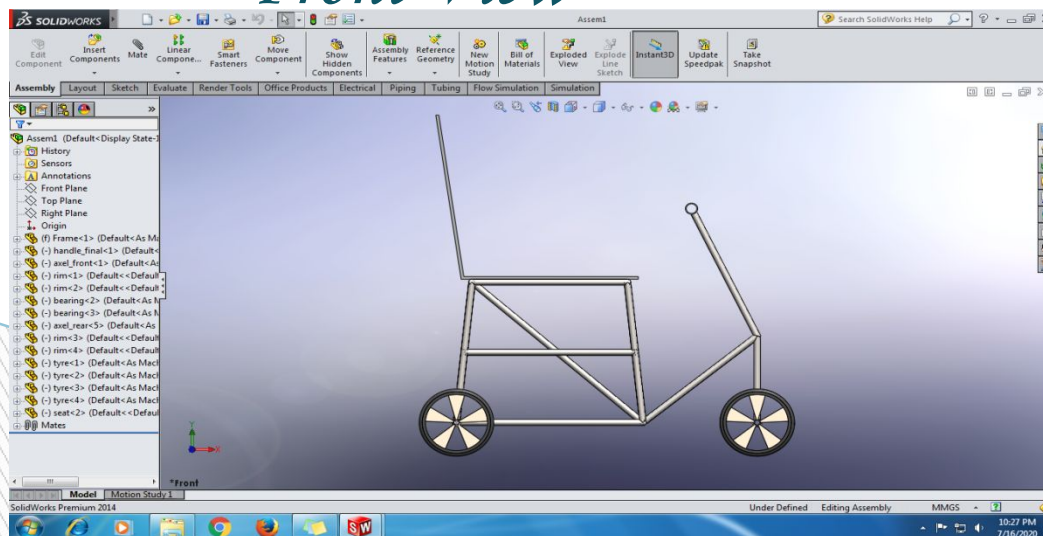
## Top View



## Side View

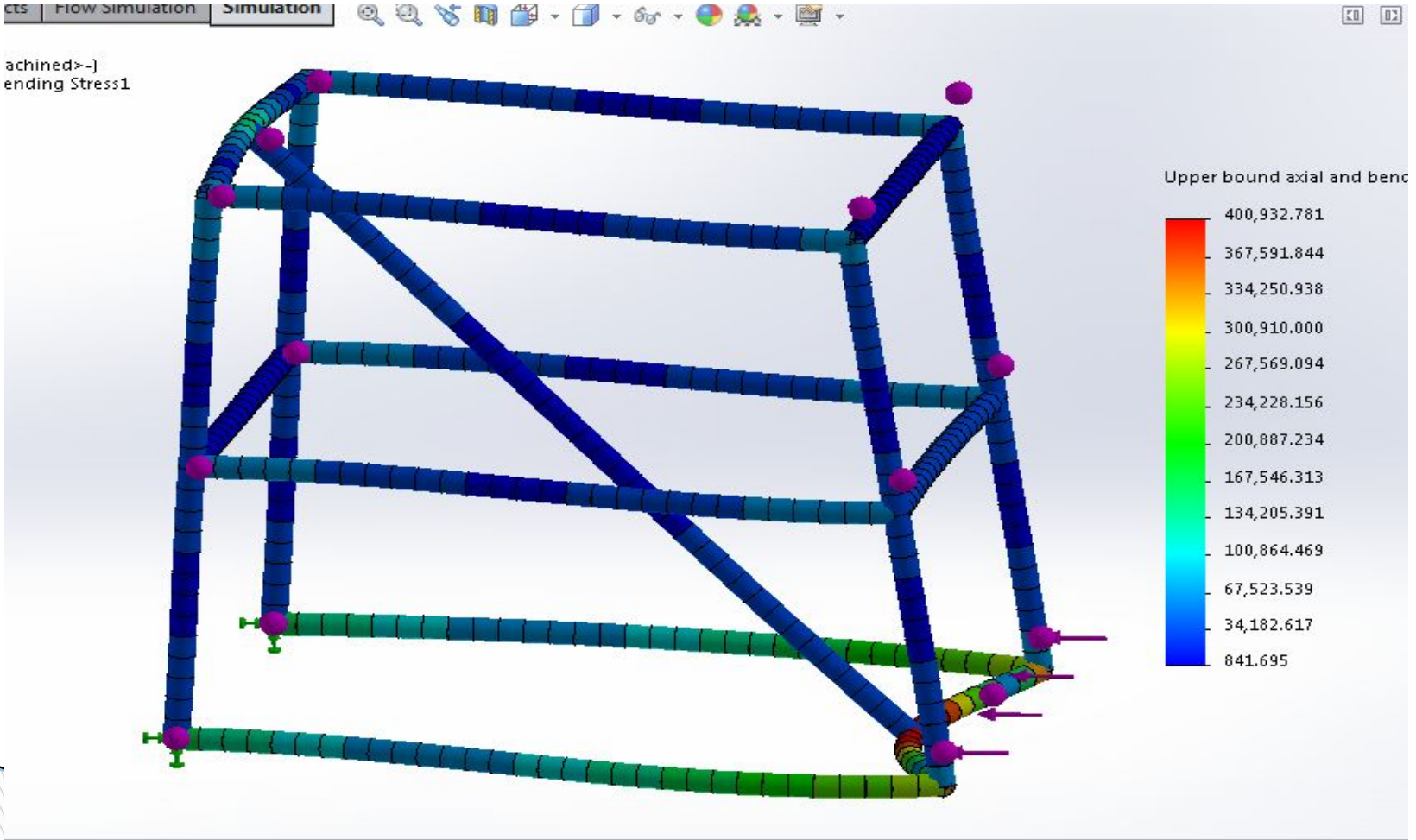


## Front View



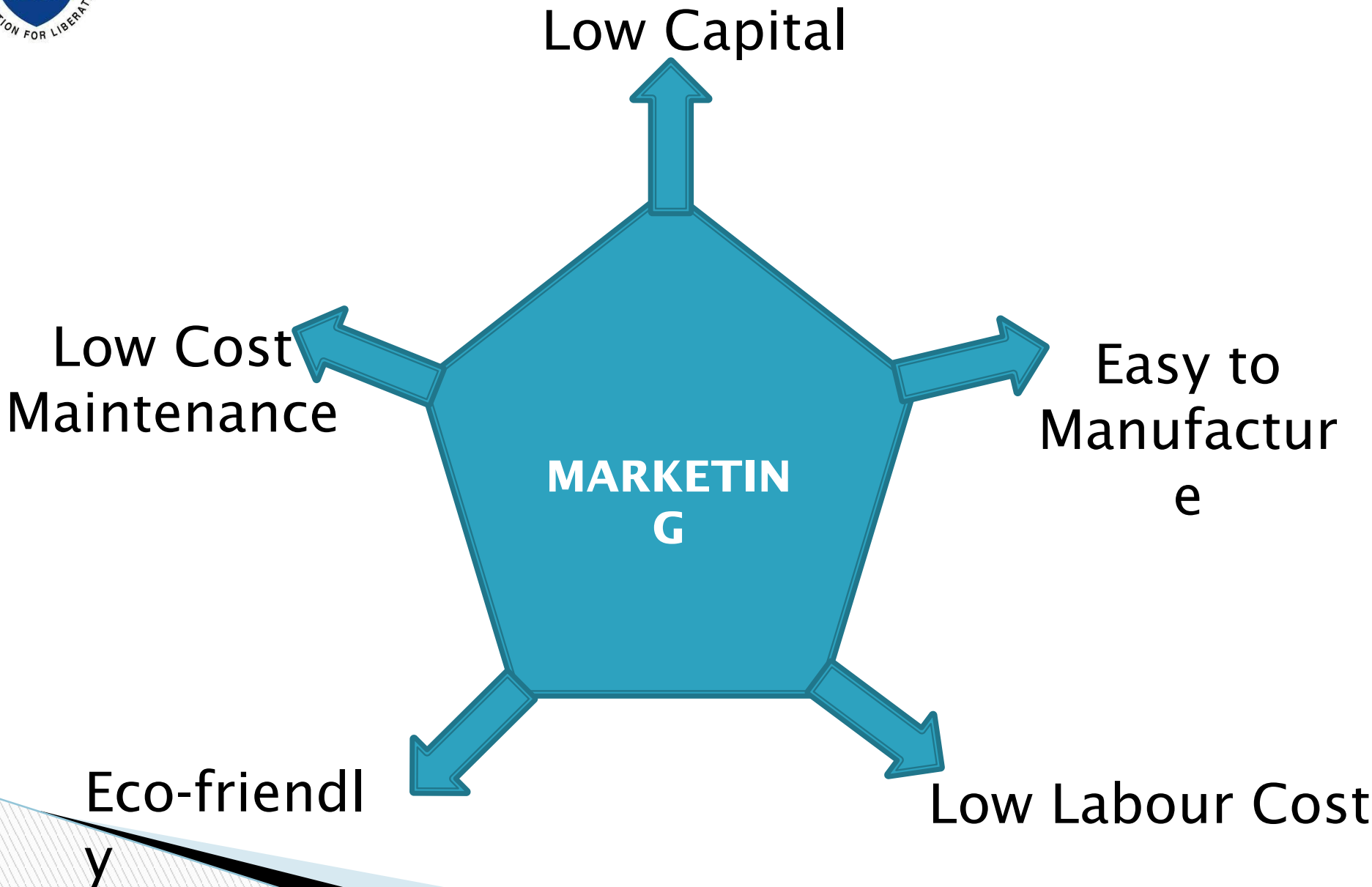
**DIMENSIONS**  
**LENGTH 947mm**  
**WIDTH 480mm**  
**SEAT HEIGHT 503mm**  
**WHEEL RADIUS 120mm**

# Analysis



# *APPLICATIONS*

- Gated Communities
- Public Gardens
- Institutes
- Tech Parks





*THANK YOU*

