Handout – Will Rose

In the preliminary design report my engineering principles were developed to show how the design of an ergonomic interior may be started. Allowing for good posture of the driver and easy reach and sight to all interior functions will allow for a comfortable drive. Knowing where and how posture can be modelled (ie system of linkages), design aspects for certain functions (ie positions and inclinations of driver’s seat) can be taken into consideration without too much overlap for other group’s processes. This leads into how those functions deemed critical can be adjusted to allow for a comfortable drive for all shapes and types of users. As stated in the preliminary design report, the crucial angles made by a seated posture for comfort are the knee angle, trunk/thigh angle, and the back angle. This leads to the consideration of allowing the corresponding parts of the chair to the seated driver to be adjusted as deemed fit by the user. This could be allowing the chair to be able to move closer/further from the pedals to allow a better reach with the foot (knee angle), or the back rest of the chair to be able to adjust its angle (back angle).

Choosing which angle or series of angles to be critical in our design will depend on the consideration of the other design groups. Space is at a premium in the electrically-assisted vehicle. As such not every function for ergonomic comfort can be allowed to change. In that light, allowing the driver’s seat to adjust for an individual’s comfort is critical to the success of the vehicle.