

S.L.S. [De]Ascension

Team 15
2019-2020



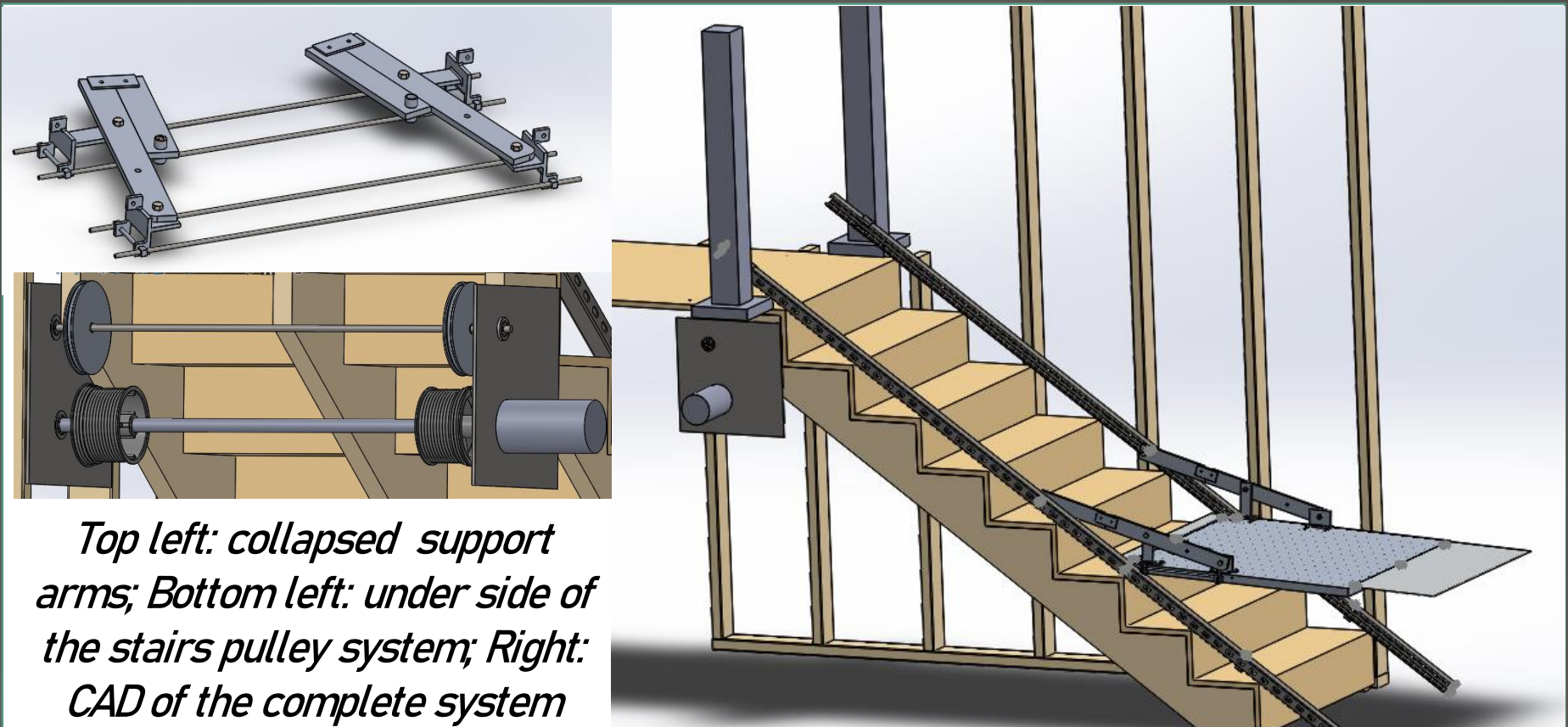
Objective

To design a chairlift system for our customer that allows a person and their wheelchair to ascend and descend a specific set of stairs.



Team members (left to right): Abigail Willson, Ryan Schierbeek, Christopher Pappageorge, Trevor Sando, Bridget Pertzsch

Design



Top left: collapsed support arms; Bottom left: under side of the stairs pulley system; Right: CAD of the complete system

A removable platform moves up and down side rails utilizing a pulley system powered by a modified winch motor. The first iteration of the CAD model is shown above. The next step is to conduct finite element analysis (FEA).