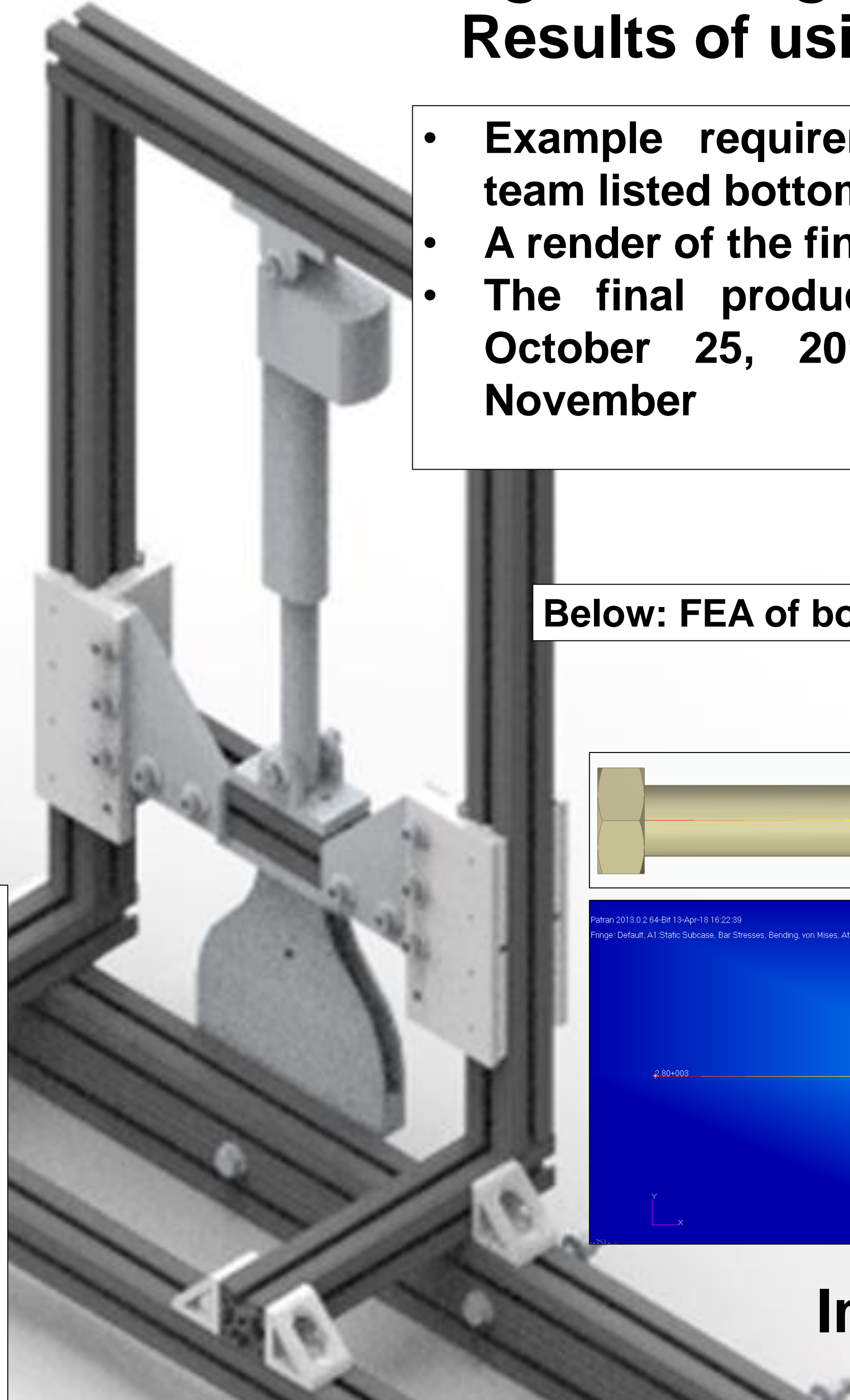
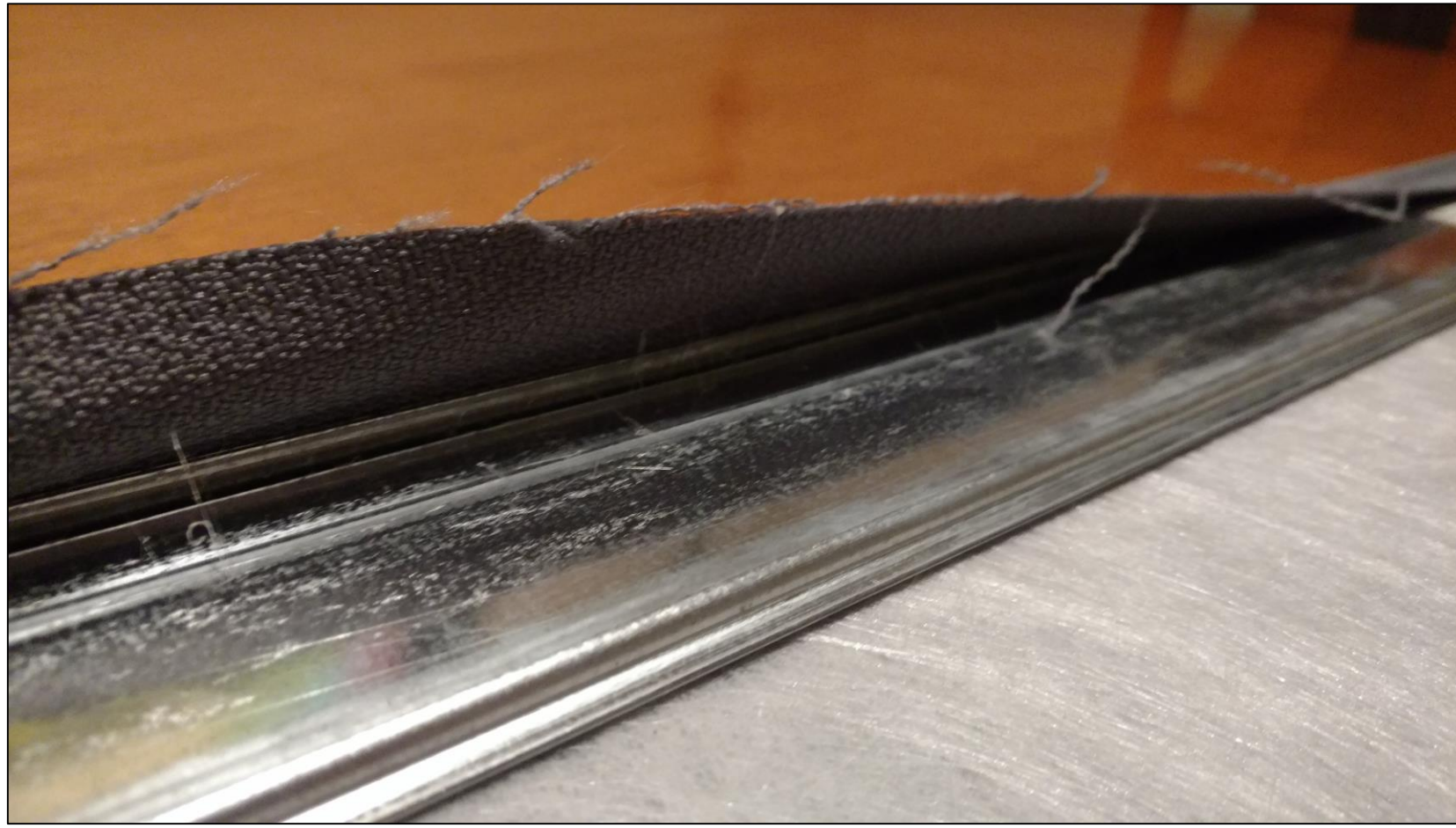


# Utilization of Aerospace Industry Design Processes for a Small Scale Student Project

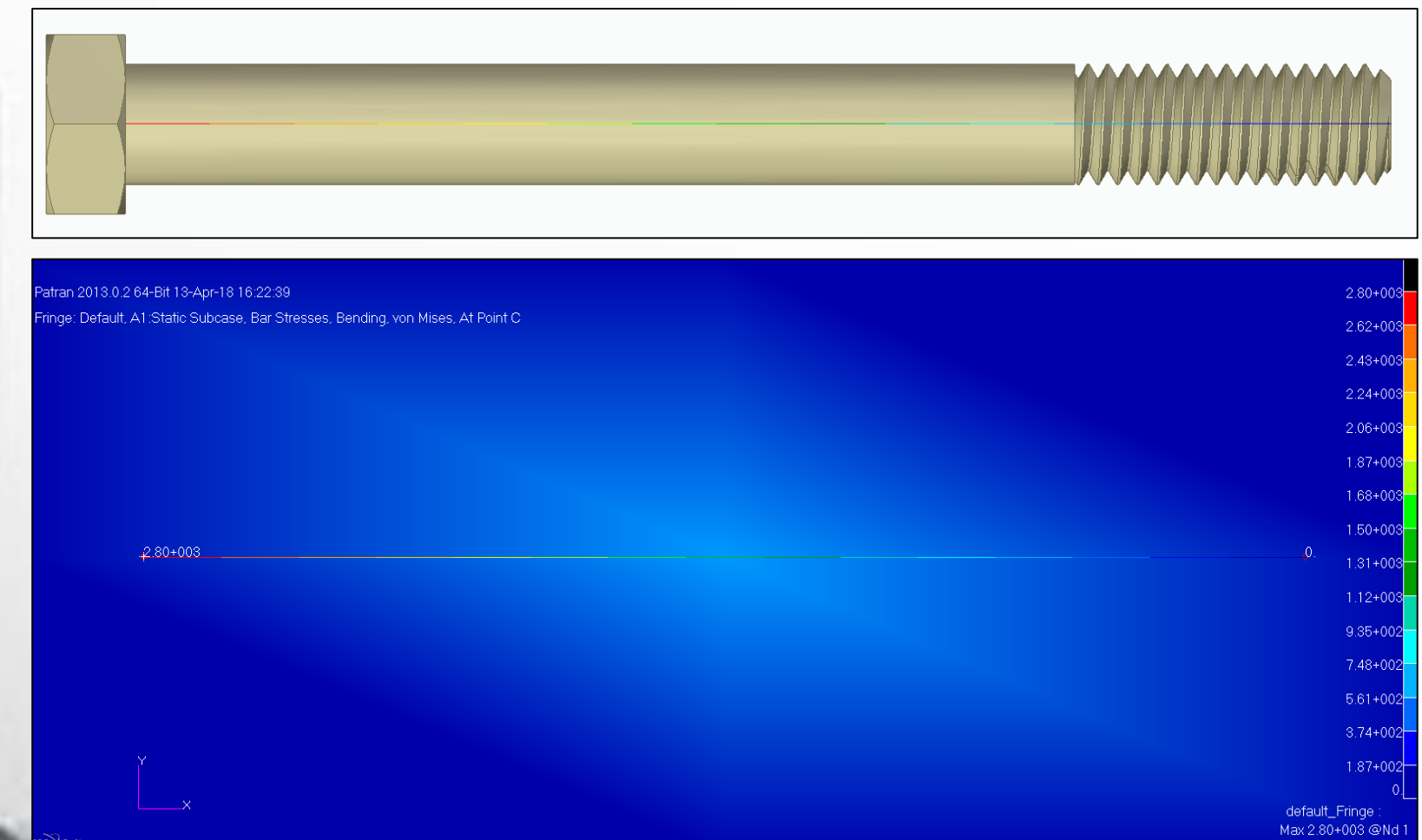
## Austin Click – UAH Engineering

### Results of using the NASA SEE

- Example requirements produced by the team listed bottom left
- A render of the final product is show below
- The final product will be demonstrated October 25, 2018 and delivered early November



Below: FEA of bolts used to mount the NDDTS



### Introduction

- National Aeronautics and Space Administration Systems Engineering Engine (NASA SEE) was used
- The product was a Non-Destructive Delamination Test System to test adhesion between cubical fabric and structure
- Example panel with failing bond shown below
- Students used the NASA SEE to create a complete design

### Impact/Conclusions

- Steelcase will overall spend less money replacing panels which are defective
- Students are familiar with industry design processes

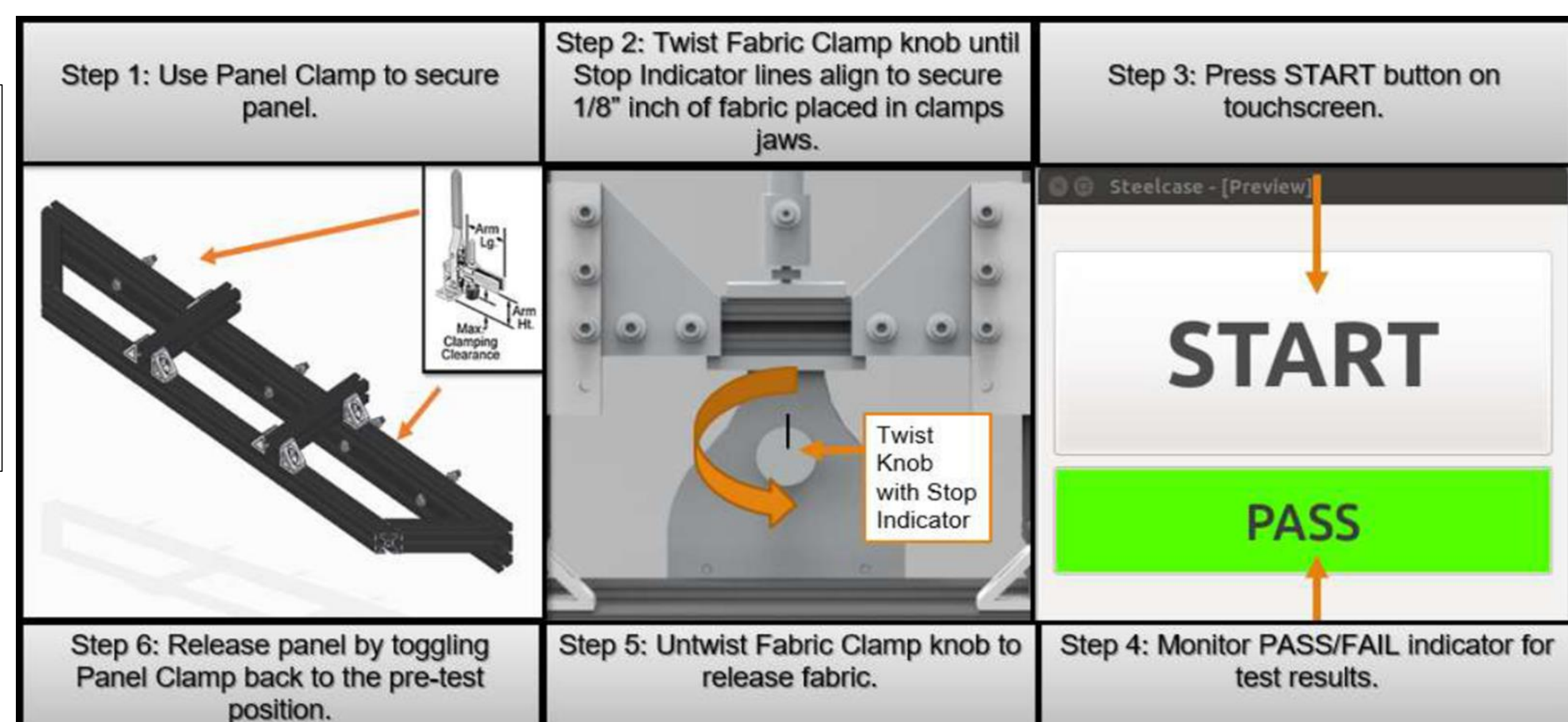
1.2.1	Functional	The NDDTS shall be capable of testing adhesion strength of the glue that bonds the panel fabric to the panel's metal frame.	C	D	NDDTS demonstrates capability to adhesion strength of the glue that bonds the panel fabric to the panel's metal frame.
1.3.1	Performance	The NDDTS should complete one panel test in 60 seconds or less.	C	T	NDDTS completes one test in less than 60 seconds.

### Explanation

- Using the NASA SEE familiarizes students with industry standards
- Produces a quality product with great documentation of the process, including documentation like CAD drawing, and a concept of operations, shown right

### Acknowledgements

Senior Design Team:  
 Krysta Blackerby  
 Vish Ghimirey  
 Nathan Lawrence  
 Evan Whitten  
 Dr. Christina Carmen



# Steelcase