Our client, a Navy veteran, lost approximately half of an inch past the center knuckle of his right index finger. We created a prosthetic finger for him that helps him more easily perform tasks, increasing the quality of his life.

Key Requirements
- Create a trade-show ready prototype
- Lifting capacity of 8lbf
- Range of motion of 145°
- Ability to wear comfortably for 5 hours
- Perform and withstand day-to-day activities
- Actuation initiated by the bending of the base knuckle

Housing
- Protects linkage system from outside interference
- Helps prevent binding
- Grip indentation
- 3D printed Onyx™

Linkage System
- Linkage system of rigid bars and pinned joints
- Seven bar system designed to mimic finger motion
- Waterjet out of Aluminum 6061

Ring
- Protects linkage system from outside interference
- Helps prevent binding
- Grip indentation
- 3D printed Onyx™

Main Iterations
Over a 9-month design cycle we created many iterations resulting in more than 100 prototyped parts, shown here are the 3 versions that show the biggest changes and our final design: