Seat Belt Guide

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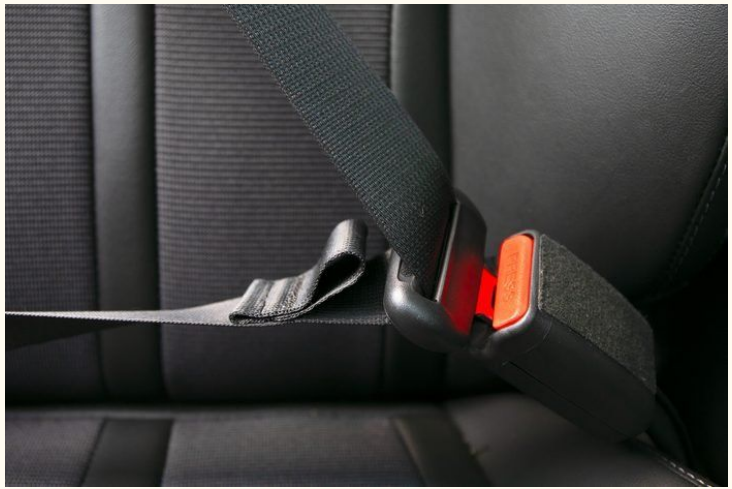
Sylvain Quach
Evan Tomietto
Yunsu Lee
Hans Rao Ladkoo

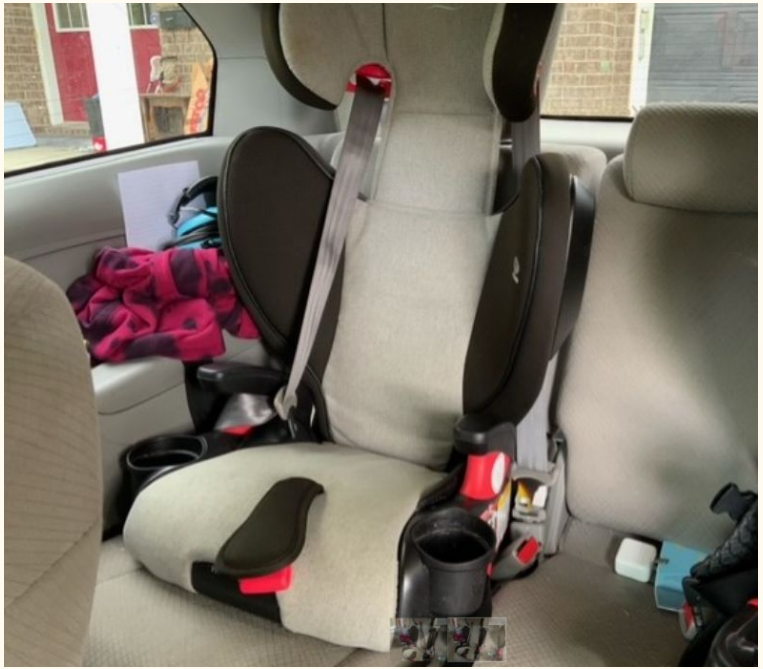
Overview

Our goal was to produce an ergonomic handle/guide used to help users with limited strength and mobility to buckle and secure themselves into standardized 3-point car seat belts.

Problem at Hand

- Client background
- Arthrofibrosis
- Looking for seat belt assist/guide

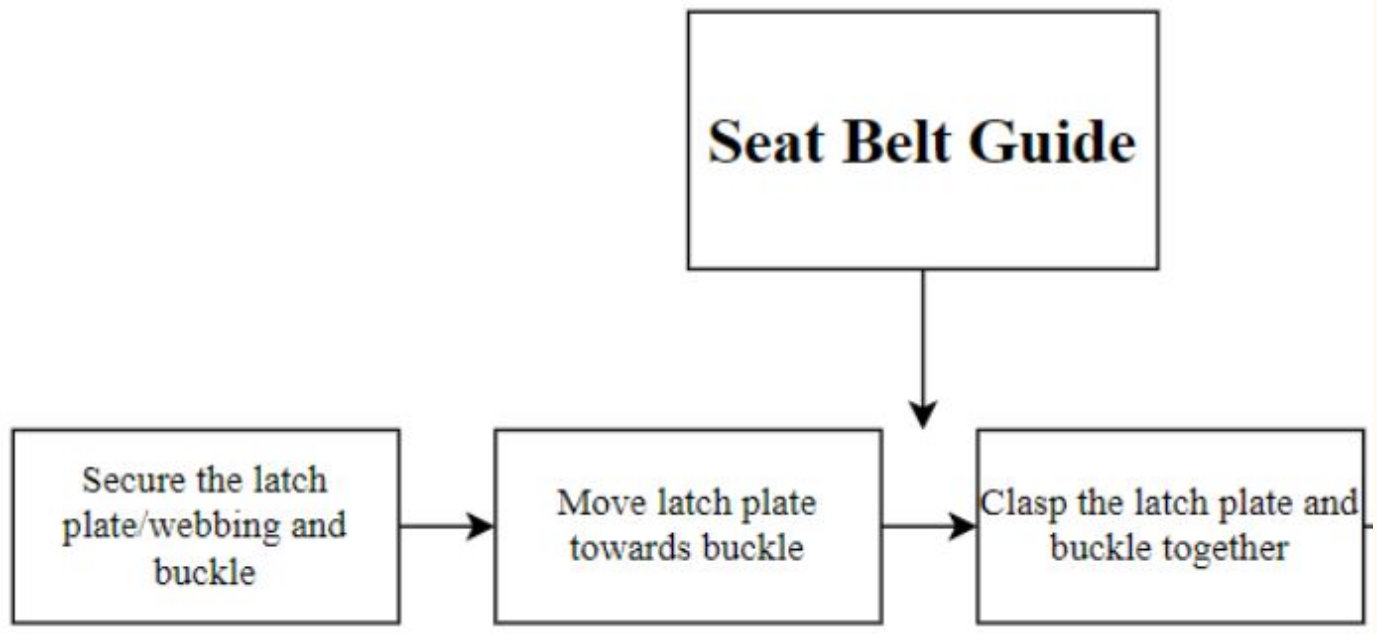




Goal of the Project

- Male Part → Female Part
- Strength/reach to clasp together
- Not hinder other functionalities

Functional Decomposition



Basic User Requirements

- Attachments to both the male and female parts of the seatbelt to provide extra reach
- A guide to lead the male towards the female part to be clipped in
- Easy installation
- Universal design for any car type
- Safety of passengers

Target Specifications

Functional Requirements	Constraints	Non-Functional Requirements
Extra reach A guide/track Safety of passengers Does not disrupt normal function of the seatbelt	$\leq$ \$50 $\leq$ 400 g $<$ 30 cm in length $<$ 5 cm in width Operates between -40 to 60 ℃	$<$ 5 minutes to install $<$ 10 years of product life Durability Aesthetics

Products that Currently Exist

lSeat Belt Handle by SBEP

Buckle Booster by SBEP

Seat Belt Grabber by Veigel

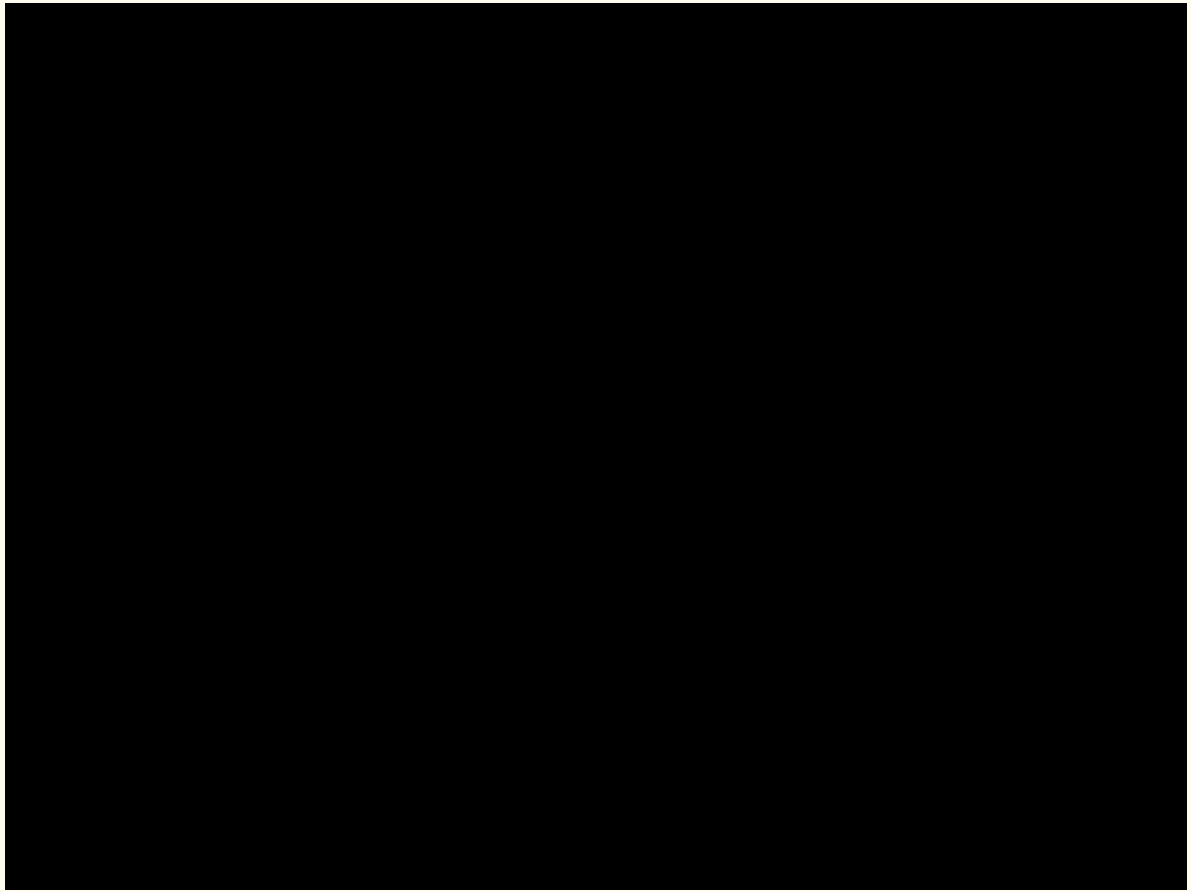
Final Product

Final Product

What makes us better?

- Extendable strap providing extra reach
- Rigid and ergonomic handle
- Multi-purpose
- Easy installation and use
- More affordable than competitors

Demonstration



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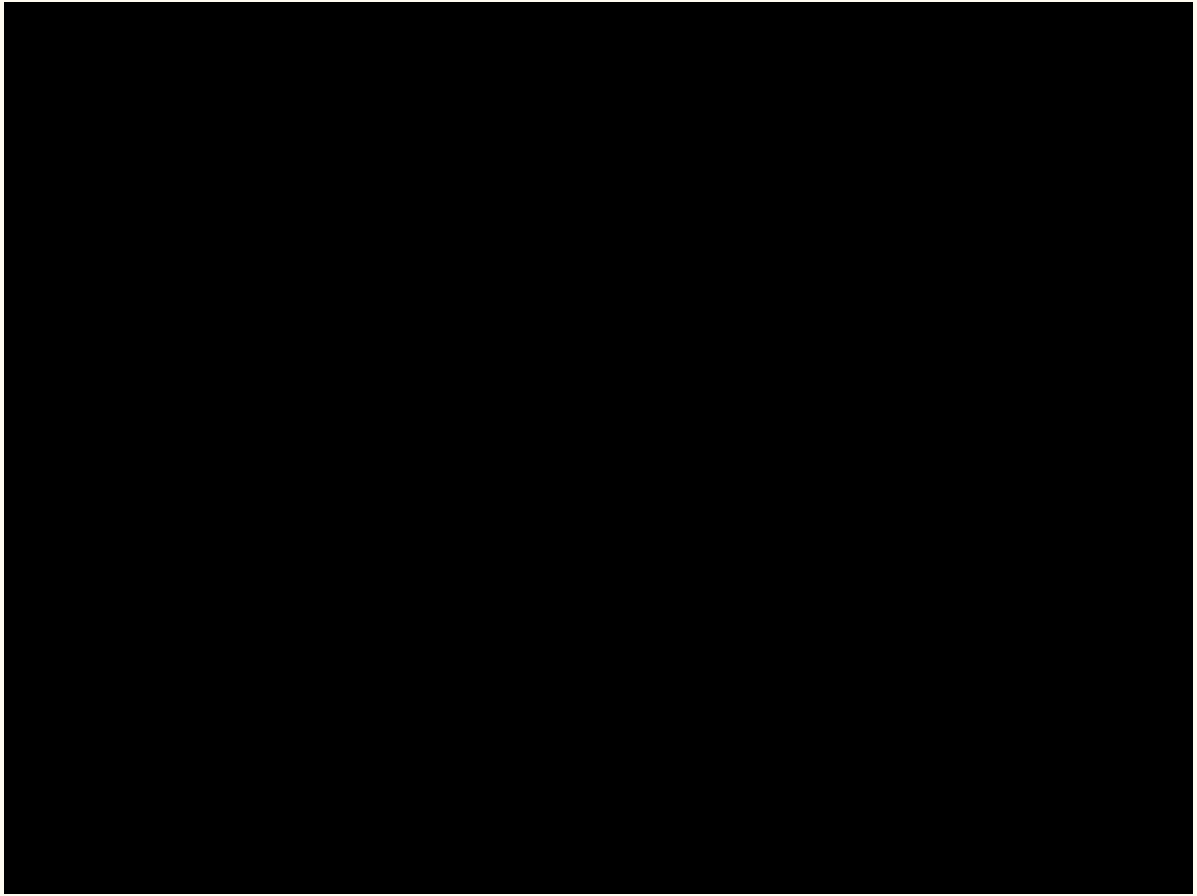

Questions?