After surveying 28 people who used backpacks on a regular basis, we discovered that a significant number of users, particularly those involved in ROTC, were carrying over 40 pounds in their backpacks. Additionally, the area that felt the most pain from carrying these heavy loads was the back.

We also conducted interviews from people who filled out the survey, and discovered that some people experienced a lack of blood circulation in their arms and shoulders do the weight of their backpacks.

Various hobbies and occupations require the use of a backpack. From being an avid backpacker to serving in the military, the use of heavy-duty backpacks, which are often filled to the brim with supplies, can put significant strain on the body. These backpacks are also often carried at fast speeds and long distances. Most backpacks do not account for this, even if they come with an external or internal frame.

Long term effects of carrying a heavy backpack:
- Strained neck and shoulders leading to headaches
- Damage to the spine
- Reduced breathing capacity due to poor posture
- Scoliosis
- Back pain and muscle spasms

The only competing product with our design is the HoverGlide backpack. They have designed backpacks that come in 3 different sizes that also make use of a suspension system to lessen the impact on a users joints. However, their suspension frame is sold with their backpacks and cannot be disassembled. This requires the user to buy a whole new backpack if they would like the benefits of the suspension frame. Their backpacks also only come in 3 different sizes.