

Fashion Design

qXgo



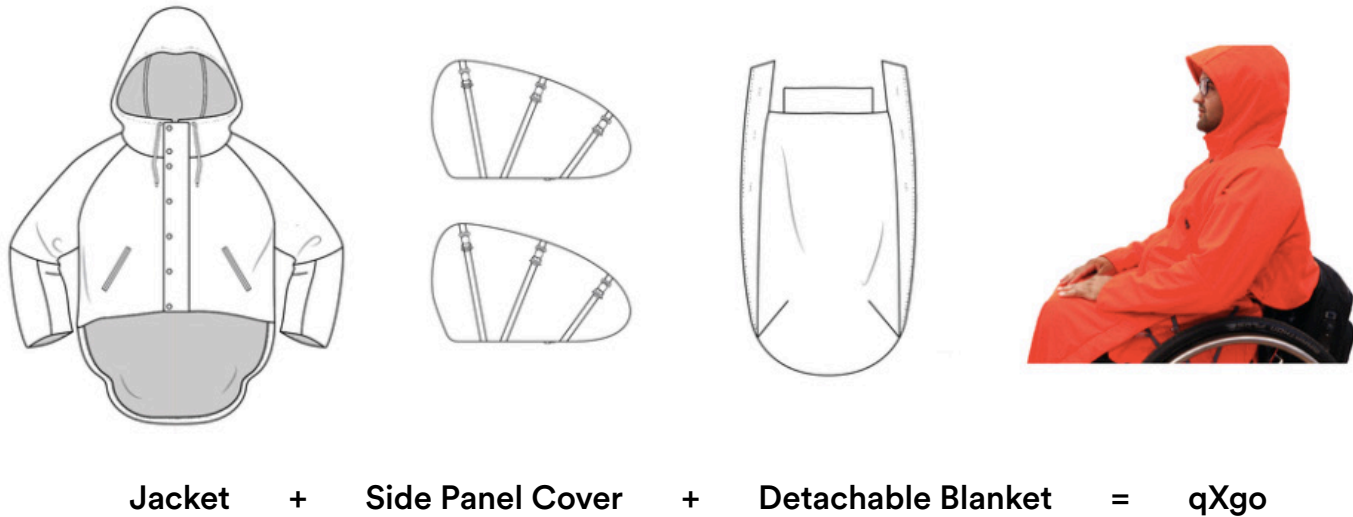
Figure 1. Detachable Blanket

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Summary
An inclusive and stylish two-piece rain solution providing superior water repellency, breathability, and portability for individuals on the go.

Design challenge
To create a portable and waterproof design system that protects seated users from the rain.

Figure 2. Three-part design system to tackle the rain





What it is

Quemuel Arroyo (“Q”) is a government official at the New York Department of Transportation who sustained a T9-T10 incomplete spinal cord injury during an outdoor sporting accident. Q enjoys leading an exhilarating life with novel experiences. But one aspect that challenges him is the rain. To combat precipitation, Q currently places a golf umbrella diagonally into his shirt while laterally tilting his head to

stabilize it. He constantly stops self-propelling his wheelchair to reposition the umbrella and / or he gets wet. Current rain solutions Q utilized were inefficient and failed to prevent rain from getting his wheelchair cushion wet. The team explored functional textiles combined with design for the seated silhouette to design a two-piece solution for rain protection.



How it works

qXgo was created to provide superior breathability, portability and water repellency for individuals on the go (Figure 2). This stylish rain jacket was designed in the context of the wheelchair “ecosystem,” which came with two side guards. The construction of the two-piece design worked in the following ways:

The top design

- Back vent for breathability (Problems with temperature regulation are experienced by people with SCI)
- Waterproof fabric (Conducted the American Association of Textile Chemists and Colorists (AATCC) Water Repellency Spray Test)
- Construction with ultra-bonded seams to prevent water flow
- Fitted hood that allowed peripheral vision

The bottom design (Figure 1)

- A lap cover that was detachable
- Two wheelchair side guard covers that also served as storage for the lap cover
- 3-D printed closures / drips for durable connection between the side guard and blanket