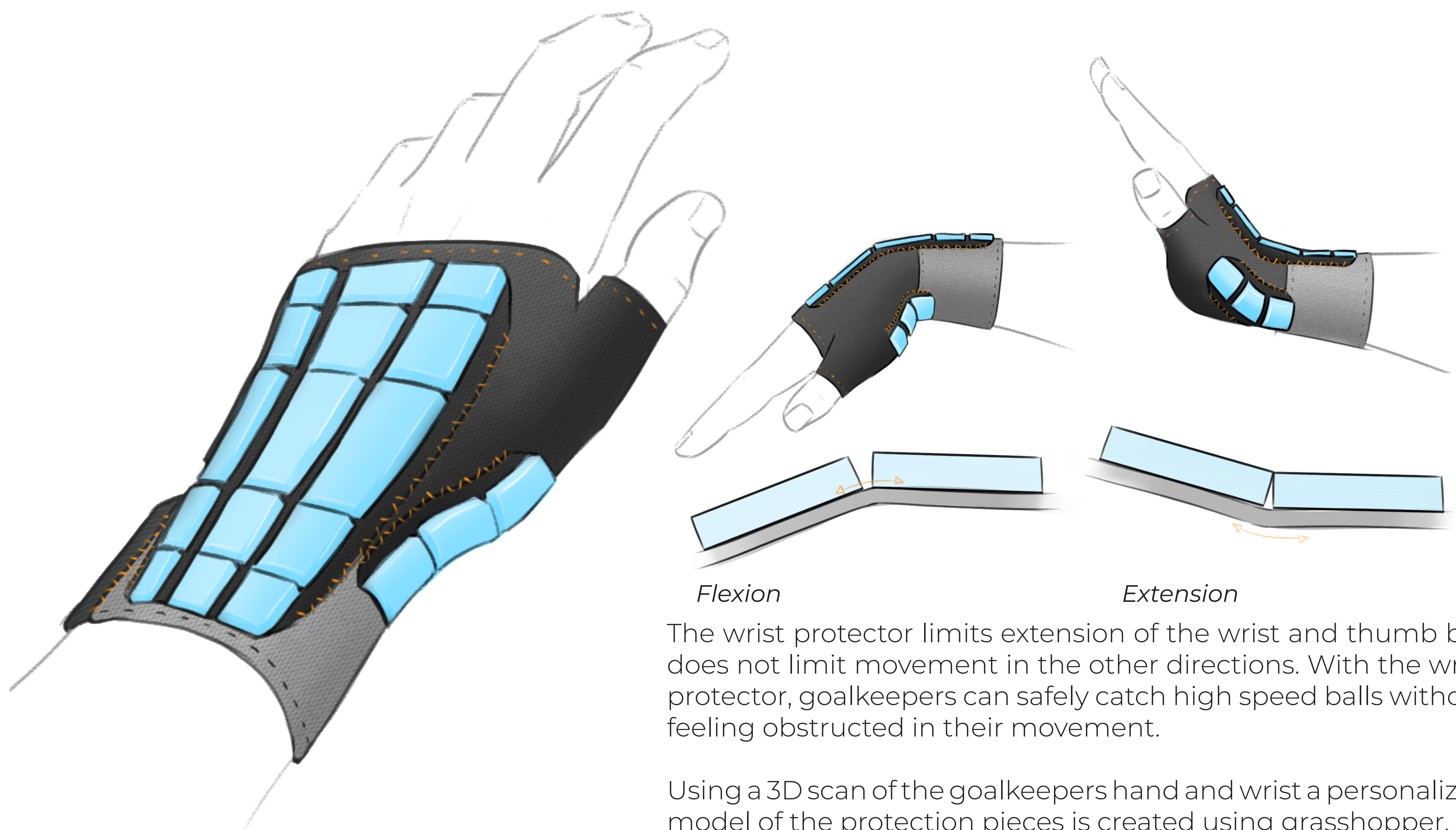


Wrist Protection for Professional Goalkeepers

With the intensity of professional soccer games increasing, the chance of injury increases as well. Balls are shot faster and their trajectory is becoming unpredictable. This results in an increased risk of hand, finger and wrist injuries in goalkeepers.

In collaboration with professional goalkeeper Norbert Alblas and the fieldlab UPPS a new type of wrist protection, suitable for goalkeepers, was designed.



The wrist protector limits extension of the wrist and thumb but does not limit movement in the other directions. With the wrist protector, goalkeepers can safely catch high speed balls without feeling obstructed in their movement.

Using a 3D scan of the goalkeepers hand and wrist a personalized model of the protection pieces is created using grasshopper.

Layered design

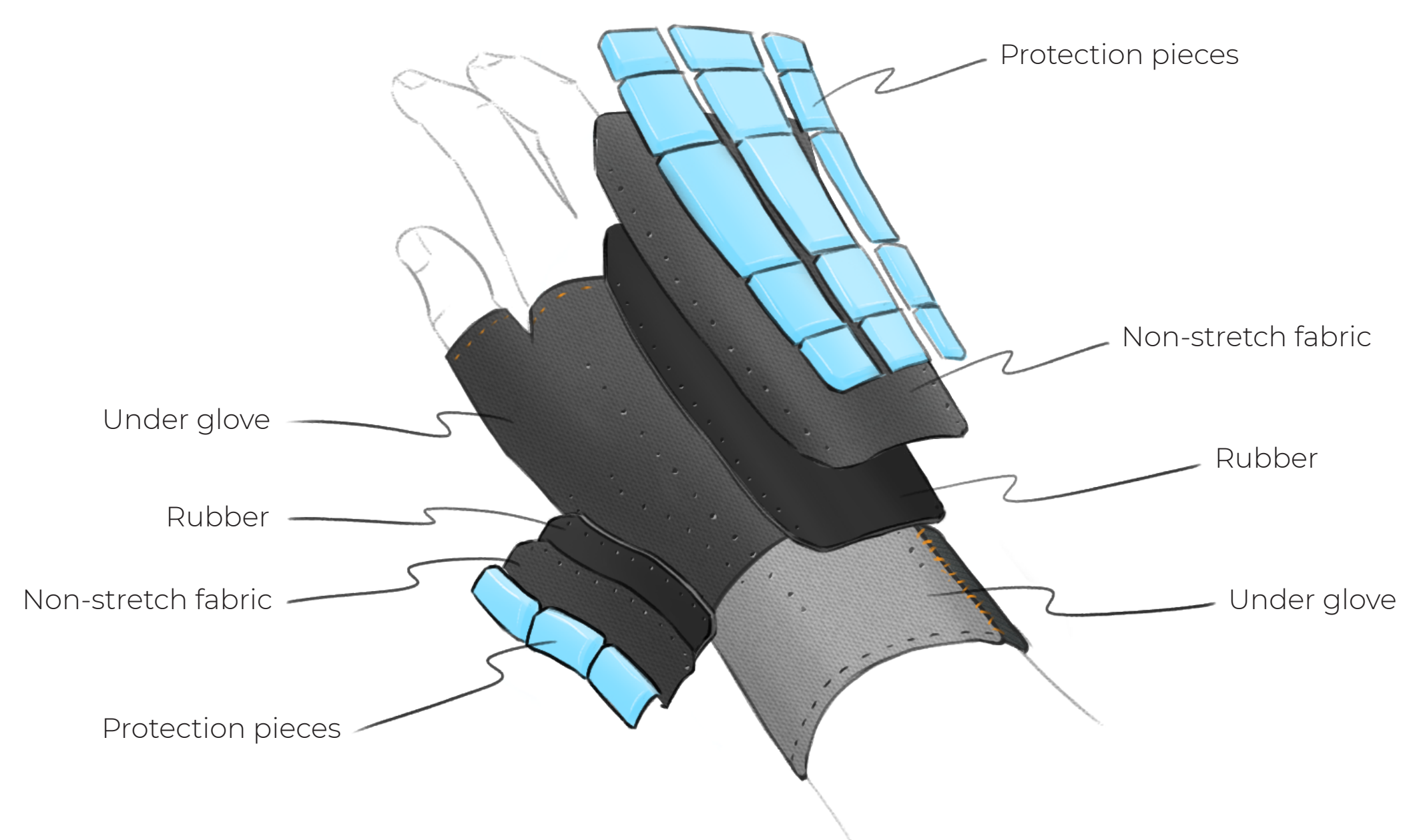
The wrist protector consists of four layers.

The first layer is the under glove. This under glove keeps the wrist protector on the hand and protects the goalkeepers' skin.

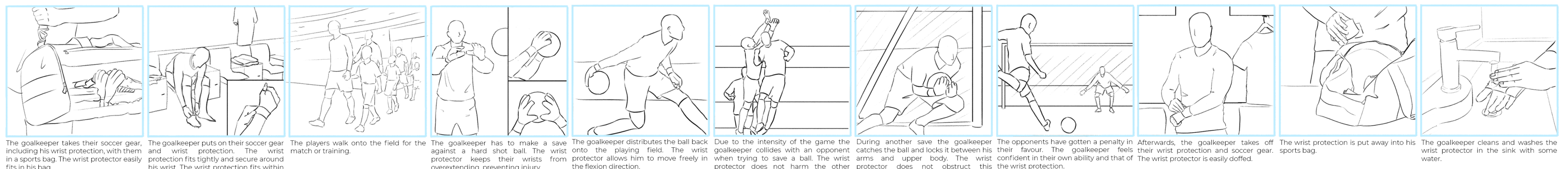
The second layer is a patch of rubber that is used to dampen the movements of flexion and extension.

The third layer is a fabric patch that serves as the living hinge of the last layer, the protection pieces.

The protection pieces create the actual limitation of the movement into extension. As they collide with each other hyper extension of the wrist is obstructed.



Use scenario



Noor Aberle
Wrist Protection for Professional Goalkeepers
March 1st, 2021
Integrated Product Design

Committee
Toon Huysmans
Silje Dehli
Norbert Alblas
Orbie BV
Company

