

A recreational basketball wheelchair  
with adjustable seat width

# FitConnect



## Problem

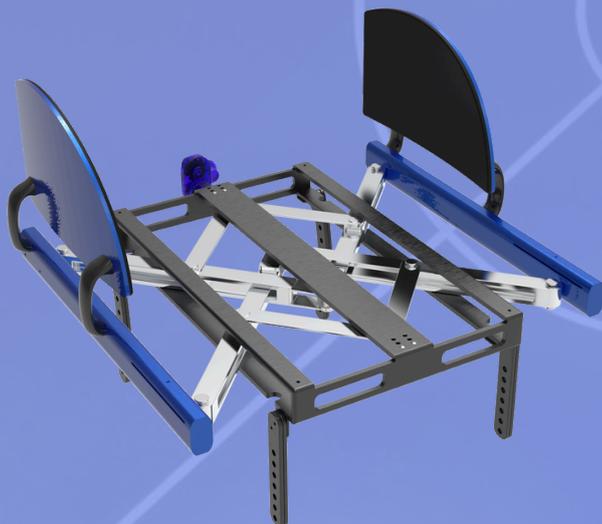
While wheelchair basketball is subsidized in the Netherlands, the lengthy processes of application, customization, and maintenance, combined with users' changing fitting needs, create notable pain points. Players, especially newcomers and teenagers often rely on wheelchairs that are poorly fitted, shared, or previously used by others. As recreational basketball wheelchairs must now accommodate evolving individual needs and multiple users, static configurations or limited adjustability have become inadequate, underscoring the need for design solutions with a higher level of adjustability.



## Solution

FitConnect emphasizes the importance of **seat width fitting** in recreational wheelchair basketball context, and proposes a novel improvement in basketball wheelchair design by integrating a quick and convenient seat width adjustment function with existing adjustable dimensions. The design achieved seat width adjustment by applying screw drive and Scott-Russell mechanism, and its ability to adjust to a high level of seat width fit has been verified through user testing.

By introducing seat width adjustment, Fitconnect not only better connect users to their wheelchair seats, but also enhances the user's connection to the community, and may encourage broader participation in wheelchair basketball.



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