The Talaria

The *Talaria* is a new triathlon-specific cycling shoe for elite short-course triathletes. A user-centered design process identified two specific needs:

Getting in and out quicker
The quicker athletes can get in or out of shoes, the better they can perform during their race. Especially in elite short-course racing this is vital. It can mean the difference of cycling in a group or all alone.

Stop the shoe from spinning during transition
The spinning shoes are a phenomenon where the shoe hits the ground during transition and starts spinning, which in turn can cause the bike to 'jump', creating stress and a potentially unsafe situation.

Envelop tongue
An envelop shaped tongue makes sure that toes can not get stuck, or that fabric bends in the wrong direction

LED
A LED to show whether the brake in the pedal is active or not

Brake
A build-in brake in the pedal keeps the shoe horizontal when there are no feet present

Heel
An opening heel creates a bigger opening, making it easier to slip into the shoe

Dial winding button
Allowing the athlete to set how tight the shoes should be before the race start. Offering adjustability during the race as well

Handle
A handle allows the shoe to be tightened quickly and strongly. Only one simple movement is necessary before optimal power transfer is achieved

We want competitive short-course athletes to focus primarily on their race by taking care of their needs for them while delivering a similar performance as the current triathlon shoe

Daan Gehlen
Marginal gains for major improvements:
A user-centered cycling shoe to increase performance for elite short-course triathletes
09/05/2022
Design for Interaction

Committee Dr.ir. J.I. van Kuijk
Ir. J.S. Faber
Diederik Hol
Company Cadomotus

Faculty of Industrial Design Engineering

TU Delft
Delft University of Technology