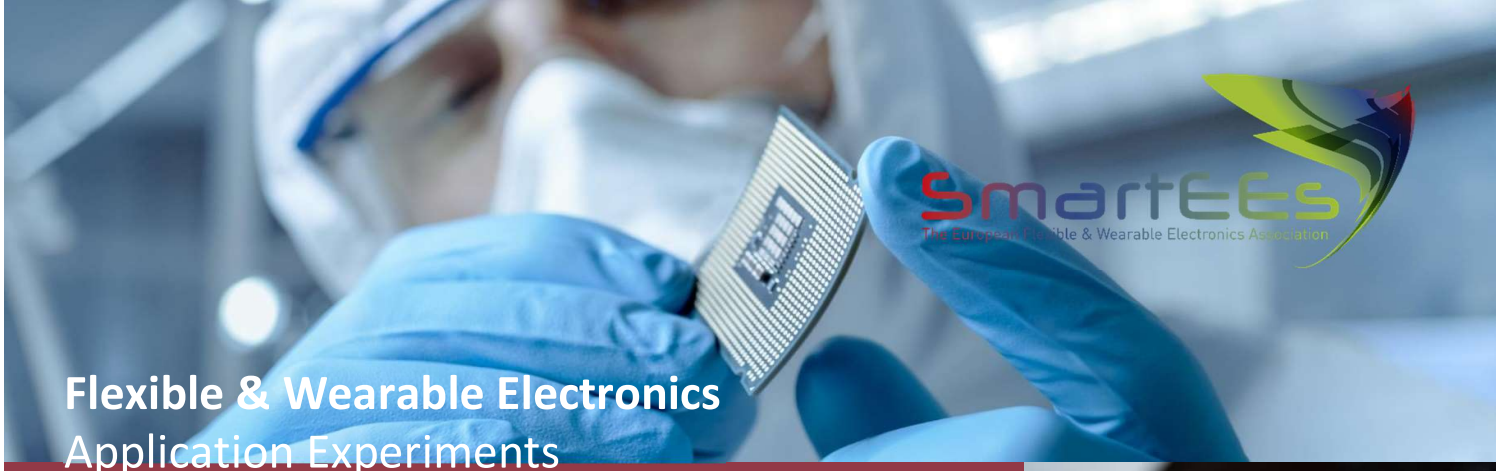
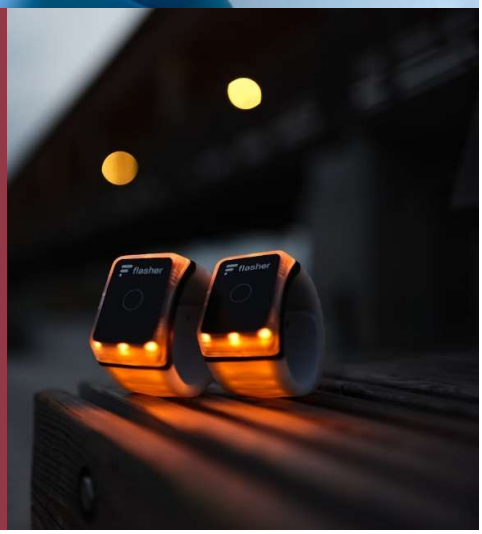


Flexible & Wearable Electronics
Application Experiments

flasher

Flasher is a smart, wearable safety gadget for e-scooter riders and cyclists. Flasher tool gives directions and safety warnings for these road-users using a smart bracelet.

The all-In-one wearable gives gesture controlled turn signals, automated brake light and positioning.



Problem to be solved

The size-restricted bracelet has high requirements on durability and has to use rigid components by design as described above (e.g. active electrical components). In order to add additional electronic features to the size-restricted system, such as wireless charging, a new flexible electronic layer was introduced. The new module consists of a flexible antenna and is responsible for the wireless charging feature. It supports common charging standards, such as Qi. Different antenna designs were derived and tested.

Solution provided by SmartEEs

The bracelet needed to be minimized in size and should include wireless charging. The wireless charging was successfully tested with the Flasher wearable at prototype level. A multilayer stacked coil design was necessary to achieve a good impedance value for a functioning antenna due to size restrictions. TNO created 3 variations of such antennas with different sizes and resulting impedance. After optimization the medium size antenna was chosen for the most suitable size and efficiency ratio.

Business model & impact

In cooperation with the company NUUK a B2C go-to-market strategy has been elaborated, focusing on the setup of different performance marketing processes. The goal was to find ways for making results such as clicks and or conversions achieved via online marketing measures better measurable, which in further consequence helps to address our customers more efficiently.

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