

LUMENUS

ANDESIGN METHODOLOGY IN DESIGNING LUMENUS



FASHION DESIGN + TECHNOLOGY

The basis of this case study is to elucidate our methodology in designing **Lumenus**, a product that makes transportation safer, and exemplify our versatility in manufacturing both soft and hard goods. We designed the collection of **wearable-technology** with the purpose of being used by pedestrians of all sorts.



INNOVATION

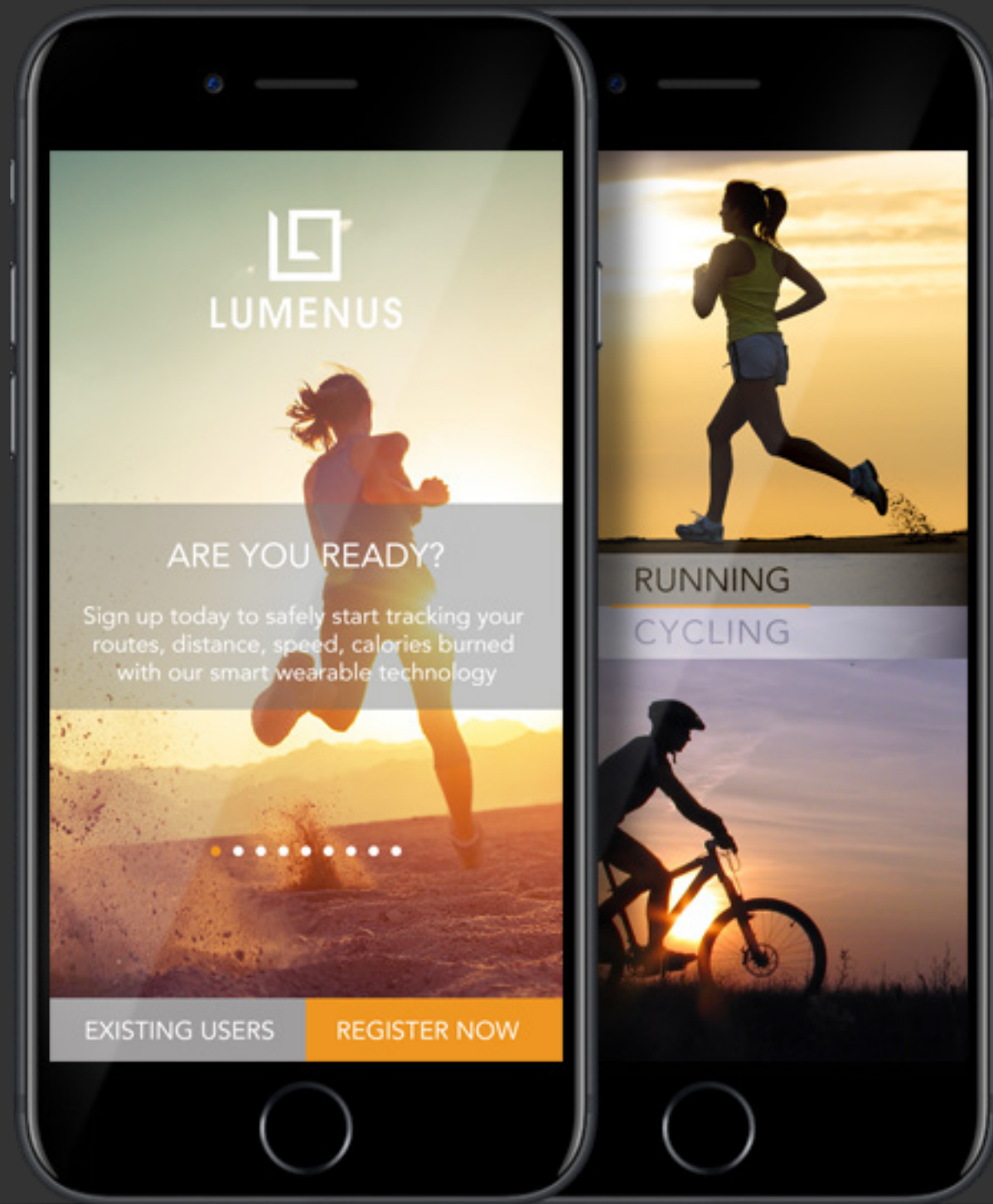
In 2015, Lumenus partnered with ANDesign to manufacture wearable products controlled with bluetooth synchronization. Through the use of ultrabright led lights, lumenus provides extra safety during a nightly jog, bicycle or motorcycle ride. One of the features is a gps-linked turn signal. Through the application, users are able to set a destination and the turn signal is automatically activated at every turn.

HARDWARE

The small circular battery has a male USB on it so it can plug into any USB charger. On average, you can expect 7.5 hours of continuous light usage, or 24 hours of flashing mode. We made strobe-mode a function to highlight the visibility of a pedestrian crossing a dark intersection and designed garments to be gender neutral. And, yes, they're waterproof.

White front lights ensure that the user is visible to those coming toward them, red rear brake lights help avoid a critical rear end incident, and orange indicator lights alert drivers of any turns. If the user wants the lights to strobe or remain consistent is optional.





SOFTWARE

The Bluetooth Low Energy integrated app syncs with the rider via smartphone. A performance gauge was integrated into the app, tracking the pace and distance of a given rider. When paired with the LUMENUS app (Android and iOS) and using GPS mapping (Google Maps API), the user can configure the LEDs to function based on a particular action. For example, when a cyclist comes to a stop, the LEDs on the back of the jacket turn on to simulate a red brake light, or flash orange to signal a turn or strobe when crossing an intersection — signals that not only warn nearby motorists of a cyclist's presence, but also his or her next move.

We made sure to put aside the question whether it makes sense to connect the jacket to a user's phone. The jacket can alert the rider when someone is calling, or if not running the target pace. Zero UI design is a term to describe human-centered, non-touch screen user interfaces. The LEDs can give you bits of information without requiring you to tap on your phone's screen. Thus, your phone acts like the brain for your jacket.



THE OUTCOME

The diverse collection of backgrounds, ranging from fashion design to electrical engineering, is a unique set of talents and perspectives exemplifying our multi-faceted design abilities in manufacturing products of all types ranging from soft goods to consumer electronics.

Apparel

- Jackets
- Vests
- Shirts
- Leggings

Accessories

- Backpacks
- Messenger bags
- Armbands
- Wristbands

Our approach to wearable technology comes from a fashion background that understands the need for beautiful looking garments and accessories. Through human centered design, we emphasized user-friendly design in the software, hardware and seamless garment interaction.