

StrideSync

by Team
Spectare

"Running together, anywhere, everywhere"

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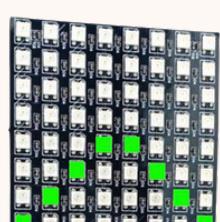
INSPIRATION

The inspiration behind our product stems from the desire to **enhance the running experience** for solo runners. By leveraging technology, we aim to provide users with a **sense of companionship** and **motivation** during their runs, without being restricted by geographical limitations or conflicting schedules.

PRIMARY FUNCTION

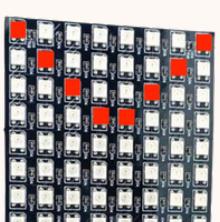
Through the comparison of paired users' speeds, the device employs a system of lights that **dynamically adjust** based on variations in pace. A transition to **green** illumination prompts the user to increase their pace, while a shift to **red** indicates the need for deceleration.

Green Chevron

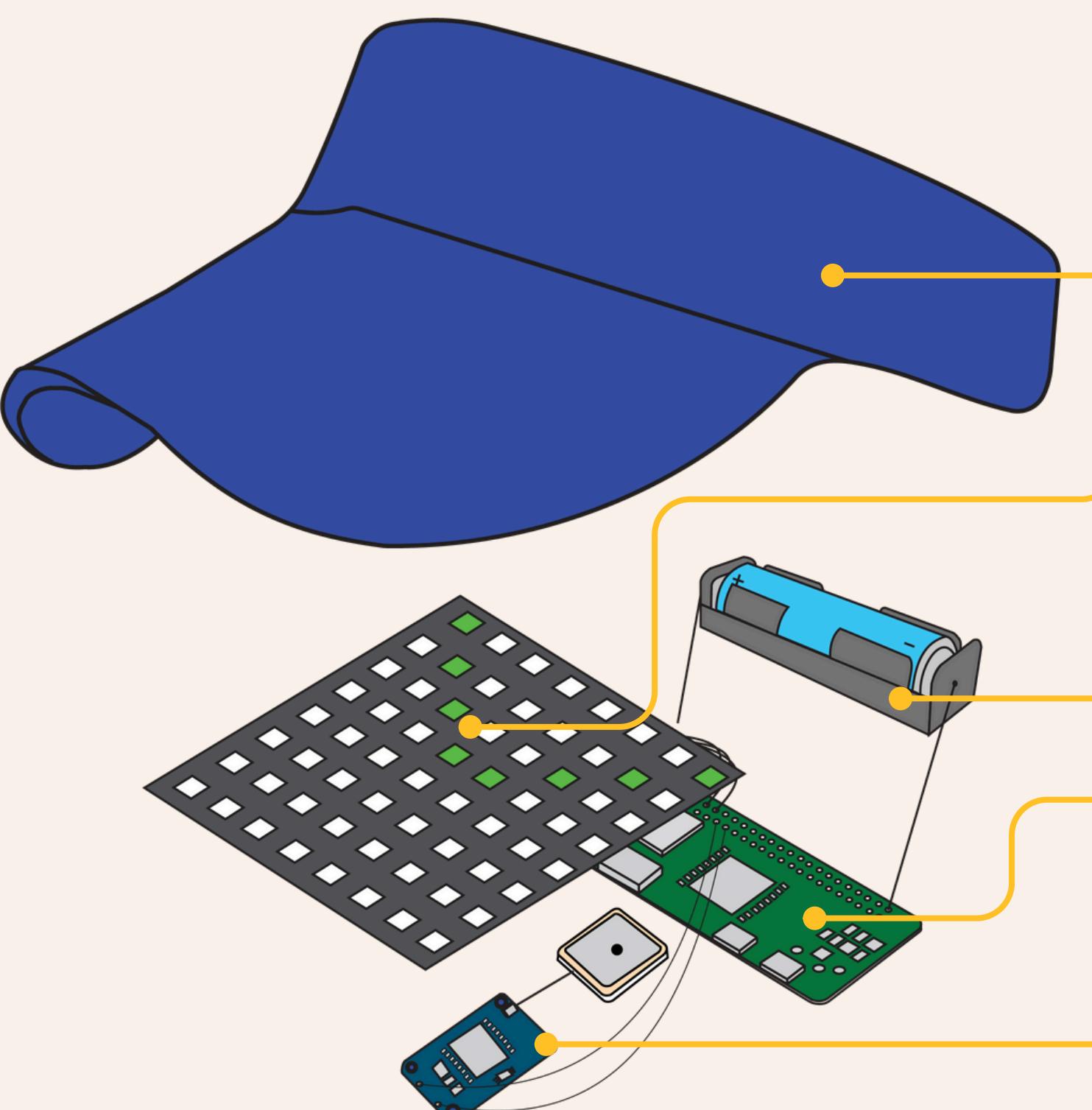


moving
outwards
Speed Up

Red Chevron



moving
inwards
Slow Down



VISOR

Lightweight Polyester

MATRIX LED

8x8 | RGB | 255 Brightness Levels

18650 BATTERY

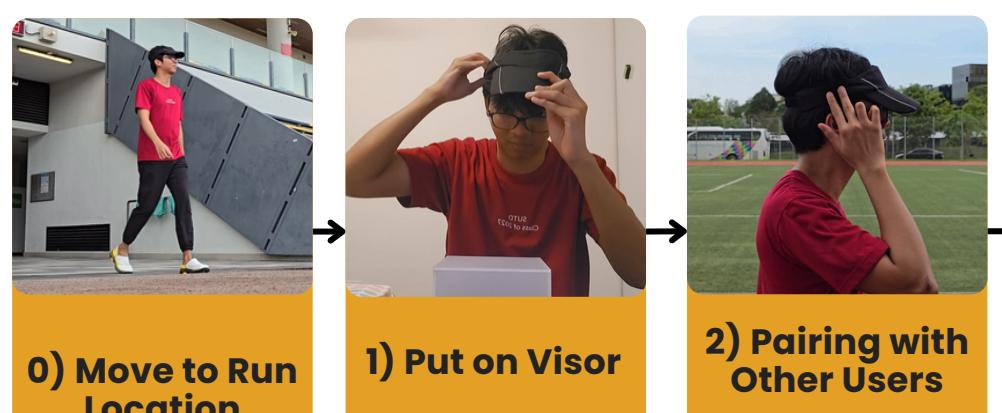
5200mAH Capacity

RASPBERRY PI ZERO

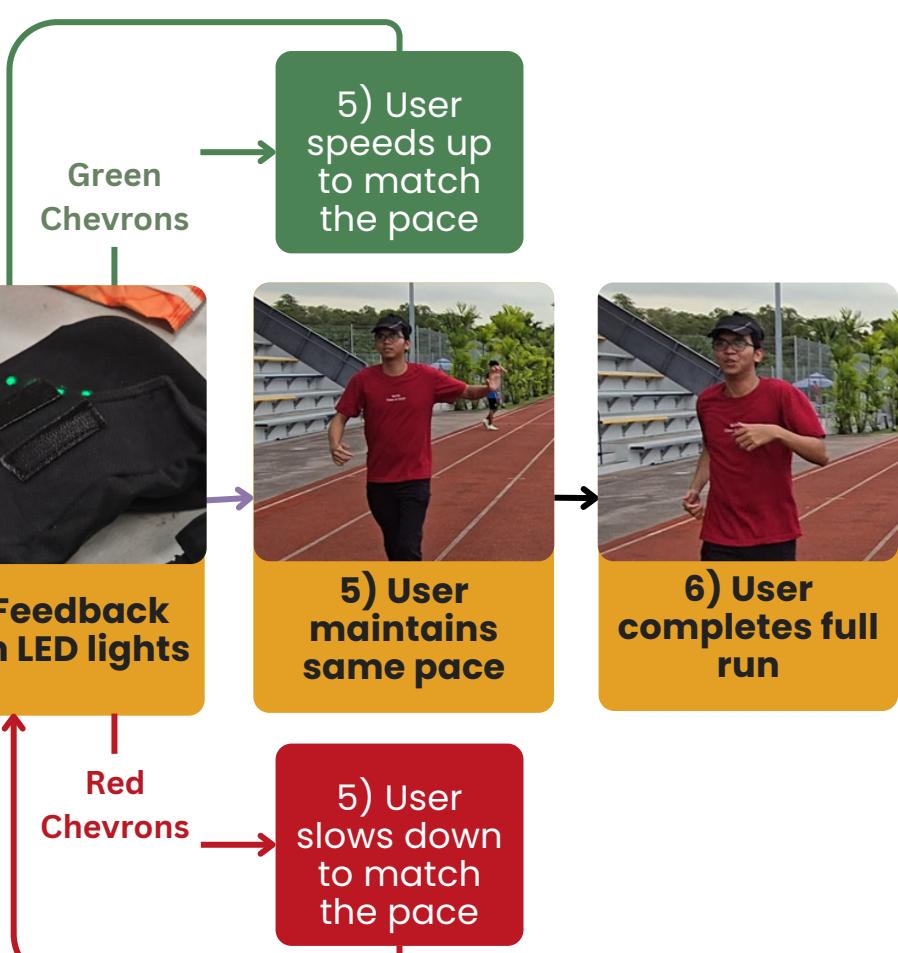
GPS MODULE

Neo 6M | 3.3V/40mA-67mA

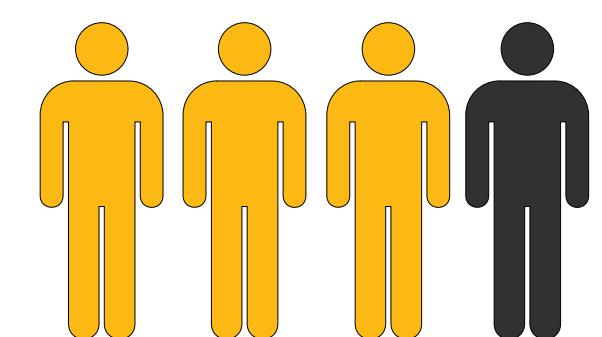
USER ACTIVITY MAP



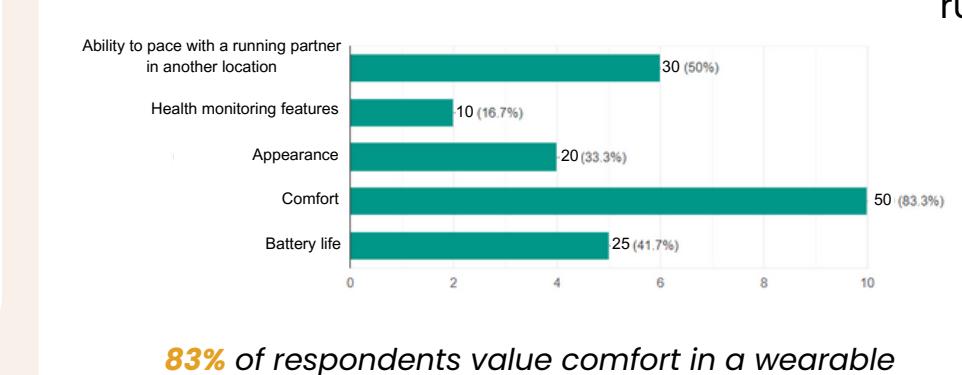
Visual depiction of the user's activity flow.



USER VALIDATION (N = 60)

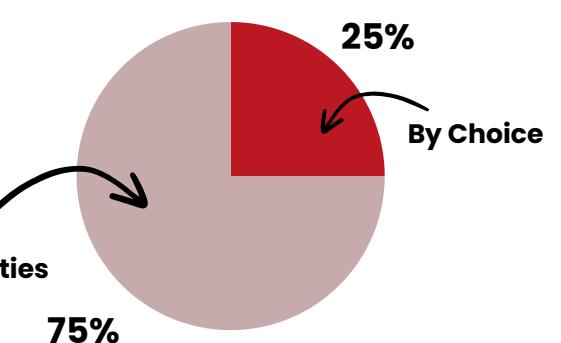


3 in 4 people prefer running outdoors.



83% of respondents value comfort in a wearable

Reason for Running Solo



DESIGN CONSIDERATIONS

Incorporating the lights onto the brim of the visor provides users with **convenient access to information** within their **peripheral vision**.

This setup eliminates the need for users to take any extra steps or use additional devices during their run, such as picking up their phones or checking a wrist accessory.

Why a Visor and not a Cap?

- Ventilation:** Visors provide better ventilation than caps due to the exposed top, keeping the head cool
- Sun Protection:** Visors protect the eyes and face from the sun's glare.
- Hair Management:** Visors are great for those with long hair as they allow for a ponytail or bun to be worn comfortably without interference

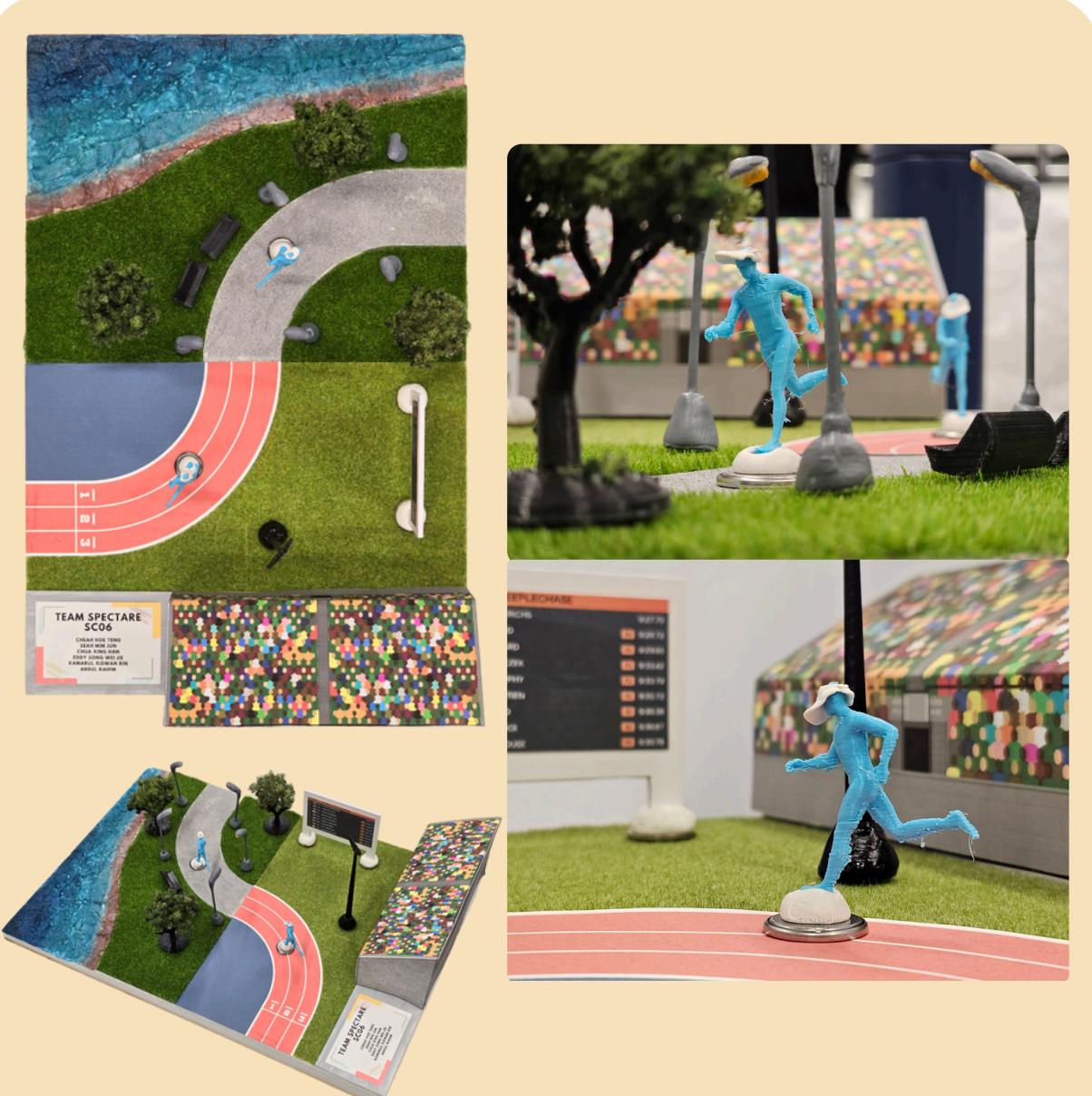
VISOR FEATURES



Adjustable band to allow tightening or loosening, catering to users of various head sizes

Brim of the visor provides **protection from direct sunlight** during the day, **ensuring visibility** of the integrated LED Lights.

SITE MODEL



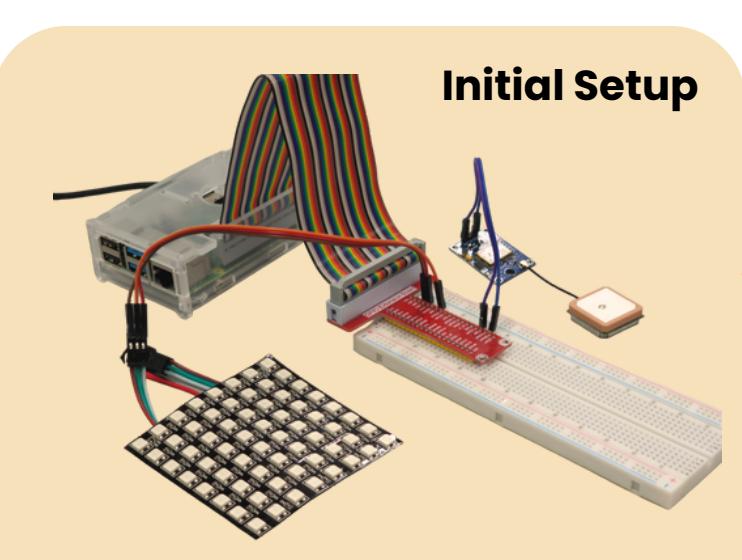
Our site model depicts **two distinct, separate locations**, highlighting the versatility of our solution despite physical distance.

The **stadium track** provides a controlled environment with excellent facilities, making it suitable for individuals seeking convenience and urban amenities.

On the other hand, the **park**'s running path offers a more natural and scenic environment, promoting outdoor enjoyment, social interaction, and a connection with nature.

StrideSync gives users the ability to **choose their running environment** based on their preferences, accessibility while still maintaining the companion of a friend.

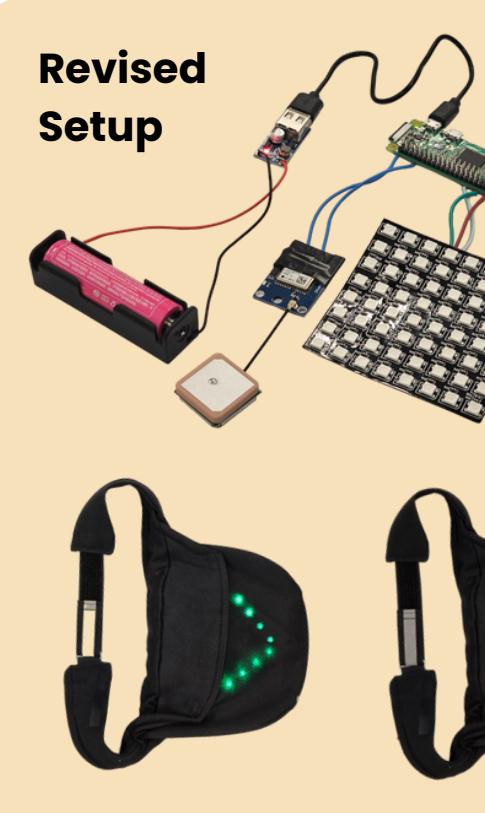
SETUP ITERATIONS



Initial Setup

Challenges of our Initial Setup

- Large Footprint:** Bulky components (Raspberry Pi 4B, Breadboard and PSU) make it **difficult to physically fit** all components onto the visor → **Messy and unrefined**
- External Power Source:** 15W Power Supply requiring a wall outlet → Non-portable



Revised Setup

Benefits of our Revised Setup

- Compact Footprint:** Transition to smaller components (Raspberry Pi Zero) allows for a compact fit within the visor
- External Power Source:** 18650 Rechargeable Battery → Portable and lightweight

Component Layout

