

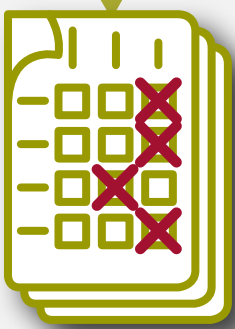
The KnowsWatch

Concept and prototype for a wearable chemosensory sensing device

Method



23 Participants with OD



Questionnaire

Situations impaired by OD

Expectations regarding a sensor device

Prototype

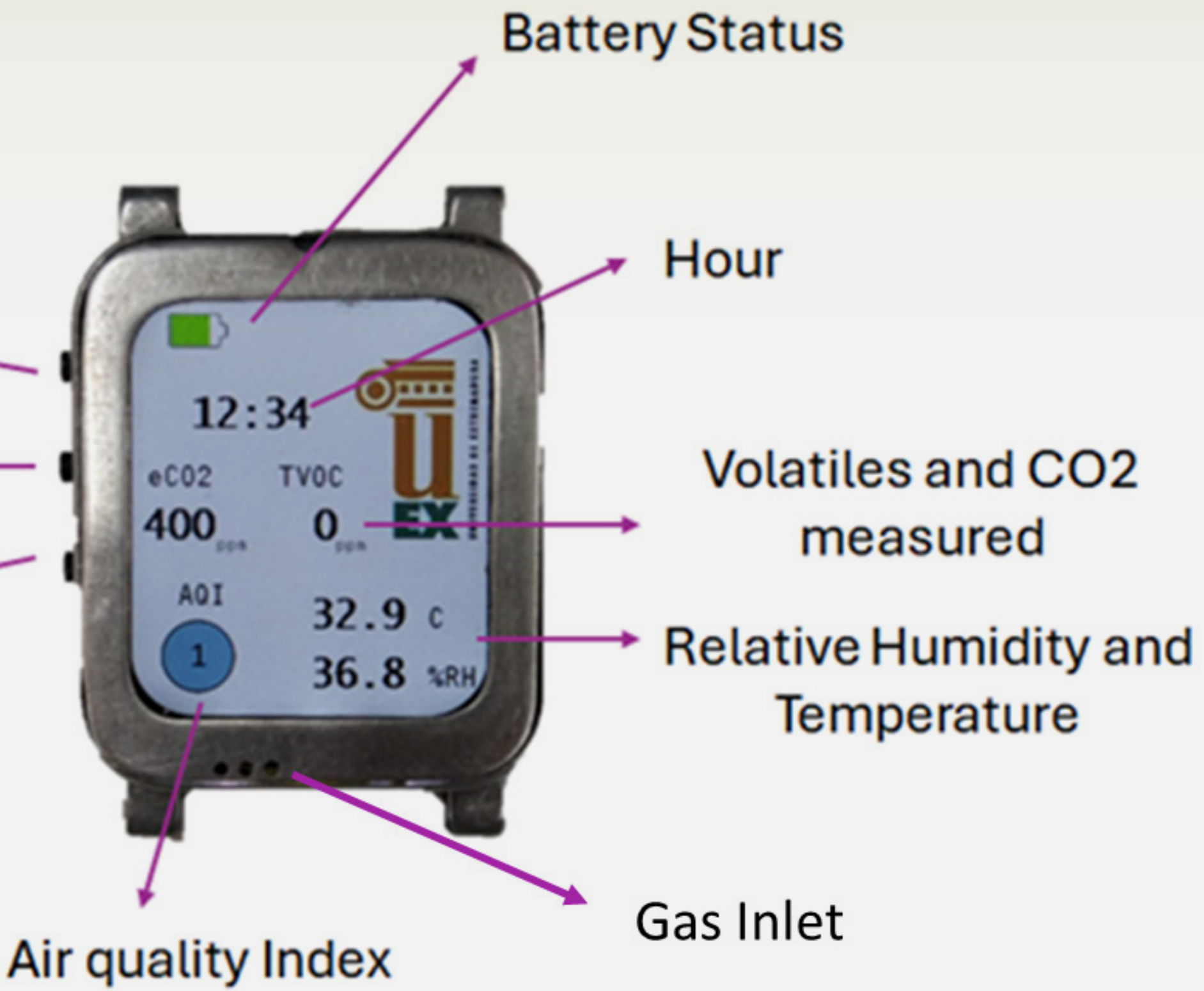
Laboratory-trained to distinguish spoiled meat and fish from fresh samples



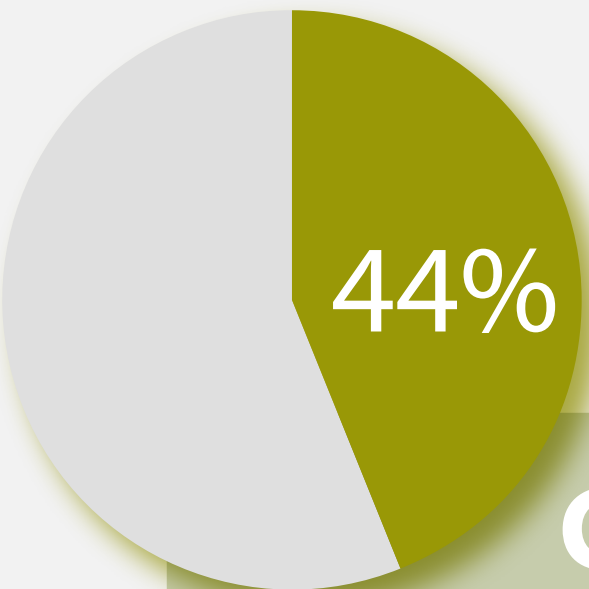
Brightness Increase Button

Reset Button

Brightness Decrease Button



Results

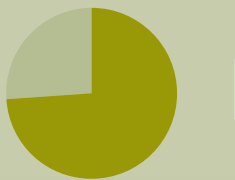


Expressed interest in using KnowsWatch in their daily lives

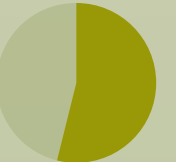
Commonly desired functions



Detection of smoke and gas

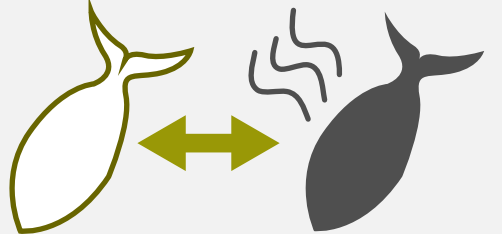


Recognition of spoiled food



Personal hygiene

Prototype accuracy in lab environment



100%

Very good

→ Participants identified critical needs for wearable olfactory sensors, particularly safety and hygiene

→ Prototype shows promise in identifying spoiled and fresh food

→ Further real-world studies needed to assess practical utility