



# Innovative solutions found for offshore wind workforce during pandemic

G+ Webinar 18<sup>th</sup> August 2020

G+ Global Offshore Wind Health & Safety Organisation, in partnership with ORE Catapult, KTN and the Workboat Association, has recognised five organisations for initiatives to potentially improve operational safety in light of the pandemic. The five finalists presented their innovative initiatives in a free webinar on the 18th of August.



Canary Sentinel is a holistic system for personalised, proactive health monitoring and alerting for users in high risk environments. The system is composed of a wrist worn bio-sensing watch, a proprietary machine learning core and a vital signs screening and reporting application.



Sea Sure have been designing and manufacturing marine equipment since the early 1960's. Their products have been used on boats at every Olympics and Americas Cup event ever since.



Flameskill has been established for over 30 years and are specialists in the supply, service, maintenance and recertification of fire protection, safety and respiratory equipment. Flameskill presented a CTAS Marine powered air respirator.



Entex are a product design company specialising in health and safety products, and in particular decontamination products. Entex has an Antiviral Decontamination Booth and a Portable Disinfectant Room Fogger.



Life's Shield is developing a Safe Light UVC product, which is created to disinfect indoor spaces and deactivate COVID-19 and other viruses, while being safe to humans. This technology is designed to future proof assets, including vessels, against future outbreaks.

## Organisations supporting



# Canary Sentinel

Canary Sentinel Ltd is a Healthcare Start Up developing continuous health monitoring and early detection systems for illness in workforces operating in high stress environments. Our system has been designed to respond to gender specific physiology and personalized base lines so that derangements can be predicted accurately, and alerts provided before a crisis sets in.

The Canary Sentinel\* system is made up of a series of modules that measure vital signs and qualitative symptoms, on the basis of which our proprietary machine learning systems create health assessments using clinical parameters to provide the user with information related to their health condition and vulnerability status on a daily basis. Our system also provides a GDPR compliant over-view to the employer via an administrator dashboard so that they have a birds eye view of the health status of teams, departments and locations.

## 1) Canary Band and Scan: Measure the most important vital signs

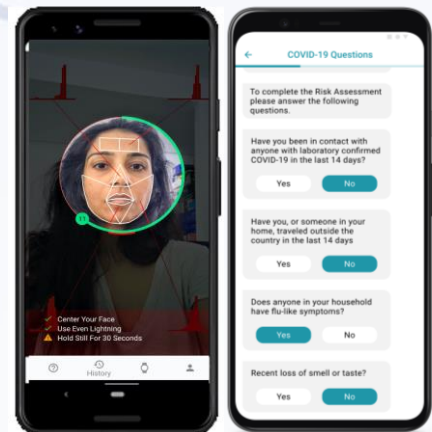
- Heart rate variability measurements
- Body surface temperature monitoring
- Blood oxygen monitoring (PPG)
- Heart rate measurement (PPG)
- GPS tracking (from mobile)
- Stress detection
- Step counting, calories burned
- Sleep monitoring
- Respiration rate
- CE and RoHS certified devices



## Canary Scan

Contactless vital signs measurements using the smartphone camera and Canary app

- Blood Pressure (Systolic and Diastolic)
- Body Mass Index
- Emotion



## 2) Canary Bot:

Qualitative symptoms assessment in case of derangements, through simple notifications and conversational triage

## 3) Reports and assessments

A simple to understand traffic lighting system to explain the user's health status with recommendations are provided in the Canary app directly and exclusively to the user

Reports : General health assessment, COVID 19 risk, Vulnerability score (risk of deterioration), stroke risk and heart attack risk

## 4) Web based customisable Administrator dashboard and data insights too

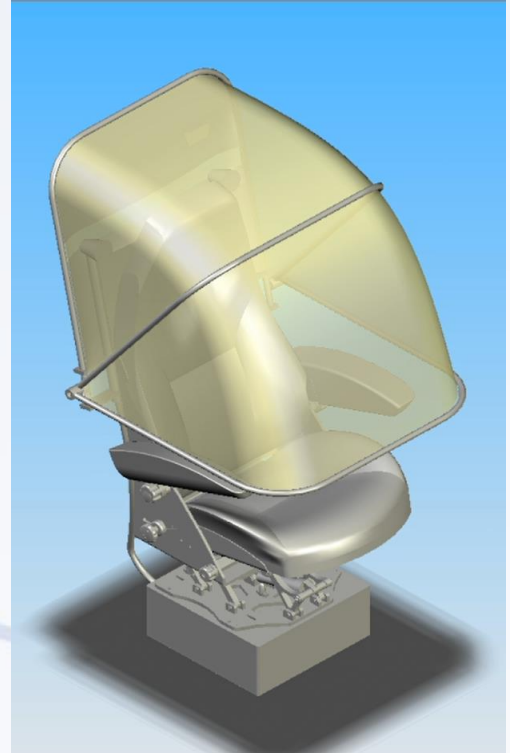
The administrator receives a high level overview of the health condition and risk trends filtered by previous 14 days and showing all employees, teams and sites



# Sea Sure

Sea Sure have been designing and manufacturing marine equipment since the early 1960's. Their products have been used on boats at every Olympics and Americas Cup event ever since. Sea Sure have a hood which can be installed on vessel seating to provide fresh air circulation.

- 1. Safety from Covid 19 transmission:**
  - a) Airborne transmission
  - b) Hand-to-mouth transmission
- 2. No compromise to other essential safety systems.**
  - a) Wearing of life jackets
  - b) Wearing of immersion suits
  - c) Compromise passenger emergency evacuation from vessel (in all conditions)
- 3. Ability to retro-fit to a range of vessels and seat configurations**
  - a) Lower cost to reach acceptable safety level
  - b) ALARP – As Low As Reasonably Practicable
- 4. Quick to get into use**
  - a) “practical” design
- 5. Technology “readiness”**
  - a) All elements are existing, in use and proven



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# FlameSkill

Flameskill's CTAS Marine powered air respirator is designed with end user comfort in mind. Its sleek, modern ergonomic profile allows the user to experience enhanced comfort while working in the most demanding environments. With a durable body to withstand hard work conditions and a range of design features including: real-time air flow control; audible/visual alarms; 2 battery options, LED operation displays. IP67 rated.

## Battery

Two lithium ion rechargeable batteries are available; a standard battery providing up to 8 hours operation or an extended duration battery providing up to 16 hours duration.

## Blower Unit Display

An automatic monitoring feature checks that the unit is operating correctly, warns the user of low battery and quickly compensates for changes in airflow and ensures correct airflow. Battery levels and flow rate alerts are displayed on the simple LED display.

## HeadTop

The FH6 range features a heat-resistant polyamide helmet shell, adjustable head harness, face seal, air distribution channel inside the shell and a flip-up visor frame equipped with a clear or shaded visor.

Helmet-mounted ear defenders can be fitted to the helmet.

## How the solution overcomes COVID

The Powered Air Respirators offer double the respiratory protection compared to FFP3 and half masks, can be worn for long periods of time. They offer face and eye protection and you don't need to be clean shaven to wear them. They are also much more comfortable to wear with the air flow giving a cooling effect. They also allow completely free movement in the vessel while in use

## Technology readiness

The CTAS Marine powered air respirator is fully certified and available for immediate use. Flameskill currently hold stock of the CTAS units although for large quantities there would be a lead time of several weeks depending on the numbers required.



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# Entex

## Antiviral Decontamination Booth

The decontamination chamber uses ultrasonic technology to generate a dry mist of disinfectant which encapsulates the body, disinfecting your skin and clothing without leaving you soaking wet. To be used with our safe non-toxic HOCL disinfectant that kills Viruses, Bacteria or other Pathogens that might be carried by a person passing through the booth.

Designed for both temporary and permanent uses, the decontamination booth can be transported on a pallet and assembled very quickly. The booth has been independently tested using microbiology to show how effective it is at distributing the disinfectant and killing microbes on different surfaces.

The product is designed and manufactured in the UK and currently in use across a range of different sectors including office environments, construction and infrastructure sites and in the hospitality industry.



## Portable Disinfectant Room Fogger

The disinflex portable room fogger generates a dry fog of disinfectant to fill an entire room and disinfect all the surfaces within the room as well as the air. It's high output fills rooms quickly without the man power, simply set the timer according to the room size and leave the unit running. The small (2 micron) particles it generates remain in the air for long periods of time and fill the room completely meaning 100% surface contact is achieved including the hard to reach areas.

Can be used with our non-toxic HOCL solution which alleviates the need to wear respiratory equipment or cordon off the room when fogging. The portable fogger is perfect for decontaminating vessels, hotel rooms, offices, schools, bars and restaurants, killing viruses, bacteria and any other harmful pathogens.

The compact design and 100mm caster wheels and carry handles make the unit easy to move from room to room as well as up and down stairs.

The unit is also designed and manufactured in the UK and is now in production.



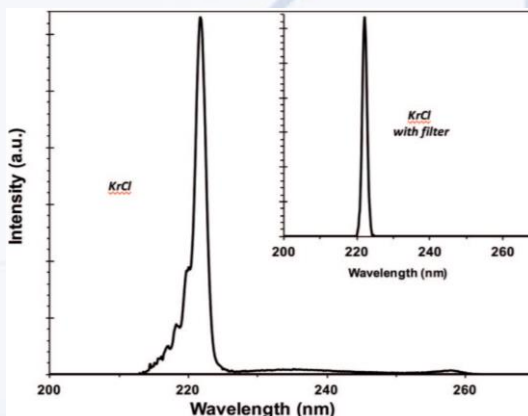
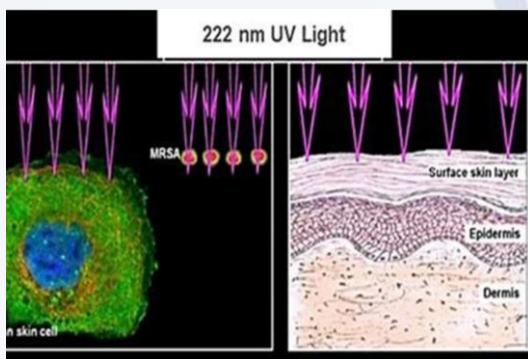
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# Life's Shield

Life's Shield is developing a Safe Light UVC product, which is created to disinfect indoor spaces and deactivate COVID-19 and other viruses, while being safe to humans. This technology is designed to future proof assets, including vessels, against future outbreaks.



- Our fixed upper wall or ceiling devices omit a continuous stream of UVC light into a confined area. The devices can operate in dual mode, with different power levels. A higher level could be used to disinfect surfaces before the boarding of personnel.
- Integrated design Models calculated to kill a predetermined fraction of the released airborne viruses.
- The Safe light wavelength cannot pass through the outer skin layer but can pass through the Virus outer layer and deactivate it due to the much smaller cell size of the virus.
- Life's Shields Safe Light lamps are efficient producers of UVC light, which operates at the 222nm. Wavelength.
- However, a small amount of potentially harmful UVC is generated outside this wavelength.
- Unwanted wavelengths of UV are removed using filters, developed by the CPE for Life's Shield.
- Life's Shield is in the process of patenting the Filter IP.



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