

PIER71

Port Innovation Ecosystem Reimagined at BLOCK71



BRINGING HEALTHCARE AND WELLBEING CLOSER TO SEAFARERS WITH IOT

Started up as a distributor of medical devices, Aeras Medical is now an innovative medical Internet of Things (IoT) company that offers remote health and wellbeing monitoring, as well as automated drug dispensing solutions.

aéras medical

The Journey So Far

Having spent 20 years setting up offices and distribution networks across Asia for multinational companies in the medical devices and technology industry, Ping Heng Tong (Tong) developed a strong affinity for people with diabetes. In 2010, he founded Aeras Medical and set out to disrupt the market by launching the most affordable blood glucose (BG) device and almost pain-free safety lancet in Singapore.

Five years later, Aeras Medical introduced a device-agnostic mobile platform to help collect data from brand-independent BG devices and wellness apps to allow sharing of data with caregivers and healthcare professionals. A year later, they won the National Vital Signs Monitoring (VSM) project awarded by Integrated Health Information Systems (IHIS), the technology agency for the public healthcare sector. This marked the transformation of Aeras Medical from a device distribution start-up to an innovative IoT company, and the development of SmartRM™, a remote health monitoring application.

In the midst of developing SmartRM™ for healthcare institutes, Aeras Medical was introduced to Smart Port Challenge 2018 when OMC Shipping put forth an innovation opportunity focusing on the importance of crew health. This gave them exposure to the maritime industry and the opportunity to adapt their solution for a new market segment.

When COVID-19 hit, Aeras Medical added a video consult module to facilitate Fit-to-Travel crew change. Launched in July 2020, this has enabled more than 200 crew changes to be made without the need for physical consultation and saved shipping companies the cost of getting doctors onboard to certify staff for each crew change.

Innovation Opportunity

Crew health at sea was a concern for shipowners due to the long duration between ports, expensive or lack of proper communication infrastructure, lack of trained medical professionals onboard, and varying insurance coverage. OMC Shipping was seeking a solution that will allow remote monitoring and diagnosis to prevent medical emergencies and disruption.

Solution

Undergoing PIER71 Accelerate enabled Tong and his team to customise their SmartRM™ application for the maritime environment so crew can be monitored for vital signs such as temperature and oxygen saturation (SpO2) while at sea. This required housing their application on a local server and modifying a set of devices to be shared by the entire crew while allowing each member to login to his/her own data. This worked out well with very high adherence rate for the crew as evidenced by the pilot project with OMC Shipping.

Forefront of Technological Innovation

Shortly after completing their pilot project, Aeras Medical identified a need for certifying crew members as fit for travel without a physical consultation in light of the COVID-19 pandemic. They added a new video consult module to SmartRM that enabled doctors to examine crew members without the need for them to go onboard the vessels. This addition not only made crew change possible at a time when physical interaction is limited, it also gives crew members access to video consults while out at sea. Aeras Medical has also developed a mental health assessment module to take care of the crew's wellbeing.

Pilot Project Key Results

The pilot project with OMC Shipping and their ship management company Synergy Marine was well received, with indication from other maritime companies that there is market demand for remote health monitoring of crew.



More than 50% of the crew said the monitoring gave them peace of mind



More than 80% of the crew wished to continue with the remote monitoring programme



29% of the crew was prepared to pay to use the programme to monitor their own health though the majority felt that the company should pay for these services

Founded 2010, Singapore

“ Without PIER71, we would not have been able to reach out to so many stakeholders in the maritime industry in such a short time. It did not end after the Smart Port Challenge and the ecosystem is shaping up to allow us to continuously learn, network and help push for continuous innovation.

Ping Heng Tong,
Founder

Looking Forward

With the global increase in usage of telemedicine, Aeras Medical spun off a new start-up in 2019, SmartRx®, to focus on the development of a drug dispensing application and recently signed a Research Collaboration Agreement with Changi General Hospital for sales of over-the-counter and pharmacist-only medicine. This will be adapted to integrate with SmartRM™ for a digital sick bay onboard the ship as a truly unique way to bring healthcare to the crew at sea. They are also starting to pitch for Series A funding to bring their applications to the region including Indonesia, Philippines and China.

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pier71.sg

enquiries@pier71.sg