



# Maritime Fitness App Ties Health to Bottom Line

BY SASHA BANKS-LOUIE

*Andrew Cowderoy was just 24 years old when he was forced out of the British Merchant Navy. Diagnosed in 2013 with ulcerative colitis, the fourth-generation shipping industry worker was stripped of his maritime medical certificate, a regulatory requirement to work at sea.*

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— ANDREW COWDEROY  
Founder and CEO  
ZS Wellness

“Losing my certification was a huge wake-up call,” recalls Cowderoy, now 29 and the founder and CEO of ZS Wellness, a UK-based fitness analytics consultancy. As a cadet, “I really thought I was fit,” he says. But after his dismissal, Cowderoy hurled himself into the gym and worked to become a certified personal trainer, having realized how unhealthy and “over-indulgent” his lifestyle onboard the ship had been.

Launched in April 2017, ZS Wellness provides fitness monitoring software, personal training, and nutrition counseling to help maritime workers deal with the physical and mental stresses of work at sea. The company supplies its fitness and education application to clients, mostly commercial ship operators, on Garmin wearables, which are distributed to the ships’ crewmembers to capture information about their heart rates, body mass indexes, stress levels, and sleep patterns.

Crewmembers then sync the wearables with their mobile devices, uploading the fitness data to Garmin Connect—the Garmin cloud—for analysis. (While most passenger ships offer persistent internet connections via satellite, on the vast majority of commercial vessels, crewmembers must wait until they’ve docked at port before syncing their data to the cloud.)

By measuring body movements and detailed heart rate data, “we’re able to see whether crewmembers are getting enough sleep, the right kind of sleep, and what their stress levels are throughout the day,” says Jörn Watzke, director of global B2B sales at Garmin.

ZS Wellness deploys its application as a suite of secure, Java-based REST web services hosted on a Java application server. Whenever new data is available on the Garmin cloud, Garmin sends an alert to an API “indicating that we can extract the new data and pull it into our own development environment,” says ZS Wellness technical consultant Tony Heljula. Once the Garmin data is extracted, it’s uploaded into [Oracle Analytics Cloud](#), where ZS Wellness conducts a deeper analysis of crewmembers’ fitness details, shares the findings with its clients and makes recommendations for customized, onboard fitness programs.

“We can now look at biometric trends and patterns by age groups, genders, and job functions,” Cowderoy says. Demographic profiles are then correlated to determine the effects that certain worker shifts, types of vessels, and routes have on individuals’ health.

## Bottom Line Benefits

By overlaying crew fitness data on top of ship operations data, clients can also get a better handle on why costs are going up, trips are taking longer, and crew injuries and illnesses are increasing, he says.

“These are critical insights,” says Cowderoy, who notes that crew downtime from illnesses and accidents at sea can take ships out of service for several days, costing the industry billions of dollars each year.

ZS Wellness also partners with The Dan Roberts Group, an international fitness training company, to develop training, education and nutritional programs for crewmembers on seagoing vessels.



*Working with fitness trainers, merchant marines can engage in training programs to improve their health.*

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While the company doesn’t make any medical diagnoses, it does provide its clients with statistics-based warning signals “that alert crewmembers of the risk they are putting their lives at and the risk they’re putting their careers at,” Cowderoy says. For ship operators and owners, he says, “we can show them the risks they’re facing financially and the risks they’re putting their crew at.”

## Labor Incentive

Managing crewmember health is a strategic priority for the maritime industry, not only to reduce downtime but also to keep seafarers motivated and gainfully employed, says Guy Platten, CEO of the UK Chamber of Shipping.

More than 250,000 seafarers are employed in the UK today, but only about 800 recruits are added to crews each year, Platten says. “We need a lot more trained seafarers to meet current demand,” he says. “If we’re going to thrive as a maritime nation, we need to develop a stronger corps of seafarers.”

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