



# Autonomizing Water Mobility with Robotics and Al.



### Boating can be a lot of fun

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### My first boating experience

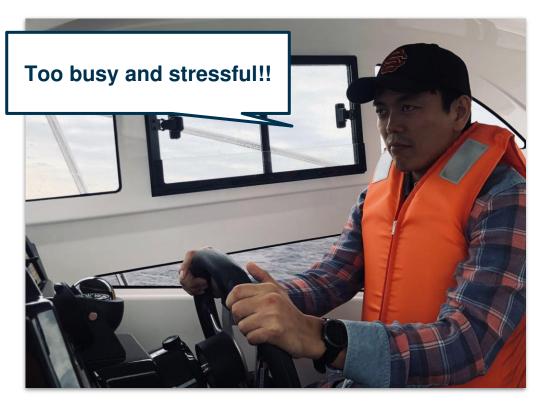
Can't keep going straight

Debris or other boats are in front of me!

Have to keep the same position while fishing

Fisherman's nets is a trap!

Docking again and again



### Most boating accidents are caused by human error



### 75% of accidents are caused by HUMAN ERROR

### Main Causes

Insufficient surveillance Improper maneuvering Not paying attention to the ship's position Failure to check the waterway

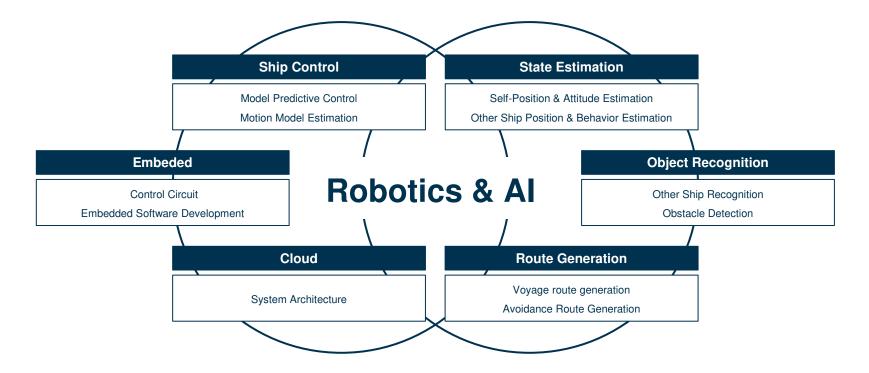
https://safety4sea.com/the-human-element-the-effects-of-fatigue-on-ship-safety/



With autonomous navigation technology, make the boats easy for everyone to operate and safe for everyone to ride.

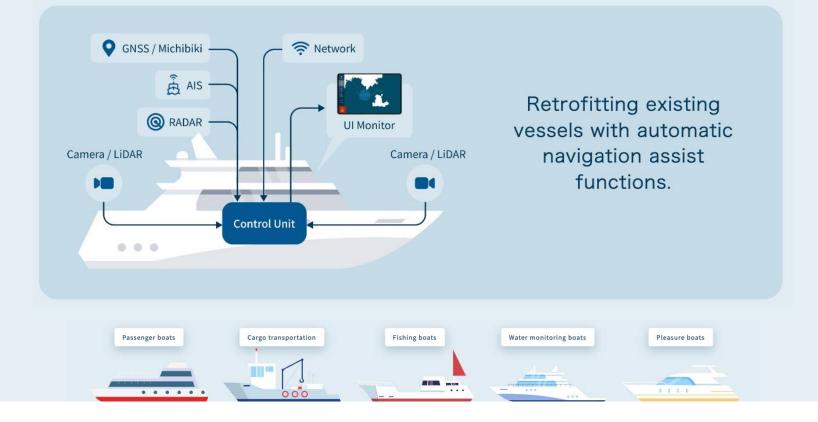


### **Our Technology**



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### Developed an autonomous navigation system that can be retrofitted



### Use Case

#### "Even one captain can do more."

#### Ship name WAKKA

- Ship owner WAKKA CORP. (Imabari City, Ehime Prefecture)
- Usage Tourist boats, sea taxis
- Propulsion Engine boats, single outboard motor



#### □ Customer feedback



#### Mr. Arashi Murakami, Representative Director of WAKKA CORP.

There is a current situation where routes to remote islands are reduced or discontinued due to labor shortages and a lack of successors. However, with autonomous navigation technology, it is possible to prevent these issues to a certain extent. The technology maintains the ship's position and direction automatically, which increases what a single captain can do. For example, while the ship maintains its position automatically, the captain could serve drinks or stop at a fixed point for fishing, which can be realized with autonomous navigation.

### **Our Customers**



#### **Marine Constraction**

DPS function replaces anchor installation. Shortens the construction period by eliminating several hours of anchoring work.



#### **Remote Island Line**

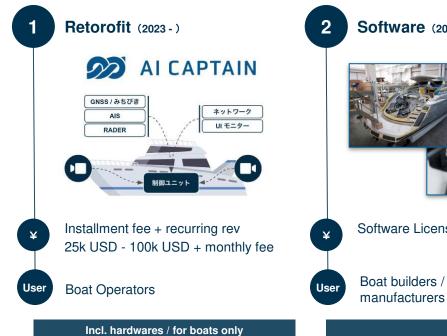
Difficult to secure captains with sufficient skills. Training costs for newcomers are also high.



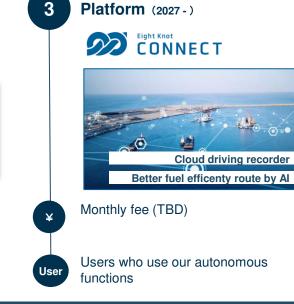
#### **Fisheries**

The ship is often operated by a single person, and the operator wants to reduce the workload because distractions can cause oversight.

### 3 business models; starting from retrofit business







Software / for boats and larger ships

### **Eight Knot Team**

#### **Experts from Robotics Fields**

Yujin Kimura

CEO / Co-founder

Tomoaki Yokoyama

CTO / Co-founder



#### **External Experts from Maritime Fields**



#### Koichi Kato **Special Advisor**

**Executive Director** Japan Ship Technology Research Association



National Institute of Technology, Hiroshima College



## **Collaboration with Academia**





Takuma Kishi **Engineering Advisor** Associate Professor, PhD



Organizational Development Expert / Extremely talented sales person / Surfer, of course

PM of Japan's best-selling communication robot /

2008 & 2013 RoboCup World Champion / Mobility

Ex-Apple Inc. / Marine activity enthusiasts

