PROJECT 07

PROJECT TITLE | **Co-Creating an Ocean Platform**

COMPANY NAME | **P.G.System Co.,Ltd.**

Creating a Safe and Unified System of Marine Traffic and Rideshare

A current social problem in Japan comes in the form of individuals who live on remote islands. Due to the aging population, companies are unable to maintain ample lines to minor islands, and the people living there. P.G.System Co.Ltd., aims to realize a new transportation infrastructure by creating a maritime system using water taxis and private boats. By creating a unified information system using the cloud and other AI and IoT technologies, they are hoping to help those in need.

Maritime Rideshare for People on Islands

Although many industries have already embraced new technological advantages, the fishing industry in Japan still seems to be behind the times. This is said to be in part by the size of the industry and markets, as well as ample infrastructure. However, P.G.System is trying to change all of this. They were selected by Hiroshima Sandbox for their proposal to create an information sharing system for marine traffic using the cloud.

Hiroyuki Tsukuda, project head, commented that, **"It's a big problem that a lot of people are losing the ability to travel freely. If the population issue continues at this rate, all traffic to these remote areas will cease altogether. One fix to this could be to build a bridge, but the problem with bridges are that they are usually far from residential areas. In addition to that, most of the residents of the island themselves are older, and without access to cars or licenses. That is why maritime services are still greatly needed in these areas. A proposed solution is to increase the flow of tourism to these areas, which will in turn, naturally increase the number of ferries and boats servicing the area."**

On the other hand, the project also takes inspiration from the popular rideshare services in America and Europe. In these places individuals share their private cars with others, as a kind of self-regulated taxi service. Due to its convenient and cheap nature, this idea has continued to spread, and is slowly making its way to Japan. P.G.Systems intends to take this idea and apply it to aquatic situations.

Tsukuda says, **"If we can create a rideshare system using mainly privately owned boats, and pre-existing maritime taxis, then that would be a huge benefit. However, we need to be careful. Increasing the number of boats has the possibility to lead to more accidents, especially in an area like the Seto Inland Sea, where there are already many problems. That is where AI and IoT technology come in, to create an information sharing system that individuals can safely and affectively use."**

Collecting the Data of the Seto Inland Sea

For this project, the team will collect data from a variety of places, including oysters rafts, light buoys, and already logged tourism data from ferries and other boats. This data will be then fed into a system that will combine it with current routes. This system, dubbed the maritime dynamic map, will hopefully solve many of the existing problems in the area.

After creating a useable prototype, the first round of field tests will include collecting realtime location information of boats via smartphone devices. The use of automatic recognition software in this project will help prevent any accidents that might occur. Funding from Hiroshima Sandbox will come to an end in March 2021, so until then the team is working on a way to make a profit using the system. Further field tests are also planned to take place in Onomichi.

Future business plans for this system are all encompassing and plan to include several industries. The first concern is making a safe and reliable system to manage navigation. The second is to promote tourism to these more rural areas by using apps based off of users preferences. Once tourism has increased in the desired locations, they will then push to initiate a maritime rideshare system. The decision to extend this to boat rentals is also being considered by the team.

A Diversified Team Helps Fuel the Project

Tsukuda used to work for the technology giant, Fujitsu, before he was recruited to P.G.Systems in 2015. During his time at Fujitsu, he learned all about the company's already existing systems for supporting safe ship navigation and high infrared cameras. He uses this background and knowledge to fuel the current project.

The team for this project is made up of individuals with work experience spanning over several different industries. P.G. Systems works to coordinate and lead the whole team, while the Fujitsu Kyushu division is in charge of developing IoT devices. Setouchi DMO, a joint private/public organization that is in charge of revitalizing the tourism industry in the area, will handle PRs. The Hiroshima Prefecture Tourism Association and the National Institute of Technology Hiroshima College are also planning on joining the team in the near future.

Tsukuda comments, **"It's so encouraging to have the support of a group like Hiroshima Sandbox. Joining them has really helped our cause, but we know we're not done yet. To get realtime information in regards to ship navigation, a partnership with boat manufacturing companies is a must. Unfortunately, we can't handle everything just by ourselves."**

The Uphill Battle Continues

"We have a pile of problems," says Tsukuda. "However, there are many stakeholders in the maritime business, so if we can partner with them and have them help promote our idea, it would be a big win. We have to tackle things one at a time, and once we have a steady foundation for system, then the next step is automating it. It would be exciting to see if we could work together with other Hiroshima Sanbox projects, such as the one in Miyajima."

●**P.G.System Co.,Ltd.**／Hiroyuki Tsukuda

TRANSPORTATION