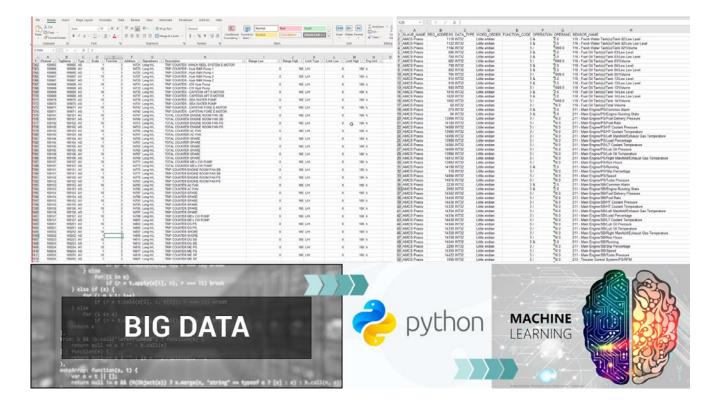# Sensor Mapping using Big Data

For the first time the thematic sections of the Festival of Innovation Projects "Sikorsky Challenge Ukraine" include the "blue economy" with the support of 4BIZproject (Boosting the Blue Economy in the Black Sea Region by Initiating a Business Collaboration Framework in the field of Fisheries and Aquaculture, Coastal and Maritime Tourism and Maritime Transport).

MDEM is going to participate in the festival, presenting the innovation project "Software for the automatic mapping process of the measuring channels for the ship remote monitoring systems" using Big Data and Machine Learning technologies of Industry 4.0.

Nowadays, very specific measuring systems and remote monitoring systems are used for the selected equipment and the vessel to estimate vessel performance and efficiency, fuel economy, reduction of exhaust gas emissions, underwater radiated noise reduction, etc. This is realized by means of sensor mapping and automation of this process when starting vessel operation as well as during the vessel lifetime cycle within different operational modes.

The goal of the project is to create the software for sensor mapping and data flow processing to be provided to the ship remote monitoring systems. The software development is being done in the Python environment and is giving benefits in saving engineering manpower. The new software is also supposed to replace numerous macros in Excel. The proposed software provides automatic sensor mapping using the database of the suppliers for the installed equipment. The time-consuming labor is replaced by the software, which makes it possible to reduce the time for data processing up to 20 times, as well as reduce the errors caused by human factors. Besides, our software improves visibility and is flexible in setup and settings. The processed data are then transferred to the Triton Platform to be monitored by the shipowners or to continue with the specific task of raising the efficiency of vessel operation.

The project in MDEM is led by Oleksandr Vynogradov, Teamlead of Triton group, under the leadership of Stanislav Seleznov, Head of Engineering Services Department.

**Click here to find more detailed information**

**Good luck and success to our team!**