

Project Details	Submission	Comments
<p>Project title :</p> <p>Project description:</p>	<p>S-131 Marine Harbour Infrastructure Database Project</p> <p>To create a S-131 database and infrastructure that will improve the information exchange between harbours and hydrographic offices (HOs) by acting as a neutral repository of harbour information.</p> <p>A Graphical User Interface (GUI) for easy data entry and an Application Programming Interface (API) will also be created to help HOs retrieve the data by connecting their GIS systems directly to the database.</p> <p>The exchange of information between harbours, HOs and mariners will be compliant with the S-101 and S-131 standards and IMO BLU CODE.</p>	
<p>Summary of project objectives:</p>	<p>Besides creating database and infrastructure, will support creation of S-131 (and S-101) products that help ports and shipping to be compliant with IMO A.893(21): safe berth to berth navigation and IMO A.862(20): recommended contents of port information books (BLU Code)</p>	
<p>Summary of project deliverables:</p>	<p>An Operational S-131 database and infrastructure that is compatible with S-101.</p> <p>A physical implementation of the database suitable for access by contributors and participants</p> <p>A GUI that permit the source originators, such as harbour masters, to easily input and validate information, in a secure mode, while also allowing authorised hydrographic offices to review and extract needed information suitable for their products which are to be made available to end-users, the mariners.</p> <p>Create an API to simplify and expedite the information flow between harbours that have a GIS system in place and authorised hydrographic offices by connecting their GIS systems and extract information. The API based on open API standards, for example, OGC API Features.</p>	<p>Clear deliverables.</p>

	<p>Documentation which include details about the management and configuration of the database, GUI and API sufficient for database operator</p> <p>Documentation for all system users and administrators.</p>	
<p>Practical relevance to Hydrographic Community/Industry:</p>	<p>The Marine Harbour Infrastructure database will be an IHO-operated database to collect harbour information in a form compatible with S-101 and S-131 as developed by NIPWG. Given that the IHO is an intergovernmental organisation, hosting such a database by the IHO Secretariat could help to build up a trusted environment where harbour authorities know where their data is being stored, and that it is held securely. The data entered would be S-101 and S-131 compliant and so harbours will not be requested to become familiar with the technical details S-100 or S-131 encoding. HOs can use the extracted S-131 compliant data to then implement them more easily into their own S-100 based production platforms.</p> <p>Marine Harbour Infrastructure database will facilitate the information exchange between harbours and HOs. The database content will be S-101 and S-131 compliant and will contribute to allow ports and shipping to be compliant with the relevant IMO resolutions:</p> <ul style="list-style-type: none"> • IMO A.893(21): safe berth to berth navigation • IMO A.862(20): recommended contents of port information books (BLU Code) <p>Demonstrating that Hydrographic Offices and Port Authorities have worked together to discharge their collective SOLAS responsibilities as per Chapter V Regulation 9.</p> <p>The technology developed should be free from proprietary restrictions, open and adaptable and made available free for HO's to implement in their own country.</p>	
<p>Project team:</p>	<p>IHO Lab - 3 years hosting of server and technical support, before transferred to IHO secretariate</p> <p>Project governance: Louis Maltais, Canadian Hydrographic Service</p>	<p>Good mix of IHO MS and industry partnership.</p>

	<p>Team leader: Prof Shwu-Jing Chang, National Taiwan Ocean University (NTOU)</p> <p>Technical development leader: Jonathan Pritchard, IIC Technologies</p> <p>Programmers: junior programmers, NTOU</p> <p>Team members: Raphael Malyankar, LLC</p> <p>Matilde Skjæveland Skår, Norwegian Hydrographic Office.</p> <p>Charline Giffard, Canadian Hydrographic Service.</p> <p>Applicant(s) information: Eivind Mong, Canadian Coast Guard.</p> <p>Stefan Engström, Traficom,</p> <p>Laura Hall-King, UKHO.</p>	
<p>Collaborators information:</p>	<p>Volunteer ports (to be identified) and HOs for testing phase.</p>	<p>Ports in Canada, Netherlands Norway and Singapore have indicated interests to be part of the project.</p> <p>Port of Rotterdam willing to participate and share their</p>

		experience from the project.
Summary of project cost:	<p>1 project lead and 2 programmers (±€40K funded by NTOU) – In-Kind</p> <p>1 architect/Lead developer 1 programmer/developer - €70K</p> <p>Documentation of operating and training manuals for port and HOs - €10K</p> <p>Implementation and testing coordination and support for ports and HOs - €40K</p> <p>S-131 updates - €10K</p> <p>Project documentation - €10K</p> <p>Hosting server, backup and maintenance (probably cloud based) - Hosting server, backup and maintenance (probably cloud based) - €14K</p> <p>IT support - €10K</p>	<p>] Possible funding from] IHO and Host Country]</p>
Other source of funding:	<p>Canadian Hydrographic Service is willing to contribute €70K per year for the first 2 years in this 3 year project</p> <p>NTOU is contributing in human resources and expertise with Shwu-Jing Chang as project lead and 2 programmers (equivalent to ±€40K per year for 2 years)</p>	<p>Good commitment for testbedding and duration could be to showcase and attract potential MS and Port Authorities to participate.</p>
Do you require a Workspace at IHO Lab? If so please provide:	<p>Space for the hosting server (physical or virtual)</p> <p>2 to 3 desk office spaces</p>	<p>IHO Lab able to accommodate the required space.</p>

	<p>Other requirements: IT support on call during development phase and testing and deployment phases. Possibility to working remote.</p>	
<p>GM's Recommendation to the Board:</p>	<p>Recommended for support. However, need to consider following:</p> <ol style="list-style-type: none"> 1. Whether to have a centralised or de-centralised database. 2. IHO's capacity to host the project server after the project. 3. Funding support from IHO and Host Country ie. Total €24K (€14 + €10K). IHO and Host Country to cost share this portion of funding request. 	