

Applicant: **Rovetto, Robert**
Organisation: **Applying as individual. Affiliated with UNSW, and Marine Rescue NSW in Australia (not representing)**
Funding Sought: **£10,000.00**

Sg9\100004

KnowSAR - Toward an International Maritime SAR Database and Knowledgebase

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Section 1 - Project Details

Project Name:

KnowSAR - Toward an International Maritime SAR Database and Knowledgebase

Please provide a short description of your project.

The project will develop and display a preliminary online international database, or a architecture concept to house maritime safety, search & rescue (SAR) content. The initial topical focus is operations: recommendations, best-practices, lessons-learned, and knowledge from various SAR organizations. It will describe the minimum information necessary for populating the database: categories, metadata, fields, and other semantic content. For populating the database, it will collect entries from the community--their submitted best-practices, lessons-learned, recommendations for any marine SAR operation. Partnerships with similar projects or results of their efforts will continue to be sought and may inform this process.

Are you applying for funding under Engineering and Skills or Heritage?

☒ Engineering and Skills

Where will the Main project activities be delivered?

AU - Australia

If you are delivering activities in multiple Countries, please tell us where.

Activities will be delivered virtually, focusing on marine safety sectors in various nations. Australia, however, is the primary on-site location with a regional location of NSW. Where in-person activities are feasible, they will be in the same. In-person activities may include subject-matter expert interviewers, or trainings on relevant content and systems that may inform the knowledge management and database architecture. For example, as a member of a SAR organization, my own SAR organization is a low-hanging fruit for such activities. More broadly, contacts in the sector, as well as agreed or interested parties in New Zealand, EU, UK, and North America. However, activities shall ideally be delivered globally. The reason for a global ideal is that it will maximize the positive impact. The global need for marine safety also entails a global ideal. That being said, a smaller set of participants may be deemed more as a use-case or test-bed, serving as a model for a more content-intensive international use-case with many more participants. The project will explore this. Other activities include developing metadata schema, taxonomy, etc. I have specialty in these knowledge management topics. Activities involving SAR sector participants include collecting their feedback and suggestions on the draft database (and what they may wish it look like). Submissions to the database from agreed organizations and subject-matter experts will begin to populate the database.

Please state the problem or opportunity you are going to address.

More knowledge sharing is needed among various groups engaged in maritime emergency response. No platform to facilitate this exists, as evidenced by internet research. Both national and international organizations, such as the IMO, have safety as a core mission which is a recognized fundamental humanitarian need. The humanitarian nature of search and rescue (SAR) entails a constant need to improve response and management for the sake of saving lives at sea. Each SAR org. has (or can) collected extensive data on operations, policy, and

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management. They've discovered their own best-practices and lessons. All this information may be beneficial to others, but it's seldom shared and few venues exists for doing so in a consistent and rigorous manner. Individual collaborations may exist, but globally a more robust--perhaps data-sharing agreement framework--is needed. Thus, this project is needed because it will fill that gap in the community: there is no international (and neutral) database for collecting and sharing maritime SAR content. There is no concept for its architecture or content. I will provide that. There is no R&D test-bed portal for the potential utility on this concept. Given my training in more than one nations' SAR org. since 2005 as a volunteer, I have a unique perspective on neutrality and inclusiveness, drawing on various cultures and viewpoints. Given my interdisciplinary background, including maritime operations, SAR, ethics and knowledge management topics relevant for this, I provide essential vision to address the problem. My project has history as a 2019 proposal [1] "Consolidating and Sharing maritime SAR Information for Improved Training" submission to World Maritime Rescue Congress. A 2023 IMRF project mentions similar, but does not present a database concept. My project will, and will aim to facilitate partnerships.

What is your proposed solution?

The solution involves developing a preliminary database in an extensible format, or a conceptual framework therefor, to house maritime SAR information for all to share and benefit from. What this may look like will be explored. The form of the database will explore easily-accessible well-known formats and systems such as spreadsheets and standard data formats and presentation mediums. Semantic content and categories will be created. The project aims to begin populating the database by collecting entries from the a set of participants, but ideally from the global community. Outreach activities will encourage sharing and participation in this mutually-beneficial effort. Contributions, and contributor feedback, will help to dynamically and iteratively improve the database concept over the course of the funded time-period. As a publicly and globally-facing platform, I provide a partial solution to the problem of limited information sharing and the gap of data-sharing systems. All marine SAR groups across nations can thereby contribute and access the database. If deemed necessary, this may become a case-study consisting of a smaller set of nation (or marine safety orgs.therein) such as in the UK, AU, US, EU to help scope and manage what may otherwise be a far larger effort. This shows potential for future larger-scale vision and collaborations. A case-study would determine how a small set of participants can formally collaborate on the project idea, what they are willing to share, and so on. The output is a template or sample database that can be expanded to global participation, while showing challenges of development and information sharing. Time-permitted, the project will research how access can be provided to underdeveloped nations or remote geographic regions. Given my past and current service in sar orgs., I will leverage contacts and interested parties toward success.

Why should the Foundation be interested in funding your proposal?

The proposal aligns with the Foundations missions, such as maritime safety. It fundamentally seeks to improve safety in maritime operations, specifically search and rescue. It aims to do so by specific means such as fostering both communication and knowledge sharing between marine safety orgs. The proposal is applicable under both or either the Engineering and Skills, or Heritage categories. For example, toward developing a globally-accessible online database, it is applicable to the former. Given the project goals of preserving knowledge, it is applicable to Heritage. By having a database, and what I envision as a knowledge-base, that past and current knowledge can be leveraged for the future of safety at sea: it specifically seeks to understand "what lessons can we learn". Lastly, the Foundation has expressed interest in the idea in one form or another, via the 2023 SaferSAR project. My proposal here predates that via my 2019 proposal [1]. My project is more advanced, and can be seen as a next stage of theirs. There is precedent, opportunity and ethical rationale for partnership and funding of my proposal. Additionally, my ideas and know-how on knowledge management topics represent a wider vision for future development: novel concepts, systems and capabilities.

Funded work should start within four months of signing the agreement and activities should not last longer than 12 months.

Proposed start date (type in or select)

14 July 2024

Proposed end date (type in or select)

19 July 2025

Section 2 - Impact

Explain the change or difference you aim for, by reflecting on the following:

This work is needed because it will fill a gap in the community: there is no international and neutral database for collecting and sharing maritime SAR content. There is no test-bed portal that can be explored for potential utility on this concept. Given my training in more than one nation's SAR orgs. since 2005, I have a unique perspective on neutrality and inclusiveness, drawing on various cultures and viewpoints. Given my interdisciplinary background, including maritime operations, SAR, ethics and knowledge management topics, I can provide valuable and needed vision for the work. Given some existing interest in the concept, partnerships are needed to better exemplify cooperation toward the goal of marine safety knowledge sharing for better live-saving and operations.

I expect that the global maritime SAR community will have both a greater understanding, and distinct opinions, on whether such a system will be useful to them. One expected change, therefore, is greater awareness. Another is more data and knowledge sharing. Where marine SAR parties contribute feedback on and entries into the database, then the project will be interactive, whereby both project creator and various community members work together. It will also provide an example of one possible iteration and architecture for the system, serving as a test case for identifying and working on challenges. I expect at least some maritime SAR organizations, including my own of which I'm a volunteer member, will benefit. With interest expressed by more than one nation's SAR org, I expect future development and collaboration.

The project will be made visible to the target community via communication channels such as: email lists, non-profit organizations and national and international levels, social media, personal contacts, and organizational affiliations. For example, I'm a member of a maritime SAR org. in Australia, and will endeavor to spotlight this project within and externally with the help of the org. I also have served in maritime safety orgs. since 2006, and am a commercially-licensed mariner with a passion for maritime safety and SAR.

I want to influence in the sense of emphasizing this idea: that an essential aspect of maritime SAR is cooperation and helping each other, which in turn requires communication. Communication in turn is about sharing information. The information of interest, here, is inherently in global interest because it's about saving lives at sea. And this project is precisely about communicating so that the communicators (i.e. community) can improve their public service capability. It thereby has a wide-reaching potential positive impact.

My life goal is a career in maritime SAR, and to date I've only been able to sacrifice extensive time as a volunteer in safety and SAR operations. This funding will make a difference to me in a few ways. One is by validating my long-held idea [1] which has been unsupported to date. It will also validate my creativity and life-long passion for maritime SAR. It will also help bring formal recognition, and in so doing ideally help me with my career goals. It will also be an example of what I call the "Spirit of SAR" (another submission to the WMRC conference [2]) which is partly about inclusivity, fostering partnerships, helping others and helping our-own in marine safety succeed. It is partly about helping others and our fellow shipmates improve for more effectively saving lives at sea. It will provide the seeds for further developing this concept in related proposals which will expand the applications to more advanced topics such as topics in artificial intelligence. [2] "The Spirit of SAR - Increasing Inclusiveness and Fairness in Maritime SAR - With Selected Experiences", Rovetto, Robert. Submission to World Maritime Rescue Congress 2019.

In all, I hope to realize some of my purpose in contributing to maritime safety, find a stable career path therein, and foster positive partnerships to those ends. I hope my creativity, ideation, and passion show not only the

rarity of finding persons so devoted to the life-saving mission, but also the value affording them opportunities to succeed and help others who are like-minded for the benefit of all.

Section 3 - Contact Details

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GMS ORGANISATION

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What type of Organisation are you?

No Response

If you are a Charity/Company, please insert your registration number here.

No Response

Partner Details

Section 4 - Finance

Budget Breakdown