



Road Safety Research Program (RSRP)

Call for Proposal

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1. Overview

Road safety and its negative corollary road traffic crashes (RTC) are a growing public health issue in many parts of the world. RTC appear to be disproportionately affecting vulnerable groups of road users from all walks of life. RTC were acknowledged to constitute the eighth leading cause of disability-adjusted life years' (DALYs) loss in 2000 and are anticipated to be the third leading cause of DALYs in the forthcoming years. The high burden of RTC is directly related to rapid motorization, individuals either maimed or killed in RTC, poor enforcement of traffic safety regulations and the inadequacy of public health infrastructure as well as poor access to health services relevant for the treatment of RTC victims.

In terms of health related parameters, the impact of RTC on any society is likely to outstrip other 'enemies of health' such as communicable diseases and malnutrition. This means many emerging economies, like Oman.

In Oman, RTC rank among the top factors leading to disability and mortality. Every year, nearly 1,000 persons die on the roads of Oman with nearly 20,000 attending a hospital for further care and management. In addition to the huge human and social cost of these accidents, the related economic cost is also substantial. It has been estimated that acute in-patient medical care alone costs the Oman national treasury approximately 3.3 million Riyals a year. This figure would be much higher if other subtle but dishearteningly negative repercussions were fully contemplated: more than half the people killed in road crashes are young adults aged between 15 and 44 years – often the breadwinners in their respective communities. According to recent estimates, RTC are likely to lower the gross national product by 1% to 2% in many countries.

Attempts to reverse this epidemic are already under way. Prevention being infinitely superior to rehabilitation, Oman has been instrumental in advocating road safety within the United Nations and this has culminated in a campaign for "Global Road Safety - A Shared Responsibility". This initiative is the culmination of His Majesty Sultan Qaboos bin Said's directives that there is need to raise public awareness in order to reduce the

incidence of accidents and minimize their social, emotional and economic burden. Another dimension of this quest is to establish evidence-based data on RTC so that enlightened mechanisms can be put in place to reduce the burden of RTC on the Sultanate. Given the aforementioned background, in 2008 the Road Safety Research Grants Program, under the aegis of the semi-autonomous advisory body, the Research Council, inaugurated a National Research Strategy for the Oman in order to lay ground work for a comprehensive overview of the magnitude, risk factors and impact of RTC injuries, and to develop ways to prevent and lessen the impact of road crashes in the Oman. This, in turn, would be incorporated into a broad range of activities including the development and management of road infrastructure, the provision of safer vehicles, law enforcement, mobility planning, the provision of health and hospital services, child welfare services, and urban and environmental planning. The ultimate aim is to enhance research excellence and capacity in the issue of RTC.

2. Scope

Studies have shown that there is no one strategy to reduce the rising tide of morbidity and mortality from RTC although the rising rate of RTC often stems from traffic exposure, automobile safety, road infrastructure, legal rules and driving behavior. It appears that a myriad of factors contribute to RTC, each often having its own individual set of precipitating factors. In recognition of such complexity, the Research Council formed a program committee made up of representatives from relevant sectors including public sector organizations, private business, health, transport, education, finance, police, and legislators to instigate a research program on road safety in Oman. The Program Committee has set clear objectives for the research program and identified research themes that will guide researchers in submitting proposals leading to the advancement of existing knowledge on RTC in Oman.

3. Objectives of the program and the research themes

The Road Safety Research Program (RSRP) operates on the basis of competitive research grants offered as a means to promote innovative research projects that would have a direct bearing on mitigating the current situation due to RTC in the Sultanate. The program is designed to support research work that will contribute to the pool of road safety knowledge. It is *not* set up to fund the implementation of road safety campaigns or the development of specific road safety products. However, the outcome of the research should contribute evidence-based policy on the interrelated themes presented in the following sections. The following four sections provide guidance on identified research areas, while leaving enough room for suggestions of different innovative topics and approaches. Research proposals covering two or more of the four identified research areas are encouraged.

a. Accident Analysis and Prevention

Crash analysis is generally associated with assimilating, synthesizing, and analyzing roadway crash data to predict and/or establish causal relationships, potential countermeasures, and/or safety improvements to minimize the frequency and/or severity of roadway crashes. The proposals, encapsulating themes under crash analysis, should focus on in-depth study of the causal factors that are identified from accident records or gathered from crash scenes for the purpose of developing a clear understanding of the mechanisms involved in the different types of traffic accidents reported in Oman. Due to the diversity of the contributing factors, the theme can be subdivided into several key research areas that address the four aspects of RTC: drivers/pedestrians; roadway/roadside characteristics; vehicle characteristics and environment. Examples of research topics that potential researchers can target may include: (i) development of a scientific approach for road crash data collection leading to objective analysis to achieve more effective road safety measures; (ii) in depth analysis of the causes of traffic crashes and traffic fatalities; (iii) micro as well as macro spatial analysis of crash occurrences; (iv) road characteristics and traffic operation issues related to traffic crashes; (v) development of analytical tools to model crash occurrence and severity that would incorporate models that include statistical as well as other pertinent techniques. This list is not exhaustive and researchers are welcome to pursue other relevant topics.

b. Behavioral and Social Issues

As many issues in RTC are inescapably socio-cultural in their context, this theme mainly covers the broad field of the social and cultural determinants of RTC. The theme also embraces diverse issues including: (i) the assessment of drivers' skills, knowledge, and behavior; (ii), social and cultural behavior factors fostering unsafe road usage; (iii) the socio-economic impact of traffic incidents and the role of the family, and (iv) factors that would lead to cost-effective prevention and intervention. It is apparent that the rising tide of RTC could be stemmed by changing individual and social attitudes and behavior towards all matters relevant to road usage. Many campaigns have only had modest success in curbing RTC because traditional customs and beliefs often override safety measures. It is also apparent that the message of any campaign will only be complied with to the extent that it leads to a change in a range of socio-cultural beliefs. Innovative proposals are requested to explore social and cultural forces affecting trends in RTC in the Sultanate. An integral part of the present quest is to gather evidence-based knowledge on attitudes and perceptions towards factors that lead to RTC.

c. Trauma Care Services

This theme deals with post-crash events encompassing factors leading to accidents as well as the long term impact of RTC. Despite well documented medical, emotional and cognitive complications among victims of RTC, there is a paucity of studies examining the pathways of trauma care and trauma outcomes for populations in Oman. It is well known that certain emergency medicine and treatment regimes tend to result in a positive functional prognosis for victims of RTC. Such regimes, in turn, decrease handicap, improve the quality of life of victims and minimize their negative societal impact. Proposals are welcomed that address: (i) the outcome and impact of road crashes on different populations; (ii) pathways of care and the role of emergency care; (iii) disparities in trauma care patterns in different regions; (iv) the current status of emergency care in terms of availability, accessibility and affordability, and (v) trauma information systems. This would assist in planning future health care provision for such populations. Issues pertinent to the care of victims, including standardization of relevant assessment measures to quantify levels of disability and the establishment of relevant taxonomy and nomenclatures, also fall under this theme.

d. Legal and Compliance Issues

Regulations to enhance road safety are enshrined in the law in Oman. Studies have accumulated from other countries suggesting that traffic safety legislation has a direct bearing on the magnitude of RTC. In recent times, the Omani government has decreed much legislation to help reduce road fatalities and injuries. Proposals are encouraged to address the trajectory of available legislation and the trends in road use. The interrelated aim of this theme is to provide evidence-based data base on:

- the impact of driving rules and regulations on mitigating road crashes;
- the effectiveness of law enforcement in mitigating crashes and their sequelae;
- the relationship between vehicle insurance companies' policies and the magnitude of RTC.

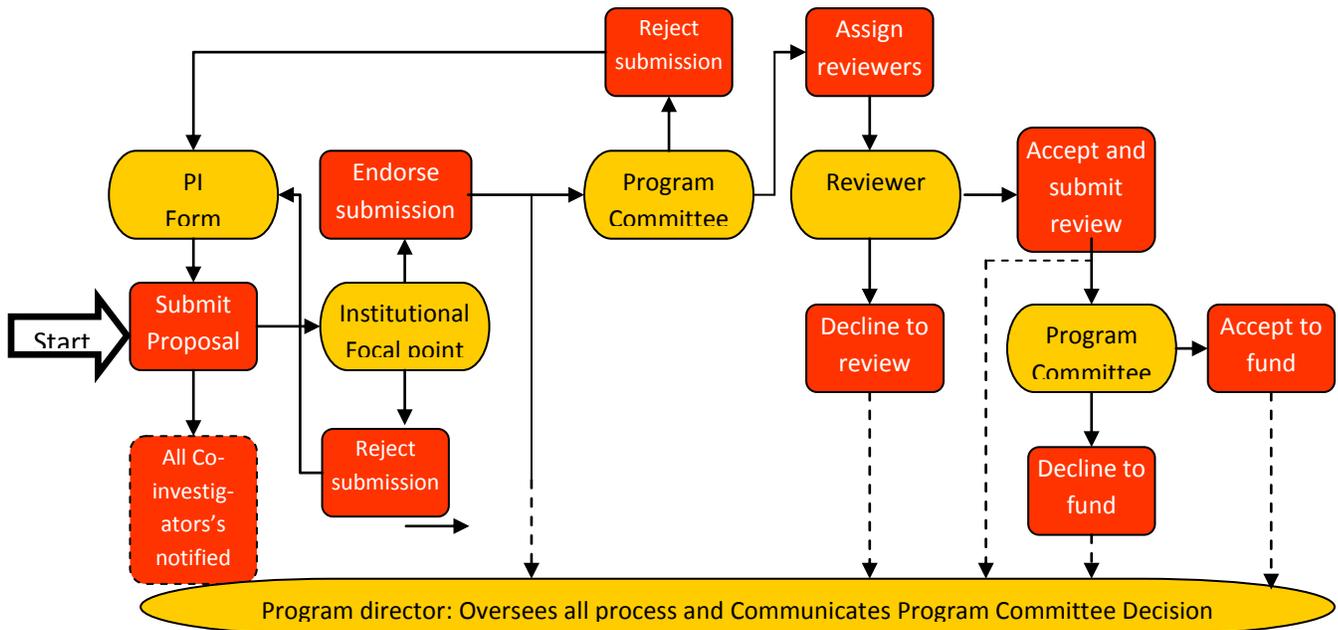
4. Eligibility criteria

The Research Council welcomes proposals from all qualified scientists, social scientists and humanities specialists, with a minimum of a PhD or an equivalent qualification. Researchers whose qualifications do not include a PhD can seek collaboration with institution or/and individuals with a PhD who will act as Principal Investigator (PI) for the project and he/she will work with them as research assistant.

5. Submitting a proposal

A Principal Investigator, in conjunction with his or her team, must prepare and submit an application using The Research Electronic Submission System (TRESS).

The steps of proposal preparation and submission process are clarified in the diagram below:



6. Timing of Calls for Proposals

Proposals can be submitted only in response to a call for proposals. Calls are published on the TRC website. Deadlines for the submission of the applications are specified in each call.

The steering committee may request a researcher or institute specializing in one or more of the road safety research program's themes to submit a proposal. However, such proposals will be evaluated in the same way as those which are unsolicited in order to ensure that the quality of the proposal meets all criteria.

Calls are considered open until the specified deadline for submission. Proposals must be submitted before the deadline specified in the call. After the deadline, it will be impossible to submit using TRESS for the relevant call.

7. Summary of the Process

The Program Committee (identified in the scope section) shall be assisted in its role by:

- A Program Director who shall coordinate activities, provide research administration support and ensure the smooth running of the evaluation and follow-up processes
- External peer reviewers who shall provide the technical input necessary for the evaluation of the proposals.

The process shall follow the steps below:

1. The PI prepares the proposal, circulates it to all co-investigators and submits it electronically using the Research Electronic Submission System (TRESS) at <http://www.trc.gov.om/TRCWebsite/index.htm>
2. The institutional Focal Point of the PI endorses or rejects the submission before it reaches the Research Council (TRC).
3. The Program Committee and the Program Director receive electronic notifications of the proposal's arrival and thus can access it electronically via the TRESS system.
4. Members of the Committee, including the Chair and Deputy-Chair, state whether there is a conflict of interest – as defined by TRC policy guidelines – in participating in the process. If this is the case, they withdraw from the evaluation process.
5. The Program Committee performs an initial screening and prepares a shortlist of proposals that meet the relevant eligibility criteria to be submitted to the external peer reviewers. If any of the short-listed proposals is deemed to require clearance from the Research Ethics Committee, it must be sent for clearance in parallel with the review process.
6. The Committee members propose a list of External Peer Reviewers based on the topic of the proposal. TRC will build a database of reviewers so that Committee Members can search for appropriate reviewers.
7. The Program Committee Chair assigns three Reviewers from the list and sends an email of intent, guidelines on peer reviewing and a request for acceptance.
8. The Program Director ensures the availability and willingness of External Peer Reviewers to participate in the review process.
9. The Program Director, on behalf of the Chair, receives a formal acceptance from the External Peer Reviewers.
10. Each External Peer Reviewer evaluates the proposal based on the set of criteria provided by TRC (the Reviewers may request clarifications on the proposal from the Principal Investigators through the Program Director).
11. The Program Director ensures that evaluations for all proposals have been received and completed. In cases where evaluations are incomplete, the Program Director contacts the External Peer Reviewer(s) to obtain the relevant information or sends a

request for an additional Reviewer after seeking the approval of the Committee Chair.

12. The Program Director seeks written comments from the TRC Financial Controller on the budgets requested for each of the short-listed proposals.
13. The Program Director forwards the proposal evaluations and other relevant material to the Committee.
14. In a meeting held at TRC, the Committee discusses the evaluation outcomes prepared by the External Peer Reviewers on each proposal in terms of the scientific merit of the proposal, the relevance of the proposal to the Program and the funds requested in the proposal. After discussion, the proposals shall then be ranked by the Committee.
15. The Governing Board of TRC chooses the approved proposals based on the ranking and the budget it sees as appropriate for the call. TRC may request that certain proposals are re-submitted in a revised form before being re-considered for funding.
16. The Program Director notifies the institutional Focal Point and the PI of the decision of the Governing Board of TRC.
17. Signature of the grant agreement (Negotiation between TRC and PI may be required over the requested budget).
18. Post award, the Program Director ensures that research teams provide the necessary progress and financial reports.
19. The Program Director sends progress and financial reports to the Program Committee and the Financial Controller.
20. The Committee agrees with the research team on an action plan to address any possible issues and/or recommend early termination of the funding

8. Evaluation Criteria

The general framework to evaluate the proposals is based on the following indicators:

Relevance to the program themes:

The focus of the proposal should match the themes *Strategic Directed Research Grant Program, Road Safety Research Program* as alluded to above. Other themes are encouraged provided that the outcomes of the project will advance existing knowledge on RTC in the Sultanate.

Novelty of proposal:

The proposal should aim to advance existing knowledge on RTC in Oman and, in turn, contribute to the pool of road safety knowledge that would lead to establishment of evidence-base intervention and prevention for RTC of relevance to the Sultanate.

Clarity of proposal:

The proposal should be comprehensive so as to meet the requirements of the multidisciplinary team which scrutinizes the merits of the proposal. The write-up should be devoid of jargon limited to a certain field of specialization, but this does not mean compromising on the quality of the content of the proposal.

Survey of relevant literature:

A comprehensive literature review is essential in order to highlight the existing body of knowledge as well as to justify the motivation of the present proposal.

Measurable outcomes of the proposal:

Although any research paradigm is acceptable, it is important that the investigator(s) clearly operationalize the scope of their study. The outcome measures should have heuristic value and direct relevance to the situation in Oman and such relevance should be tangible.

Methodology:

The investigator(s) must succinctly state who the research participants are, what materials are to be used and when, where and how data will be collected.

Plan and management of the project:

The investigator(s) should clearly articulate the plan and management of the project including a clearly demarcated division of labour and manpower involved in the different phases of the study as well as the viability of proposed team work, if any.

Research team capability to conduct the project:

The investigator(s) should be ostensibly equipped with both the knowledge and skills to undertake the proposed research. This means that the PI as well as team members should have the qualifications and background knowledge in the field that would equip them to execute the proposed study. Although there is some flexibility, those who have sound research and academic backgrounds relevant to the proposed study will be preferred.

Budget estimation and adequate time allocated to the project:

The proposal should contain logical and realistic time chart for the execution of the study with clear compartmentalization of each phase. The budget should be economical in meeting the required expenditure.

Ethical standard:

The proposal should clearly state how the execution of the study meets the required best practice in ethical standards. Good practice here also entails setting up mechanisms so as not to offend social modesty, tradition and harmony among Oman's diverse population.

Building National Research Capacity on Road Safety:

The proposal should contribute to building national research capacity such as training of a cadre of Omani researchers leading to graduate qualifications.

9. Reporting requirements

- The project must have a maximum duration of 36 months. A draft final report is to be submitted to TRC within 3 months of the commencement of the grant. Applicants are required to submit a realistic project schedule with their applications
- Applicants should note that the draft final report will be considered by TRC and returned with comments as soon as possible.
- A brief report summarizing progress is also required mid-way or annually through the project, or at a time agreed with TRC.
- Research reports are to be prepared to a standard suitable for publication in a reputable scientific journal. Report writing must be clear, concise, non-repetitive, accurate and able to withstand technical scrutiny.
- Grant recipients will be responsible for applying appropriate editorial and quality control before the draft final report is delivered to TRC.
- TRC reserves the right to publish and disseminate grant reports, and to make them available for download from TRC website. An electronic report template will be supplied to grant recipients at the commencement of the project so that reports can be prepared and delivered in TRC standard format.
- The patent that comes from funded research by the Research Council will apply to IP rules and regulation of the Council

10. Strategic research grant policy guideline

- Applicants should ensure they understand the conditions under which funding is provided and be aware of the grant rules and regulations presented in the **Strategic directed Research Grant Program Policy and Regulations** which can be found on the TRC website (<http://www.trc.gov.om>)