

Counter Improvised Explosive Devices **Technology Demonstration Project**

Project Guidebook

1.0 BACKGROUND

1.1 SCOPE

Defence R&D Canada (DRDC) is co-ordinating an R&D effort on behalf of the Department of National Defence (DND) to examine and further develop promising technologies that could counter or defeat Improvised Explosive Devices (IEDs). To complement the effort in this area currently being undertaken in-house, DRDC is seeking promising ideas and technologies from Canadian suppliers that could be applied effectively and quickly.

DRDC is implementing a special project under the Technology Demonstration Program (TDP). This Guidebook outlines the phased approach that DRDC will be employing to solicit projects under the Counter-IED TDP. The process described in this Guidebook applies only to those proposals from Canadian suppliers. Under the first phase, DRDC will solicit project synopses of ideas/technologies, etc., which will be evaluated against the criteria outlined in this Guidebook. Suppliers submitting proposal synopses which meet the defined criteria will be requested to submit a full proposal for review, evaluation and funding under the Counter-IED TDP. Ideas or projects that do not fit under this Counter-IED TDP may be referred to other DRDC or DND organization(s) for consideration.

1.2 OBJECTIVES

The overall objectives of this Counter-IED TDP are:

- a. To improve the knowledge of the Canadian Forces (CF), DND, other Government Agencies and Canadian Defence Suppliers about the IED problem;
- b. To highlight the scientific and technological knowledge resident within the Canadian Supplier community and to identify how it could be applied to the IED problem;
- c. To identify to the CF/DND new solutions that have not been examined;
- d. To provide a means by which the CF, DND, other Government agencies and the Canadian Supplier community can exchange ideas and insights on how technological solutions could improve the protection of the CF;
- e. To develop and demonstrate promising technologies; and
- f. To enable the exploitation of these technologies towards operational implementation.

1.3 PROJECT VALUE AND TIMEFRAME

DRDC anticipates allocating approximately \$10 million to the Counter-IED TDP – to cover a range of projects from both DRDC centres and industry. The exact mix of internal versus external projects has yet to be determined but will be based on the merit of all proposals. It is currently anticipated that projects proposed by Canadian Suppliers will be in the \$1 to 2 million range, although other project values will be considered. The process described in this Guidebook addresses solely the Canadian supplier submissions.

Projects should be completed no later than 36 months after they start.

1.4 ELIGIBLE SUBMISSIONS

Only those proposals from Canadian Suppliers which are resident and operating under the laws of Canada will be considered. In addition, proposals must certify, in accordance with the PWGSC definition of Canadian Content, that no less than 50% of the proposal meets this definition.

2.0 INVESTMENT PRIORITIES

The Counter-IED TDP projects will cover the entire spectrum of Counter-IED operational domains and technology areas, outlined as follows:

Counter-IED Operational Domain	Technology Area	Example Topics
Predict	Analysis and prediction	Human intelligence (HUMINT); psychological operations (Psyops); behavioural pattern recognition; intelligence, surveillance, and reconnaissance (ISR); forensic analysis
Detect	Sensing and surveillance	Sensors, stand-off detection, false alarm reduction, pattern recognition, remote surveillance
Prevent	Access control and jamming	Deny enemy communications, deny enemy free movement, deny enemy ISR, control access to materials, jamming
Neutralize	Explosive neutralization/disposal	Render IED safe, disposal, controlled detonation, forensic collection, enemy interdiction
Mitigate	Protection and mitigation	Blast resistance, blast containment, first responders, medicine, and information operations
Prepare	Training Support	Support to CF training for operations in theatre

3.0 PROJECT ELEMENTS

The Counter-IED TDP will be organized along three main project types as outlined in the following table. The parameters identified are intended as guidance to show the spectrum of possible activities and the expected delivery or exploitation path.

Project Type	Objectives	Parameters
Technology Acceleration	Accelerate the transition to use by the Canadian Forces of technologies that address key counter-IED capability gaps.	<ul style="list-style-type: none"> ▪ Duration typically less than one year ▪ Technology that is “in the pipeline”
Research and Technology Development	Close the gaps in knowledge and capabilities of the S&T and operational communities so as to enable effective response to future IED threats.	<ul style="list-style-type: none"> ▪ Duration typically 1-2 years ▪ Exploit partnering and leveraging across national and international S&T performers
Technology Demonstration	<p>Demonstrate the impact and utility of S&T knowledge and capabilities to the Canadian Forces. Ultimately, the S&T would be embodied in equipment; training programs; tactics, techniques and procedures; or another type of operationally relevant implementation.</p> <p>Show operational communities the utility of new technology. TDP projects should foster collaboration between the operational and S&T communities through partnerships, joint field trials and exercises.</p> <p>Provide opportunities and venues to validate and exploit the capabilities of technology in the context of real and potential operations, processes, systems or operational architectures.</p> <p>Projects are not intended to be opportunities to market products to a customer or to conduct sales activities.</p>	<ul style="list-style-type: none"> ▪ Duration typically less than 3 years ▪ Generate a residual capability (i.e. transition S&T to CF operation) ▪ Participation of operational users in project teams and demonstrations ▪ Establish linkages to participate in national and international exercises or joint demonstration projects

4.0 PARTICIPANT CONTRIBUTIONS/FINANCIAL CONSIDERATIONS

Consistent with the philosophy of the Technology Demonstration Program, Participants in the Counter-IED TDP will be expected to contribute direct financial support or in-kind effort to their project. This amount and the basis upon which that amount is calculated must be clearly identified in Suppliers Proposal.

An overall goal of the Counter-IED TDP is to enhance counter-IED capabilities by leveraging on knowledge. A key objective is to enable and foster the exchange of information and knowledge on the IED problem. Participants in the TDP will be expected to actively engage and interact in TDP forums, symposia, and team meetings. Furthermore, participants should be prepared and willing to help foster or actively facilitate collaborations with other organizations, or to provide insight into similar programs of Allied organizations.

Participation by selected Suppliers in the Counter-IED TDP will occur through standard Public Works and Government Services Canada (PWGSC) contracts.

5.0 CALL FOR PROPOSAL PROCESS

5.1 PROCESS OVERVIEW

The Counter-IED TDP initiative will employ a competitive two step selection process that examines each proposal's quality and relevance, as established by the selection criteria described in this Guidebook. The following process will be used:

5.2 STAGE 1 - PROPOSAL SYNOPSIS

The first stage is a broad solicitation for a **Proposal Synopses** which is open to all Canadian suppliers. Each Proposal Synopsis will be reviewed and screened by a Project Selection Committee (PSC) in accordance with the Stage 1 criteria described in this Guidebook. The PSC will be supported by expert reviewers as necessary.

Applicants must note that this is a screening process at the synopsis stage and other factors as described in this Section could result in a proposal being removed from further consideration. Failure to use the forms provided for these submissions, meet the stipulated deadlines, or to submit incomplete applications will also result in the proposal being rejected without further consideration. Because of the large number of submissions, only the most suitable proposals can be given further consideration.

5.3 STAGE 2 – FULL PROPOSAL

Those applicants whose Proposal Synopses pass Stage 1 will be invited to submit a **Full Proposal**. The PSC will then evaluate each Full Proposal in accordance with the Stage 2 criteria described in this Guidebook taking into account the reviews obtained, and investment priority requirements for each project category.

For approved projects, the PSC may request the Counter-IED Project Manager to implement refinements in the project scope, budget, schedule or work plan that have been identified during the selection process. Recommendations for full or

partial funding, based on the scope and IED objectives of the Counter-IED TDP, may also be made.

5.4 PROPOSAL SELECTION COMMITTEE

Synopses and full proposals will be evaluated by a Project Selection Committee (PSC) which will be comprised of a Director level representative from Assistant Deputy Minister (ADM)(Materiel), the Military Engineers, PWGSC and ADM(Science & Technology). The PSC will be chaired by Associate Director General R&D Programs from ADM(Science & Technology).

5.5 SCHEDULE

Call for Proposal Synopses	21 August 2006
Classified Briefing to Suppliers	08 September 2006
Deadline for Synopsis Submission	22 September 2006
Request for Full Proposals	06 October 2006
Deadline for Full Proposal Submission	03 November 2006
Project Announcements	11 January 2007

Please note that it is currently proposed to hold a classified briefing at the SECRET on the IED problem on September 8, 2006 in Ottawa. Space for this briefing will be limited, and, will only be open to those firms possessing a valid SECRET level clearance granted by PWGSC Industrial Security. Firms must send their Visit Clearance Request electronically to proposals.ied@drdc-rddc.gc.ca no later than 30 August 2006. The Visit Clearance Request must contain an electronic copy of the Security Screening Certificate and Briefing Form (TBS 330-47), that was issued by PWGSC Canadian & International Industrial Security Directorate (CIISD), for each representative they wish to have in attendance at the briefing. The form will be checked for appropriate SECRET level clearance, signature and expiry date.

Where a company requests multiple attendees, DRDC reserves the right to limit that attendance in consultation with the company.

5.6 SUBMISSION FORMATS

Applicants must use the form provided as certain procedures are automated. **Failure to use this form will result in the proposal being rejected from further consideration.**

5.7 SENSITIVE OR PROPRIETARY INFORMATION

The contents of all proposals will be considered sensitive and will be maintained in confidence by DND including PSC members and expert reviewers throughout the evaluation and selection process. Any release of this information outside the selection process requires the express agreement of the proposing organization.

5.8 SECURITY CLEARANCE /ACCESS TO CLASSIFIED MATERIAL

All Suppliers who propose the use of or work with classified material MUST possess a valid Security Clearance granted by Public Works and Government Services Canada (PWGSC).

5.9 INTELLECTUAL PROPERTY

Each project under this initiative will manage Intellectual Property (IP) according to the following principles:

Background IP

- Identification and “right to use” of background Intellectual Property will be made at project initiation. Project participants will normally make their background Intellectual Property available to the extent appropriate for the successful execution of the project;
- Project participants will respect the interests of collaborators with respect to divulgence or use of third-party information, or any previous commitments/ licensing of background Intellectual Property.

Foreground IP

- Ownership of IP generated as part of any resultant contract will follow the principles of the TBS Policy on Title to Intellectual Property Arising under Crown Procurement Contracts;
- Every reasonable effort will be made to support private sector participants in the commercialization of foreground Intellectual Property generated in the course of the project. This will typically result in either the granting of licenses or leaving ownership with the participant. The selected approach will be negotiated at the outset of the project.
- Parameters for the ownership, management, administration and exploitation of foreground Intellectual Property (i.e. Intellectual Property generated in the course of the project) will be established at project initiation. These parameters will favour the transfer and commercialization of Intellectual Property so as to maximize its access by first responders and operational communities;

5.10 PROPOSAL SYNOPSIS SUBMISSIONS AND EVALUATION

5.10.1 SUBMITTING YOUR PROPOSAL SYNOPSIS

A downloadable electronic application form (MS Word) that guides applicants and requires specific information about the Proposal Synopsis is available on the DRDC Web Site at <http://www.drdc-rddc.gc.ca/>.

Conditions on proposal submission are as follows:

- All unclassified Proposal Synopses must be completed using the provided form and must be submitted electronically via e-mail to proposals.ied@drdc-rddc.gc.ca, **no later than 1600 hrs EDT September 22, 2006.**
- If an applicant has a proposal that contains classified information, contact the Co-ordinator directly to arrange delivery of the proposal as to proper procedures (proposals.ied@drdc-rddc.gc.ca).
- Applications must utilize the forms provided on the website and submit all of the required information according to the required format. Failure to populate the forms correctly or submit the required information can result in the rejection of the proposal.
- A paper submission will not be accepted, unless it is classified.
- Late submissions – a classified paper submission delivered to the specified Bid Receiving area after the closing date and time but before the contract award date may be considered, provided the delay can be proven to have been due solely to a delay in delivery that can be attributed to the Canada Post Corporation (CPC) (or national equivalent of a foreign country).

The only pieces of evidence relating to a delay in the CPC system that are acceptable are:

- (a) a CPC cancellation date stamp;
- (b) a CPC Priority Courier Bill of Lading; and
- (c) a CPC Xpresspost Label,

that clearly indicate that the bid was mailed prior to the bid closing date.

Example: If the bid closing date was May 15, 1995, then the CPC cancellation date stamp should read no later than May 14, 1995, to be accepted.

Applicants must note that electronic email systems can have systematic delays and that large attachments may cause their system to hold or delay transmission of emails. **It the applicants' sole responsibility to ensure**

that the submissions are received on time; late submissions will not be accepted. Date stamps for the transmission are not acceptable.

- Each Proposal Synopsis should include an identification of the source(s) and amount of funding for this or for similar projects all partners are involved in.

5.10.2 SCREENING OF PROPOSAL SYNOPSES

Scope, outcomes or deliverables, including the time frame, should be included in the project description section of the application form. In addition, Proposal Synopses will be assessed on the following criteria (totaling 100 points):

a) Project Viability and Risk Assessment including Relevance to IED Investment Priorities (30 points) – demonstrates relevance to one of the IED Areas of Interest; the proponent’s assessment of Technology Readiness Level (TRL) would be a useful addition to the synopsis. However, DRDC does not intend to impose a limitation on any TRL’s as there may be lower TRL’s that have a higher impact worthy of consideration.

b) Technical & Management Expertise and Experience of Project Team (20 points) – demonstrate the necessary technical and management skills, and the experience of using the expertise on projects of similar application, scope and complexity. Demonstrated success in the past is highly desirable. The team should also demonstrate that the human and physical resources needed, will be available to complete the work proposed;

c) Impact on End User (30 points) - Discuss how the proposed project will improve the effectiveness and efficiency of emergency response operations. Describe how it will generate a leave-behind science and technology capability or capacity for which there is an urgent requirement to improve IED preparedness, prevention and response. State how the impact on the end user community is going to be demonstrated or how the application of existing knowledge to new or unique applications of direct relevance to IED Priorities;

d) Creation of New Knowledge, Capabilities, or S&T (Research & Technology Development Projects only) (20 points) – describe the creation of new knowledge, capabilities or S&T.

5.10.3 FEEDBACK ON PROPOSAL SYNOPSES

When all the synopses have been reviewed, each applicant will be advised as to the status of the application. Applicants will receive one of the following replies:

- The Proposal Synopsis application did not meet the criteria;
- The Proposal Synopsis application did not rank high enough at this time to be considered for a Full Proposal. Please consider resubmitting at the next call for Proposal Synopses;
- The Proposal Synopsis application has been accepted and the applicant will be asked to submit a Full Proposal.

5.11 FULL PROPOSAL SUBMISSIONS AND EVALUATION

5.11.1 SUBMITTING FULL PROPOSALS

Applicants will find the electronic application form and proposal preparation guidance on the DRDC Web site <http://www.drdc-rddc.gc.ca/>. Applicants must be aware that changes may be made and that the final form and guidance for proposals will be sent directly to applicants.

Full Proposals must be submitted as described below or they will be rejected:

- All Full Proposal applications must be completed using the provided form and must be submitted electronically via e-mail to proposals.ied@drdc-rddc.gc.ca. Failure to do so can result in the rejection of the proposal;
- Applications must contain all of the required information according to the required format. Failure to populate the forms correctly or submit the required information can result in the rejection of the proposal.
- Most submissions are expected to be unclassified. If an applicant has a classified submission, contact the Co-ordinator to arrange delivery of the proposal via proper procedures (proposals.ied@drdc-rddc.gc.ca).

5.11.2 EVALUATION OF FULL PROPOSALS

Meeting Counter-IED Needs (50 points)

- Relevance to Investment Priorities identified herein;
- Impact on End User;
- Time to Exploitation;
- Technology Maturity /developmental risk;
- Competitive Technology Analysis;
- Delivery of Outputs To End Users;

Management (30 points)

- Technical & Management Expertise and Experience of Project Team including the Project Manager;
- Project Plan;
- Corporate commitment to project

Leverage (20 points)

- Creation of Collaboration among IED Community of interest
- Opportunity created by the project for international collaboration

5.11.3 SELECTION OF FULL PROPOSALS

Proposals will be selected on the basis of their rating under Section 5.11.2. The highest rated proposals, in order of ranking, will be recommended for funding based on priorities, merit and funding available.

5.11.4 FEEDBACK FROM THE SELECTION PROCESS

When all of the Full Proposals have been reviewed, all applicants will be advised on the status of their application. Applicants will receive one of the following messages:

- The project application did not meet the criteria;
- The project application could not be funded at this time;
- The project application has been accepted, conditional on refinements made to the project work plan scope, or budget identified during the selection process;
- The project application has been accepted in full.

Applicants will be provided with the full review results for their proposal, and overall ranking within 30 days of the completion of the review.

6.0 RESULTANT CONTRACT

Any resultant contract will be awarded by PWGSC containing the standard PWGSC terms and conditions for R&D contracts. Given the need to implement solutions to this problem, any deviation from these conditions may delay or compromise the award of a contract. Proponents who are invited to submit full proposals will be provided with a draft contract and Letter RFP with appropriate instructions at that time.