Technical Support Working Group
Combating Terrorism Technical Support Office
Technology Transition Plan©
Project Name Here
TSWG Project Number

The Technology Transition Assessment and Plan should address all elements required for transitioning the technology to the intended users, as well as other secondary users and markets. **This plan is intended to be a working document for collaboration throughout the development process. A first draft, with questions, comments, etc. should be submitted to the CTTSO/TSWG Technology Transition Manager at techtrans@tswg.gov within 6 months of contract award.** *Items to be included are:*

Background Information: *One short paragraph Background on the problem that the technology addresses.*

Requirements Statement: Summary statement derived f*rom the Task Plan, SOW, etc...Also explain the concept of operations (CONOPS) for technology when employed.*

Project Task Manager/Proponent: *Cite the Government Agency/Military department that is the advocate for this project, i.e. what federal agency would procure a product based on this technology? (Not CTTSO/TSWG)) If this project addresses any military requirement, include information on military user(s) here.*

Technology Description: *describe physical principle(s) used, physical characteristics (size, weight, etc.), technical capabilities planned vs. demonstrated. Include a representative photo of the device, system or concept.*

Software: *If this project involves all software or significant software resources, a Software Transition Plan may be needed – contact the CTTSO Technology Transition Manager for details (techtrans@cttso.gov).*

Development Status: *At time of preparation and anticipated at time of completion of current effort (e.g. breadboard, prototype, software system, pre-production unit, etc.). Provide a* <u>basic</u> *project schedule including dates of Preliminary and Critical Design Reviews, prototype deliveries, testing periods, etc. Please suggest a Technology Readiness Level (TRL) status as of the date of the plan. TRL definitions are on the CTTSO Technology Transition web page.*

Statement of Intellectual Property (IP): *to include provisional patents, patent applications, patents, trademarks, copyrights, and licenses associated with any element of the project, included any assertions made in contract proposal on pre-existing IP and ratified by contract. Include patent filing status and dates for all IP to be utilzed in the project. Any licenses granted on patented IP and third party licenses should be listed.*

Data Rights. *It is standard practice for the government to retain unlimited rights to all technical data developed under the contract. Unlimited rights means right to use, modify,*

perform, display, release, or disclose technical data in whole or in part, in any manner and for any purpose whatsoever, and to have or authorize others to do so. If there is an exception to this, it should be in the contract and stated here.

Statement of Contract Deliverables: *to include test plans, hardware, software, technical data, software code, reports, operations and maintenance/support manuals, training manuals, etc.*

Regulatory issues description*: to include environmental, safety, health, transportation, communications spectrum, or any other applicable regulatory restrictions involving the production, distribution, sales, or use of products resulting from the technology.*

Standards: *applicable standards required to be met for use by Federal, state, and local public safety personnel should be identified (e.g. NFPA, ANSI, NIOSH, etc.). What standards must be met to ensure interoperability with other systems. See system support section below.*

Liability Risk Analysis - *discussion of potential liability risks in the use of the technology by intended or unintended users. State intention to apply for Safety Act designation/certification. See CTTSO Technology Transition web site for Safety Act application.*

Testing: *Describe test plan provisions, and timeframes for developmental and operational testing, and what operational organization will be involved in the operational testing. (Note a Test and Evaluation Guide is available from CTTSO/TSWG Technology Transition web site.)*

Accreditation of Software intended for Enterprise Systems should be addressed here.

Safety Certification or characterization testing should be addressed here if the technology is being transitioned to military forces.

Market description*: to include primary users, secondary users, and spinoffs of the technology for Military, Federal, domestic state and local government, commercial/industrial, and international markets as applicable. A separate Market Assessment should be completed, with results summarized here.*

Security: *Describe any sensitivies or criteria regarding the technology, data, applications, or users of the technology, determine appropriate Classification Guide Distribution Statement, and if the product or information should be public, restricted, or classified. Do not include any classified information in this document.*

Export Control restrictions: *citing the appropriate section of the ITARS (if applicable), Military Critical Technology List, or a statement that the technology or product does not fall under export control provisions. If unsure about this, see Export Control guidance on the CTTSO Technology Transition Page* <u>and</u> *consult with the CTTSO/TSWG Technology Transition manager on procedures.*

Commercialization Strategy Discussion: *cite developer's intention to venture or license the technology with associated timelines for actions associated with the transition/commercialization activity. Discussion should include roles of current development partners or other associations to be leveraged. For assistance, consult with the CTTSO/TSWG Technology Transition manager.*

Technology Transition to Production (Produceability/Affordability): *describe the type and level of effort envisioned to take the technology from its state at the end of the development effort to a production ready operationally suitable product. (Size/weight reduction, packaging, integration, additional test and certification). Provide an estimate of any additional costs to transition the prototype to initial low rate initial production (LRIP). If possible, provide an estimate of the number of initial units needed to be sold and price of units to cover transition costs. Sample LRIP analysis follows:*

Description	Type	Quantity	Unit Cost for Quantity 5 Systems	Unit Cost for Quantity 25 Systems
Embedded System	Custom	1	$ 4,407	$ 3,746
Control Panel	Custom	1	$ 904	$ 768
Tremble Sensors	Custom	20	$ 3,390	$ 2,882
Tremble Sensor Cables	Custom/COTs	20	$ 3,117	$ 2,648
Control Panel Cable	Custom/COTs	1	$ 488	$ 415
Power Cable	Custom/COTs	1	$ 191	$ 163
Misc Parts	Custom/COTs	1	$ 874	$ 743
Total Hardware Cost Per Unit			$ 13,371	$ 11,365
Total NRE Costs Per Unit ($65K grand total)			$ 13,000	$ 2,600
Total System Cost Per Unit			$ 26,371	$ 13,965
Grand Total System Cost			$ 131,855	$ 349,125

Notes:
All costs are loaded.
System installation is not included.
NRE tasks included cover additional development and refinement, as well as documentation.

Training: *discuss training needed to adequately use the technology or product and what will be provided to users under the contract. What organization(s) will be involved in the initial training?*

Interoperability: *discuss other equipment and systems that this technology must operate*

with and the operational environment it will need to operate in. What tests will be done to ensure that it will work with other systems, or not interfere with other equipment/systems. If a military system, what are its vulnerabilities?

System Support
Discuss support objectives for initial and full operational capability. Discuss interfacing systems, transportation and facilities, standardization and interoperability. Describe the support approach including configuration management, repair, scheduled maintenance, support operations, software support, and user support (such as training and help desk), maintenance and repair manuals, supply requirements, and warranties. Provide information under the following support element topics:

- ***Maintenance Concepts***
  - *Identify the types/levels of maintenance to be performed and who will perform the maintenance.*
  - *What type of periodic maintenance or calibration will be needed?*
  - *Will the system be maintained at the operational location (organizational maintenance), at a field unit level (field maintenance) and/or a manufacturer/depot level?*
  - *Will initial deployment include Technical Representatives in the field?*
  - *If initial support is from the manufacurer, will interim replacement units be available and provided?*
- ***Supply***
  Describe the approach to supplying field operators and maintenance technicians with necessary tools, spares, diagnostic equipment,manuals and software that will support the interim and final maintenance concept.
- ***Support Equipment***
  Define the support equipment to be used by the system, both common and peculiar to include any special test equipment or software development environment
- ***Training***
  Describe how the training will ensure that users are certified as capable of operating and using the proposed system. What special training resources/simulators/instructional packages are to be provided?
- ***Transportation and Facilities***
  Describe how the system will be transported to and in field environmental conditions. Identify any hazardous concerns, lift constraints, and storage conditions required.
- ***Upgrades and enhancements.*** *Describe methods for upgrades and technology insertions. Also address post-development software support requirements.*

Life Cycle Cost Considerations *(To be submitted at time of CDR)*

If this project is to be transitioned to a DOD program of record, based on the above data,and the anticipated numbers of units deployed, estimate the support costs for the first 3-5 years that the system is in operation.

Action Items/OPR:
To be determined on first review.

Contacts
TSWG/CTTSO

Contracting Officer's Representative (COR) TSWG Program Manager/Project Manager:

Task Manager:

Technology Transition Manager:

Developer

Company/Lab Name
Address

Principal Investigator
Name
Phone
E-mail

Distribution Statement: Distribution authorized to U.S. Government agencies only; due to critical technology and operations, December 2000. Any and all requests for this document must be referred to Technology Transition Manager, CTTSO/TSWG, P.O. Box 16224, Arlington, VA 22215 or via e-mail to techtrans@tswg.gov.

Additional Notes

For assistance with Technology Transition Assessment and Planning, contact TSWG/CTTSO Technology Transition Manager via e-mail at techtrans@tswg.gov

CTTSO/TSWG Technology Transition Web Page
http://www.cttso.gov/technology-transition.html