Collective Protection Technology Readiness Evaluation (COLPRO TRE)

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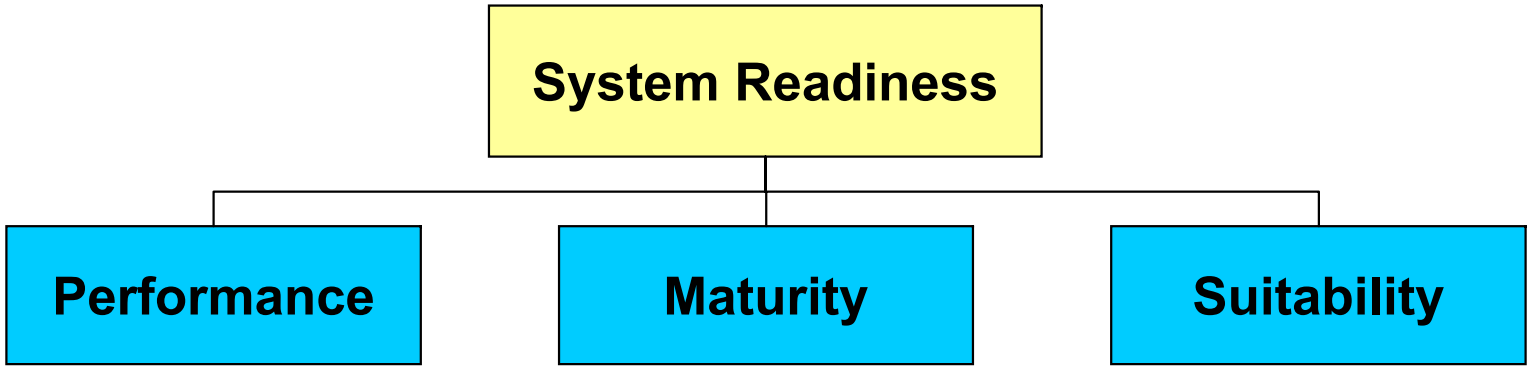
TRE Introduction

- **Technology Readiness Evaluation (TRE)**



  - **Utilizes a combination of performance testing and maturity and suitability assessments to evaluate readiness for transition to fielded applications**
  - **Performance testing measures capabilities for given performance parameters, under specific conditions**
  - **Maturity assessments result in assignment of Technology Readiness Levels (TRLs)**
  - **Suitability links the specific application needs & reqs**

TRE Introduction

PROGRAM DEVELOPMENT PROCESS – Technology Readiness Levels

Basic/Applied Research	Advance Technology Development	Advance Component Development	System Development and Demonstration	Product and Operational System Development
1-2-3-4	5-6	6-7	7-8	8-9

Technology Readiness Levels

1 – Basic Principles Observed
2 – Technology Concept Formulated
3 – Proof of Concept
4 – Laboratory Environment Component / Breadboard Demo
5 – Relevant Environment Component / Breadboard Demo

6 – Prototype Demo in Relevant Environment
7 – Prototype Demo in Operational Environment
8 – System Qualified through Test and Demo
9 – System Proven in Operation Conditions

Joint Science & Technology Office for CBD (JSTO-CBD)

Government Laboratories

Joint Program Executive Office for CBD
Joint Project Managers for CBD

ColPro TRE Program

- **Program Goals**
  - **Identify and evaluate emerging and mature technologies for applications across the entire collective protection commodity area**
  - **Assess the maturity, performance, and attributes of selected technologies**
  - **Provides critical support for both collective protection & platform specific acquisition programs**

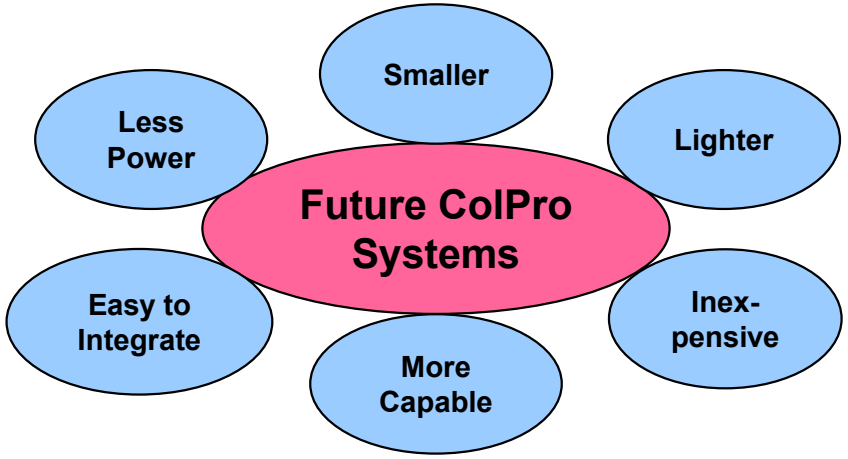


ColPro TRE Program

- **Key Benefits**
  - **Provides a baseline assessment of available technologies**
  - **Establishes a catalog of mature technologies with supporting data for possible use in future programs**
  - **Promotes rapid transition of mature products and technologies**
  - **Provides industry with feedback on warfighter needs and targets for technology transition milestones**

ColPro TRE Program

- **Desired Capabilities and Enhancements**
  - Increased TIC/TIM protection (ITF-40 listing)
  - Reduced size, weight, and power
  - Reduced logistics burden
  - Reduced erect and strike time
  - Reduced system complexity and components
  - Increased personnel throughput capability into/out of toxic free area
  - Increased utilization flexibility



ColPro TRE Program

- **Roles and Responsibilities**
  - **JPM-CP Office: Program management**
  - **JSTO-CBX: Program oversight, sponsor**
  - **JPEO-CBD: Program review**
  - **JSTO-CBT: Technical expertise**
  - **Joint T&E Executive Office: Test protocol/plan review**
  - **National Assessment Group (NAG) & Edgewood CB Center TRE Team: Independent assessment and final reports**
  - **Eglin AFB, Edgewood CB Center, Natick Soldier Center, & Aberdeen Proving Grounds: Test orgs.**
  - **CBR Technology Alliance (IA&E Team): Program support**
  - **Technology Focus Area Panels**

ColPro TRE Program

- **Technology Focus Areas Panels**
  - **Four focus area panels**
    - **CB Barrier Material and Quick ColPro Erect Technologies**
    - **ColPro Support Equipment**
    - **Air Purification**
    - **Whole ColPro Systems**
  - **Subject matter experts and representation from JPEO-CBD and JSTO-CB**
  - **Responsibilities**
    - **Customize technology readiness level definitions**
    - **Inventory/evaluate existing test protocols & develop new test methodologies as needed**
    - **Select technologies for ColPro TRE participation**
    - **Coordinate and supervise performance testing events**

ColPro TRE Program

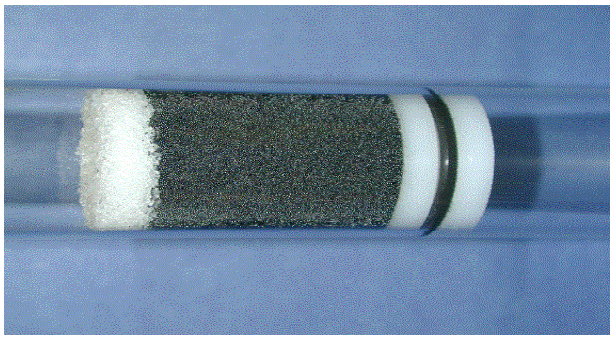
- **Technology Focus Areas Panels**
  - **CB Barrier Material & Quick ColPro Erect Technologies**
    - **Panel Chair resides at Natick Soldier Center (NSC) in Natick,MA**
    - **CB barrier materials (swatches) will be tested at NSC and ECBC for physical properties and chemical agent permeation**
    - **Quick ColPro erect technologies will be tested at Aberdeen PG for erect/strike cycling and snow loading**
    - **Technologies being tested include CB liners, CB inherent tent mat'l, expedient coatings, airbeams and folding frame structural systems**

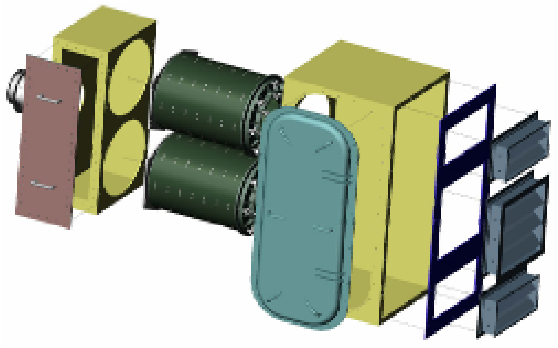
ColPro TRE Program

- **Technology Focus Areas Panels**
  - **ColPro Support Equipment**
    - **Panel Chair resides at Brooks City Base near San Antonio, TX**
    - **Equipment will be tested at Eglin Air Force Base**
    - **Testing will include CB compatibility, environmental testing, dimensional characterization, and limited operational assessment**
    - **Technologies being tested include fan/filter systems, environmental control units, and tent heaters**

ColPro TRE Program

- **Technology Focus Areas Panels**
  - **Air Purification**
    - **Panel Chair resides at Edgewood CB Center (ECBC)**
    - **Equipment will be tested at ECBC (chemicals) and contractor facility TBD (biologicals)**
    - **Testing will include varied chemical challenges for chemical abatement systems and varied biological challenges for biological neutralization systems**
    - **Technologies being tested include adsorptive and oxidation systems for chemical removal - UV, oxidation, & high temperature systems for biological neutralization**





ColPro TRE Program

- **Technology Focus Areas Panels**
  - **Whole ColPro Systems**
    - **Panel Chair resides at the Naval Surface Warfare Center Dahlgren**
    - **Equipment will be tested at Eglin Air Force Base**
    - **Key sub-systems will also be tested in other focus areas as required**
    - **Testing will include pressurization, leakage, purge (airlock), and vapor challenge testing**

High-Level Timeline

Participant Selection Process	Nov 04 – May 05
Performance Testing	
CB Barrier Materials and Quick	
ColPro Erect Technologies	Aug –Sep 05
ColPro Support Equipment	Aug –Sep 05
Whole ColPro Systems	Oct – Dec 05
Air Purification	Jan – Jun 06
Future ColPro TREs	2008 & 2011

Points of Contact

- **Information Sources**
  - **ColPro TRE Website**
    - **www.nswc.navy.mil/wwwDL/B/COLPROTRE**
  - **Federal Business Opportunities**
    - **Solicitation Number: DON-SNOTE-050124-001 (Archived)**
  - **JPEO-CBD website**
    - **www.jpeocbd.osd.mil**

For questions and comments,

email the ColPro TRE team at:

COLPROTRE2@NSWC.NAVY.MIL