U.S. Army
Edgewood Chemical Biological Center
Partnering with Industry

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Edgewood Chemical Biological Center

Specialized Workforce

Total Manpower: 1,428*

Expertise Across Lifecycle

- Deployable Employees:
  - 250 field-deployable scientists, engineers, technicians and operators
- Staff in Personnel Reliability Program (PRP)
  - 454 staff, 63 dual BPRP and CPRP
- Total Scientists and Engineers
  - 621 (43%) Scientists and Engineers

Unique Infrastructure

Chemical Transfer Facility


McNamara Life Sciences Research Facility

Uniquely designed for cutting edge research, toxicological testing, genomics and proteomics, accompanied by a BSL-3 laboratory environment.

Advanced Chemistry Laboratory

Features advanced toxic agent laboratories, environmental chambers and secure work spaces for classified material.

Directorates/Capabilities

Research and Technology

- Science and Technology for Emerging Threats
- Chemistry and Biological Sciences

Engineering

- CBRNE Materiel Acquisition
- CBRNE Analysis and Testing

Program Integration

- CB Agent Handling and Surety
- CB Munitions and Field Operations

Advanced Manpower: 1,428*

*Government Civilians, current as of 1Q FY15

Advanced Degrees

- Bachelor
- Master
- PhD

Total Manpower: 1,428*

*Government Civilians, current as of 1Q FY15
ECBC Provides Lifecycle Support

SAFTEY---SECURITY---SURETY---INFRASTRUCTURE

SSSF

Threat Synthesis

Test

Test/ M&S

Threat & Vulnerability Analysis

Toxicology Estimates

M&S Aerosol Physics

ECBC’s core competencies support solutions throughout the acquisition lifecycle from cradle to grave.
Rapid Prototyping

Capabilities

• Additive Manufacturing
• Advanced Conventional Manufacturing
• 3D Data Capture Capability
• Electronics Lab
• Interactive software and multimedia for training and product support.
• Accessible to all ECBC and partners
Collaborating directly with the Joint IED Defeat Organization (JIEDDO), Product Manager Counter Explosive Hazard (PdM CEH), Program Executive Office for Simulation, Training and Instrumentation (PEO STRI), and Maneuver Support Center of Excellence (MSCoE).

- The first prototype was delivered in 3 months.
- Prototype is transitioning to Program of Record.
- Simulation Software being used in Virtual Clearance Training Suite (VCTS)
- Mobile App being used for Interactive Multi-media Instruction (IMI)
Joint Service Aircrew Mask (JSAM)

- Revolutionary mask design experienced issues during developmental testing.
  - Resulted in millions of dollars of sunken cost in tooling.
  - Additional redesign using traditional manufacturing process could added cost and schedule.

- ECBC collaborated with developer to use rapid prototype-based test assets for mask redesign.
  - Streamlined the design-build-test-redesign cycle.
  - Saved millions of dollars and months of schedule.
TAC BIO

- Deep UV LED technology developed by DARPA

- ECBC R&T- developed the methods to use the LED to detect biologic contaminants

- ECBC Engineering- designed the enclosure for manufacturability and maintainability

- The design was transitioned through patent license agreement to industry for production
Regional Additive Manufacturing Partnership– Maryland (RAMP-MD)

- Consortium of private businesses, educational institutions, and governmental agencies working to:
  - equip and educate an additive manufacturing workforce
  - provide entrepreneurs and manufacturers access to facilities and equipment
  - build a commercial infrastructure to support the manufacturing base.
- Established 2014 by the Maryland General Assembly
- RAMP MD currently holds partnership agreements with 10 industry partners, with more coming on board
- Overarching CRADA provides streamlined access to ECBC capabilities for industry, academia, or other non-federal partners
- Intellectual property protected and project compartmentalized by separate Joint Work Statements (JWS’s)

http://www.rampmd.com/home.html
In Conclusion

Why can’t industry & ECBC form partnerships that breed innovation and deliver “products” quicker?