

## ENGINEERING DIRECTORATE

The Engineering Directorate operates under the auspices of the Edgewood Chemical Biological Center (ECBC). The Directorate has over 600 people with the main offices located on the Edgewood Area of Aberdeen Proving Ground, Md. with additional personnel stationed at Rock Island, Il. Additionally, Engineering Directorate personnel directly support the Joint Project Managers (JPM) under the Joint Program Executive Office for Chemical and Biological Defense (JPEO-CBD), as well as numerous other government organizations.

Our Engineering Directorate drives technology transition from research to engineering development and transitions materiel from engineering development through production, fielding and sustainment. Our highly trained workforce is committed to responsive customer service and is knowledgeable about current and evolving technology and capabilities worldwide. **We use our unique infrastructure, engineering expertise and lifecycle services to solve chemical and biological (CB) defense challenges for the Warfighter and Homeland.**

## MISSION

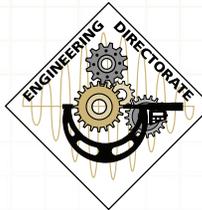
Provide unique infrastructure, engineering expertise and lifecycle services to solve Chemical and Biological challenges for the Warfighter and the Homeland.

## VISION

First Stop for Chemical and Biological Defense Solutions.



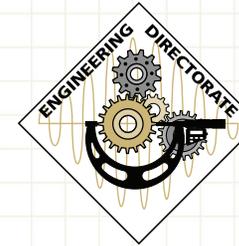
ECBC is the principal research, development and engineering center for non-medical chemical and biological defense. ECBC is an organizational element of the Army's Research, Development and Engineering Command, which reports to the Army Materiel Command. ECBC develops technology in the areas of detection, protection and decontamination and provides support over the entire materiel lifecycle—from basic research through technology development, engineering design, equipment evaluation, product support, sustainment, field operations and disposal.



**ECBC ENGINEERING**  
Design→Build→Test→Support

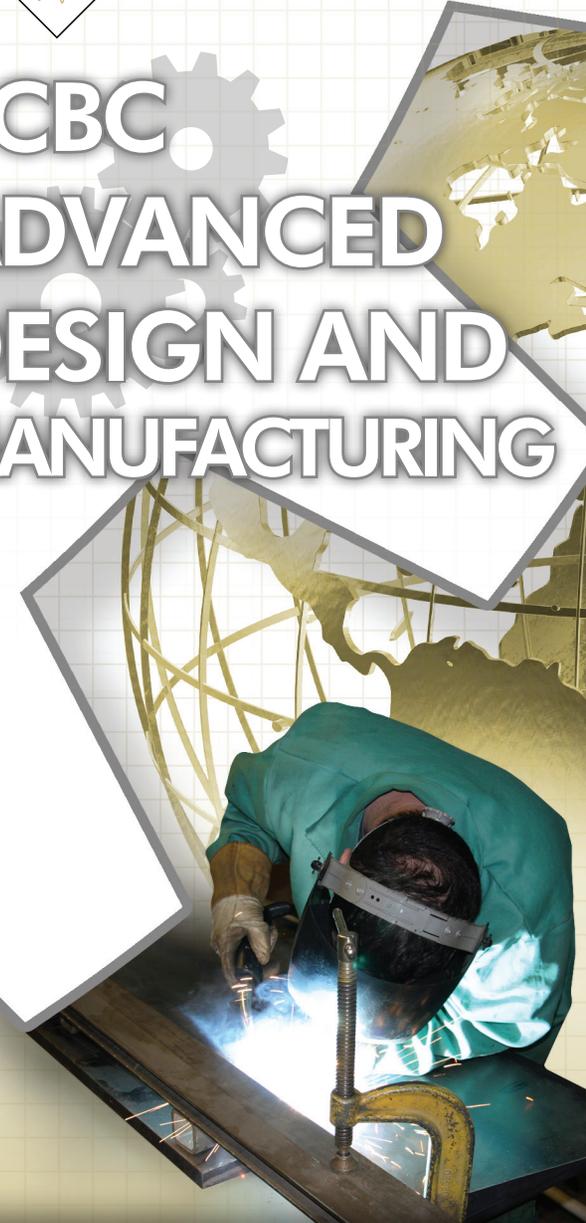
The Edgewood Chemical Biological Center Engineering Directorate is here and available to assist you with Design, Build, Test and Support Solutions for Chemical and Biological Defense Needs.

Please call 410.436.5600 or e-mail [ecbc.engineering.directorate@conus.army.mil](mailto:ecbc.engineering.directorate@conus.army.mil)



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# ECBC ADVANCED DESIGN AND MANUFACTURING



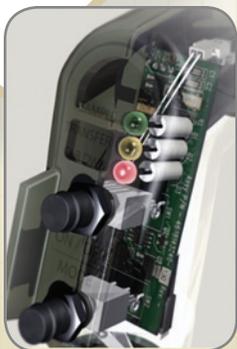


### MISSION

Use integrated design, engineering and manufacturing to provide the right technology to the right place, at the right time.

The Edgewood Chemical Biological Center (ECBC) Product Development Facility (PDF), Advanced Design and Manufacturing (ADM) is a division of the Engineering Directorate that provides design and manufacturing services using state-of-the-art equipment following Rapid Development Processes. ADM maintains state-of-the-art technologies and qualified personnel to rapidly execute complex projects covering all aspects of interdisciplinary design and development specializing in Chemical, Biological, Radiological, Nuclear, Explosive (CBRNe PAO) requirements. Fully integrated with extensive manufacturing capabilities, ADM provides rapid response lifecycle solutions. ADM's concept-to-product process allows efficient optimization of design, performance, manufacturability, cost and schedule. The ADM division of ECBC, with a staff of over 140 technical specialists, is organized into functional Branches surrounding its core capabilities. The core competencies are listed below, including a more detailed description of each area.

### ENGINEERING DESIGN AND ANALYSIS:



This interdisciplinary group combines expertise in mechanical engineering, physical science and computational analysis. The focus of this group is product development from initial concept through low-rate production, with an emphasis on sound engineering principles and solution optimization.

### ELECTRONIC DESIGN AND INTEGRATION:



The Electronic Design and Integration Branch combines expertise in electrical/electronics engineering, and computer science to develop custom designs and prototypes including electronic circuit boards, electronic circuit analysis/simulation, software development, integration of sensors and the rapid development of electro-mechanical prototype systems.

### RAPID TECHNOLOGIES LABORATORY:



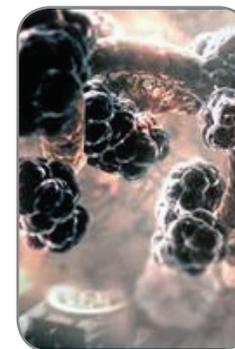
The Rapid Technologies Laboratory is a state-of-the-art facility equipped with an array of high-end Additive Manufacturing and 3D Data Capture capabilities. The suite of five labs is home to nine different prototyping machines, non-contact laser scanners, a touch probe portable coordinate measuring machine, and a variety of supporting software packages. The facility was developed to support ADM's rapid product development and quick turn-around design solutions by providing the ability to produce functional parts within hours of design concept.

### FABRICATION AND INTEGRATION FACILITIES:



The Engineering Directorate's 90,000 square feet of manufacturing and high bay integration facilities are staffed with highly skilled craftsman and manufacturing specialists, operating versatile facilities for the prototyping of complex systems and rapid production of mission critical items. Fully integrated with design and engineering capabilities, this facility enables the Directorate to rapidly design, prototype and produce a wide variety of items.

### CONCEPTUAL MODELING AND ANIMATION:



The Conceptual Modeling and Animation Branch provides the ability to accurately represent a customer's vision by creating specific visual depictions. Emphasis is placed on the creation of precise virtual models, constructive models, and realistic animations. These products are used for concept development, command briefing, interactive training aids, and informative multimedia.

*Engineering's ADM Division combines world class engineering, state-of-the-art manufacturing, and logistics support to provide an unbeatable comprehensive capability from concept through sustainment with solutions that are **better, cheaper, and faster.***