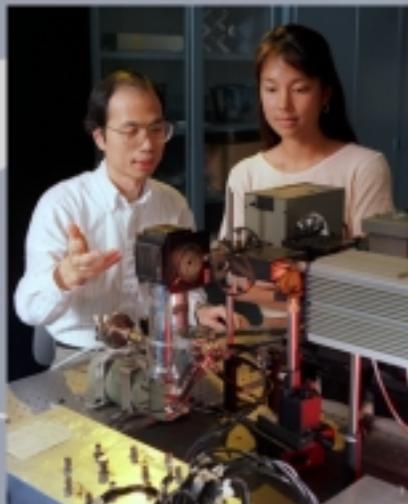
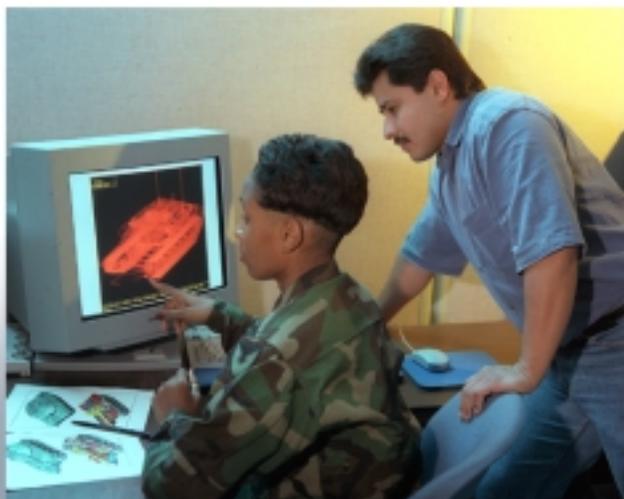
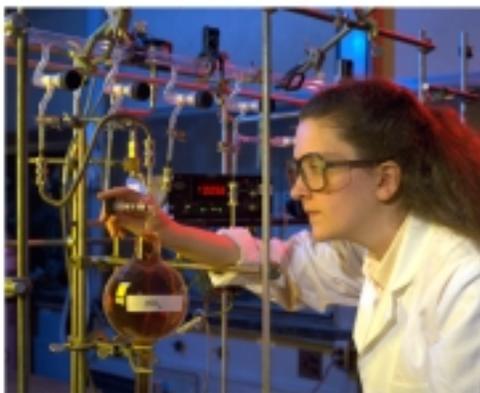
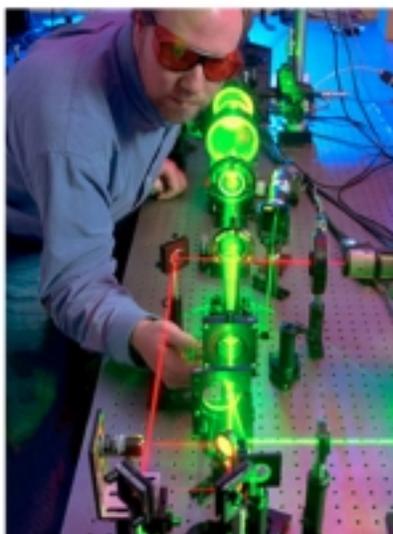


U. S. ARMY RESEARCH LABORATORY

Strategic Plan

SEPTEMBER 2002



Message from the Director

The senior leadership of the U.S. Army Research Laboratory (ARL) has developed this strategy to better serve the Soldier, the Army, and the Nation through increased scientific, technical, and analytic excellence and to provide a challenging, rewarding, and stable environment for all members of the ARL Team. The Army relies on the ARL Team, as an integral partner in Army Transformation, to provide the science and technology foundation for the development of full spectrum operational capabilities. We must marshal internal and external assets to fulfill the science and technology requirements of warfighters. Equally important, we must assist the Army in understanding the implications of technology on doctrine and in defining future needs and opportunities. Finally, we must analyze the effectiveness of proposed materiel solutions, assuring that survivability, lethality, and the human dimension are not slighted in the rush to field the latest generation of technology.

The purpose of this strategy is to focus our activities in a coherent and unified direction by recognizing a set of underlying principles and establishing an overall framework for management decisions in both a proactive as well as a reactive sense. Implementation plans will be revised or developed to define specific courses of action that will enable us to achieve the goals and objectives contained herein.

This strategy is a living document that will evolve as external and internal circumstances dictate. In implementing the strategy, the focus must always remain consistent with the ARL corporate philosophy: foster, maintain, protect, and perfect the historically proven organizational values and guiding principles of ARL:

- **Commitment to mission execution for the Soldiers of today and tomorrow**
- **Technical integrity and excellence**
- **Customer satisfaction**
- **Care for the ARL Family**
- **Responsiveness and flexibility**



Robert W. Whalin, Ph.D., PE
Director
U.S. Army Research Laboratory

ARL Mission

*Provide innovative science, technology,
and analyses to enable full-spectrum
operations.*

Introduction

ARL's mission is to "provide innovative science, technology, and analyses to enable full spectrum operations." Simply stated this means that ARL, as the Army's corporate laboratory, must provide to its customers and partners the underpinnings necessary for development and fielding of the capabilities our Soldiers require for mission execution.

The diversity and complexity of the organizations and requirements relevant to ARL's research and analysis programs (near, mid, and far term) present unique management and scientific challenges. ARL's endeavors must be aligned with the Army Vision; the Army Plan; Program Objective Memoranda guidance; Defense Planning Guidance; Department of the Army approved Defense and Army Science Board results; future capability requirements developed by TRADOC; and technology needs of the RDECs, NSC, ECBC, STRICOM, and the acquisition executives (PEOs/PMs) to whom ARL transitions technologies. Since its inception ten years ago, ARL has continued development of innovations relevant to planning and evaluation processes applicable to complex research and analysis organizations and has implemented a comprehensive business planning process specifically tuned to our unique environment.

The ARL business planning process and performance evaluation construct have been widely disseminated and have received positive comments from both domestic and international organizations. The business construct consists of four components: a strategic plan, which defines the "big picture" for the laboratory with a five- to ten-year time horizon; a long-range plan, which resources the "big picture" over the Program Objective Memorandum (POM) period; an annual performance plan, which delineates the goals and objectives for the year of execution; and an annual performance report, which compares the objectives defined at the beginning of the fiscal year with the actual results attained at the end of the fiscal year.

This document provides an updated "big picture" strategy and sets goals and objectives that are the basis for the development and execution of implementing strategies and plans for each ARL element. Corporate strategic goals and objectives for ARL are grouped in four areas: Workforce, Technical Programs, Technical Infrastructure, and Business Processes and Administration.

Strategic Goals and Objectives

Workforce

An organization is only as strong as the summation of the skills, expertise, and dedication of its workforce. During the first ten years of its existence, the ARL Team has shaped the organization to be a widely recognized key provider of science, technology, and analyses critical to Army Transformation. ARL's dedicated and innovative team members possess the requisite expertise and ARL has established a work environment with the characteristics required to attract, retain, and motivate highly qualified personnel. Great strides have been made.

ARL must now continue to enhance the skills and expertise of its team members to keep pace not just with scientific and engineering advances as we strive to ensure the Army's scientific and technological advantage, but also with advances and changes in the Army's business processes and practices. The goal is a preeminent, multi-disciplinary, adaptive, and learning team capable of meeting the challenges associated with the continuing evolution of the Soldier's technology requirements. To meet this goal ARL will:

- Emphasize recruitment of a diverse, high-quality ARL Team
- Provide continuous education, professional development, and training opportunities for all members of the ARL Team
- Emphasize leadership and executive development
- Maintain growth in the percentage of technical staff holding advanced degrees
- Encourage mentoring
- Continue acknowledgement and reward of individual and group excellence by ARL team members in all aspects of ARL operations



Technical Programs

Scientific and engineering advances are occurring at a pace unparalleled in history and the future Soldier will have an expectation of operating with a technological overmatch. The Army expects ARL as its corporate laboratory to: generate scientific discoveries and technological advances in areas which the private sector and other laboratories have little robust capability; gather the best science and technology from academia, industry, other Service laboratories, other government laboratories, and the international research community; and then rapidly mature the technologies for transition principally to the RDECs, but also to other partners in Army Transformation (PEOs/PMs, TRADOC Battle Labs, other Services, and the private sector). While ARL has been successful in overcoming the challenges associated with meeting the Army's basic and applied research needs, the ARL Team must now set as a goal the evolution of its programs to ensure that it continues to provide technologies that revolutionize the capabilities of America's Soldiers. To achieve this goal ARL will:

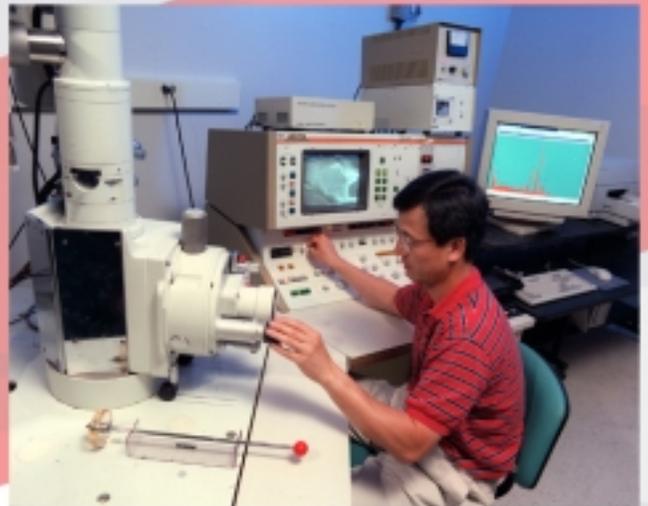


- Plan integrated basic and applied research programs in response to evolving Army requirements
- Expand the Nation's basic science knowledge base through execution of intra- and extra-mural basic research
- Provide solutions to critical Army technology challenges in weapons and materials, vehicle technology, human factors, sensors and electron devices, computational and information sciences, modeling and simulation, and advanced collaborative environments
- Develop and implement technologies enabling the next generation of analysis techniques, methodologies, and models; perform integrated survivability and lethality analyses of Army systems and technologies across the full spectrum of battlefield threats and environments
- Increase battlefield effectiveness of materiel systems through analysis and engineering of the Soldier dimension
- Provide timely scientific and technical expertise for the Army, DoD, other federal agencies, and homeland defense

Technical Infrastructure

A robust technical infrastructure provides the environment necessary for development of technologies critical to Warfighter capabilities resident in the Objective Force. The breadth and scope of ARL's technical mission unique infrastructure are unparalleled. The pace of scientific and engineering advancement, however, mandates not only the continuous assessment, monitoring, upgrade, or acquisition of an internal technical infrastructure, but also requires access to external technical infrastructures to ensure that ARL's scientists and engineers have access to the technical environment necessary to execute research endeavors. ARL will:

- Exploit national and international research infrastructure as appropriate
- Maintain and enhance ARL's national leadership as the best-equipped experimental laboratory for mission unique scientific and technology applications
- Enhance ARL's communications and computational infrastructure to exploit the rapidly expanding capabilities of high performance computing, modeling, simulation, and scientific and engineering visualization



Business Processes and Administration

The ARL business construct has evolved since the inception of ARL ten years ago. Current business processes and practices have enabled the ARL Team to successfully develop and transition technologies and provide analyses and technical assistance to its customers. The evolution of the business construct in response to the myriad of changes resulting from Army Transformation must continue. A major component will be streamlining processes and identifying means and mechanisms that enable ARL to be more agile in exploiting scientific or technological opportunities and rapidly transitioning technologies to ARL's partners and customers. ARL's business process and administration objectives include continuous, focused efforts to:

- Maintain and strengthen strategic relationships and partnerships with TRADOC (representing the soldier), PEOs/PM, the RDECs, ATEC, DARPA, and other ARL partners
- Leverage extramural national and international expertise through aggressive management and execution of single investigator research, multi-disciplinary research initiatives, university-affiliated research centers, academic centers of excellence, cooperative agreements, contracts, and small business innovative research programs
- Reengineer business processes (using principles such as LEAN) to achieve functional, horizontal, and vertical integration and maximize effectiveness through automation, simplified procedures, and streamlining
- Maintain effective lines of communications within the ARL Team



Conclusion

The Army has embarked on a visionary transformation journey. The Soldiers of today and tomorrow are depending on us, the Army's corporate laboratory, to deliver the scientific discoveries, technological advances, and analyses that provide Warfighters with the capabilities with which to execute full-spectrum operations. That is their expectation. The ARL Team must meet their expectations by delivering the promise contained in the motto embedded on our unit crest:

“Technology to Win”

