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2023 **ARLIS**
ANNUAL REPORT

UNIVERSITY OF
MARYLAND

THE
HUMAN DOMAIN

✕ **COGNITION** HAPPENS

✕ **ACTIONS** ARE TAKEN

✕ **VALUES, INTERESTS** AND **BELIEFS** ARE DISPLAYED

✕ **PEOPLE, TECHNOLOGY AND INFORMATION** INTERSECT

✕ **ADVERSARIES** EXERCISE **INFLUENCE**

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UNIVERSITY OF MARYLAND

The University of Maryland, College Park is the state's flagship university and one of the nation's preeminent public research universities. Located in the Washington Metropolitan Area, UMD has strategic research partnerships with U.S. federal agencies. In the immediate neighborhood are numerous government agencies devoted to scientific research, including the Army Research Laboratory, the U.S. Army's primary facility for scientific research; NASA Goddard Space Flight Center; the National Institute of Standards and Technology; the Food and Drug Administration; National Oceanic and Atmospheric Administration; and the National Security Agency.

These strategic research partnerships with the federal government offer unique opportunities for students and intelligence community professionals to work alongside ARLIS researchers to create new academies and foster internship programs.

A TRUSTED AGENT

Established in 2018, the University of Maryland Applied Research Laboratory for Intelligence and Security's primary sponsor is the Office of the Under Secretary of Defense for Intelligence and Security. OUSD (I&S) created ARLIS to serve as a strategic asset focused on challenges in the Human Domain.

ARLIS conducts classified and unclassified research and serves the government as an independent, objective trusted agent. ARLIS provides rigorously obtained scientific insights and socio-technical solutions to hard security and intelligence challenges, helping defense and intelligence mission owners respond to their needs effectively.

APPLIED RESEARCH LAB FOR
INTELLIGENCE
AND SECURITY

During 2023, it was nearly impossible not to hear or read something in the news about artificial intelligence. In fact, with the rise of generative AI and large language models, we could almost call 2023 the year of artificial intelligence. It was the year that AI seemed to finally break away from technology publications and into mainstream media coverage about its pros and cons, of which there are many.

I can tell you that we at ARLIS recognize the unique strengths the harmonious integration of AI and human intelligence bring to the table. It is clear there is a symbiotic relationship between humans and machines that has become increasingly crucial. In the dynamic realm of intelligence and security, the importance of humans in the loop cannot be overstated. ARLIS understands that the true potential of AI lies not in replacing human capabilities but in amplifying our collective effectiveness.

One of our more notable projects in 2023 focused on the declassification process for government documents and is identifying applications of AI to streamline portions of the process. We are making significant strides in supporting the government's efforts to automate and expedite the declassification of sensitive information to not only enhance efficiency, but also ensure transparency and accountability.

In 2023, we dove into quantum computing to support the government's vision to transform the way the Department of Defense uses quantum computing to refine and expand defense applications across the community. The convergence of quantum computing with our research staff will open new avenues for solving complex national security problems. In collaboration with government partners, ARLIS is also actively engaged in training insider threat professionals and researching new ways to conduct credibility assessments. Finally, one of our key focus areas continues in cognitive security, where we have developed an interesting approach to safeguard against vulnerability and emerging threats in the information landscape.

In closing, I would like to recognize Dr. William Regli, our founding executive director, and extend my sincere gratitude for his vision and leadership, without which we would not be here today. Thank you also to the Office of the Under Secretary of Defense for Intelligence and Security (OUSD I&S), our government sponsors, and the University of Maryland for your continuing support. To the dedicated employees of ARLIS, your commitment to excellence and collaborative spirit are the driving forces behind our successes. Thank you for your continued trust and partnership.

Dr. Craig Lawrence
Interim Executive Director
ARLIS
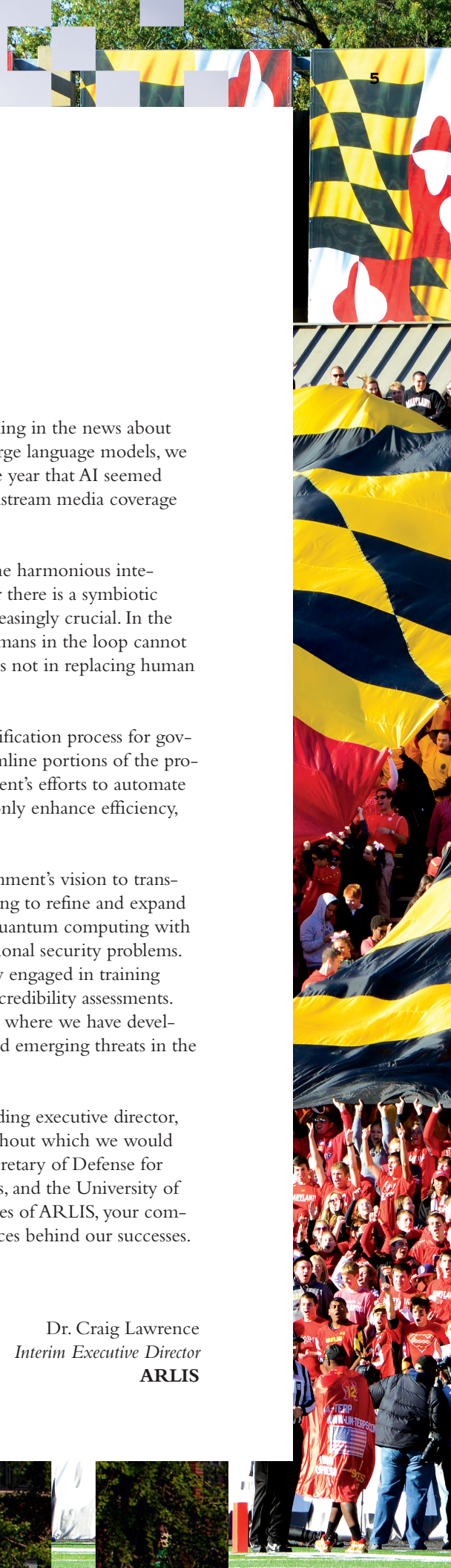
VISION

Support Defense Intelligence and Security Enterprise goals with an organization that maintains world-class Science and Technology (S&T) Core Competencies, establishes trustworthy research & engineering and testing & evaluation capabilities, and performs education and outreach while maintaining excellence in its operating environment, management, resourcing, and facilities.

CORE MISSION

We enable national security information advantage and decision superiority by developing scientific foundations and engineering sociotechnical capabilities in the Human Domain.

VALUES

HUMANS FIRST

People are at the center for all we do. We tackle complex, human-centered national security problems. We value the people focused on these challenges and who put team first.

MISSION ALWAYS

The mission creates urgency in what we do. We focus on mission impact and help those who serve us to better preserve and defend our democracy.

TRUSTWORTHY TOGETHER

Our mission puts us in a position demanding trust. We hold ourselves accountable to the highest research and ethical standards. We treat each other with respect.

STRATEGIC GOALS

ARLIS's strategic goals align with the national, defense and UMD strategies:

- *Improve Decision Making for National Security:* Helping the human decision-maker succeed in the face of increasing socio-technical complexity.
- *Manage Risks to the National Security Environment:* Managing risks to technology, supply chains, trusted insiders through application of social science and engineering.
- *Enhance the Workforce:* Growing the cleared technical workforce to meet future government needs.
- *Build ARLIS:* Improving our organization, business practices and relationships with stakeholders.
- *Enhance the Research and Innovation Ecosystem:* Foster national security innovation, job creation and technology transition for important national security endeavors.

PEOPLE & DEMOGRAPHICS

The ARLIS research team draws from a wide range of expertise and disciplines representing more than 40 different degrees in the areas of social and behavioral sciences, political and economic sciences, languages and linguistics, systems engineering and computer science. With more than 240 full- and part-time employees, the ARLIS team continues to grow in the areas of human and social systems; intelligent human machine systems; data science, advanced computation and emerging technologies; and software and systems engineering. These technical experts work with ARLIS's many former and current defense security and intelligence operators and policymakers to solve difficult national security problems, resulting in quality research that is relevant both to academia and our operational partners.

ARLIS also draws on the expertise of former senior U.S. government leaders who engage with government sponsors, end-users, and researchers to support ARLIS research. Because they are highly accomplished and well-respected with their communities, they help connect researchers to operators.

Given that they have extensive practical experience working government mission sets, this group of "Applieds" support ARLIS daily in meeting the requirements the DoD has for all UARCs. They have a comprehensive knowledge of sponsor requirements and problems, broad corporate knowledge and current operational experience, all points mandated in guidance from the DoD. The Applied team opens doors for ARLIS research by helping us understand the true needs of government sponsors, helping technology and insights transfer back to the government and developing the workforce.

ARLIS
IN CONTEXT

The Department of Defense began establishing university–affiliated research centers in 1942 in an effort to mobilize the country's science and engineering expertise. The purpose of these centers is to maintain essential research, development and engineering in the public interest and in support of national security.
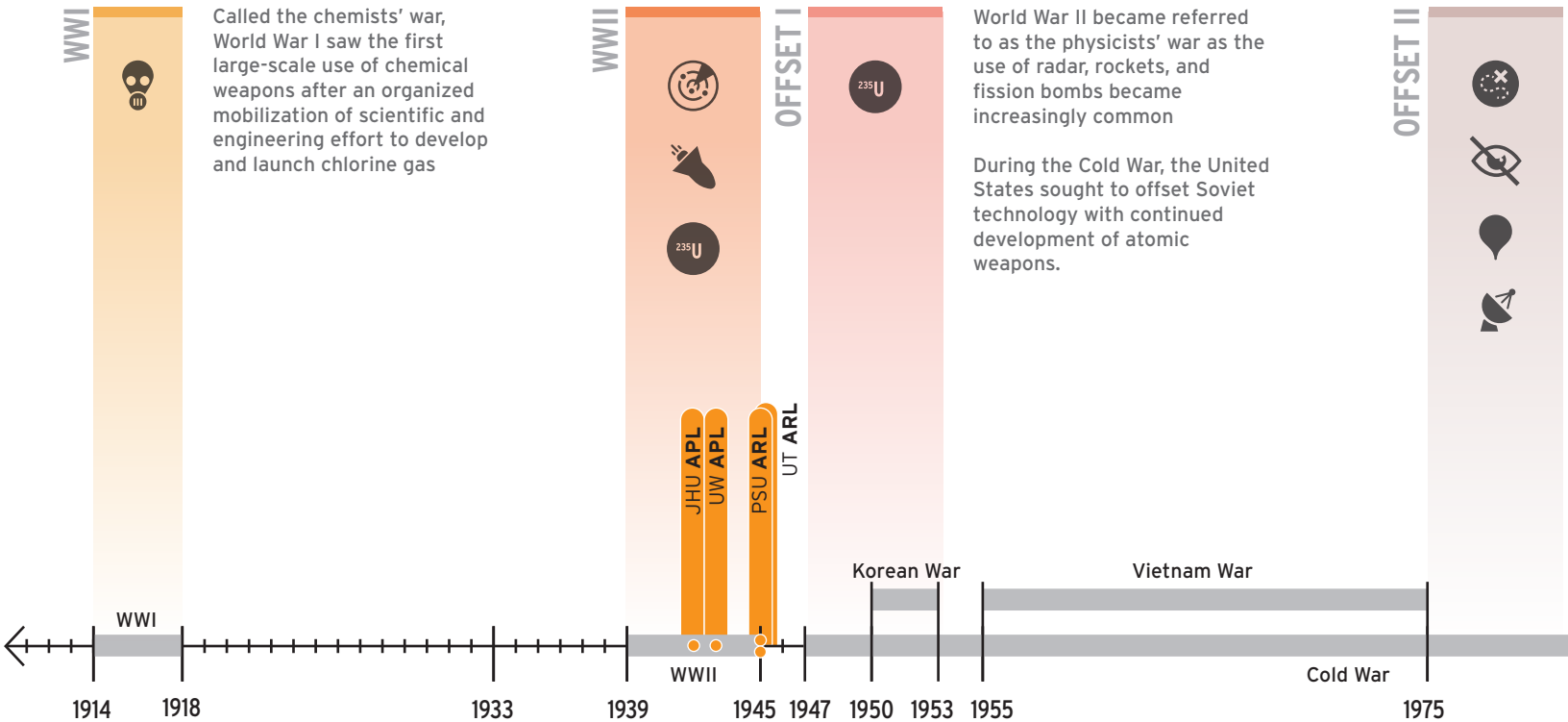
WWI

Called the chemists' war, World War I saw the first large-scale use of chemical weapons after an organized mobilization of scientific and engineering effort to develop and launch chlorine gas

WWII

OFFSET I

World War II became referred to as the physicists' war as the use of radar, rockets, and fission bombs became increasingly common

During the Cold War, the United States sought to offset Soviet technology with continued development of atomic weapons.

OFFSET II

JHU **APL**
UW **APL**
PSU **ARL**
UT **ARL**

Korean War

Vietnam War

WWI

WWII

Cold War

1914   1918   1933   1939   1945   1947   1950   1953   1955   1975

MDA: Missile Defense Agency
OSD: Office of the Secretary of Defense
USSTRATCOM: U.S. Strategic Command
NSA: National Security Agency

- Johns Hopkins University: Applied Physics Laboratory
- University of Washington: Applied Physics Laboratory
- Pennsylvania State University: Applied Research Laboratory
- University of Texas at Austin: Applied Research Laboratories

- Utah State University: Space Dynamics Laboratory
- Georgia Institute of Technology: Georgia Tech Research Institute
- University of Southern California: Institute for Creative Technologies
- Massachusetts Institute of Technology: Institute for Soldier Nanotechnologies

ARLIS IN CONTEXT

These UARCs are sponsored for applied research supporting warfighting domains on land, in the air, in sea, cyber and in space. U.S. dominance can no longer be taken for granted in these warfighting domains. Adversaries, unsophisticated militaries and non–state actors are seeking and acquiring destructive technology and weapons that were once the province of advanced militaries.

In the wake of 14 other UARC establishments ARLIS looks to leverage core capabilities in human and social systems, intelligent human–machine systems, and advanced computing and emerging technologies for applied research that addresses profound socio-technical challenges including: insider risk, supply chain security, human–machine operationalization of artificial intelligence, cognitive security, foreign malign influence and the utilization of emerging technologies like quantum.
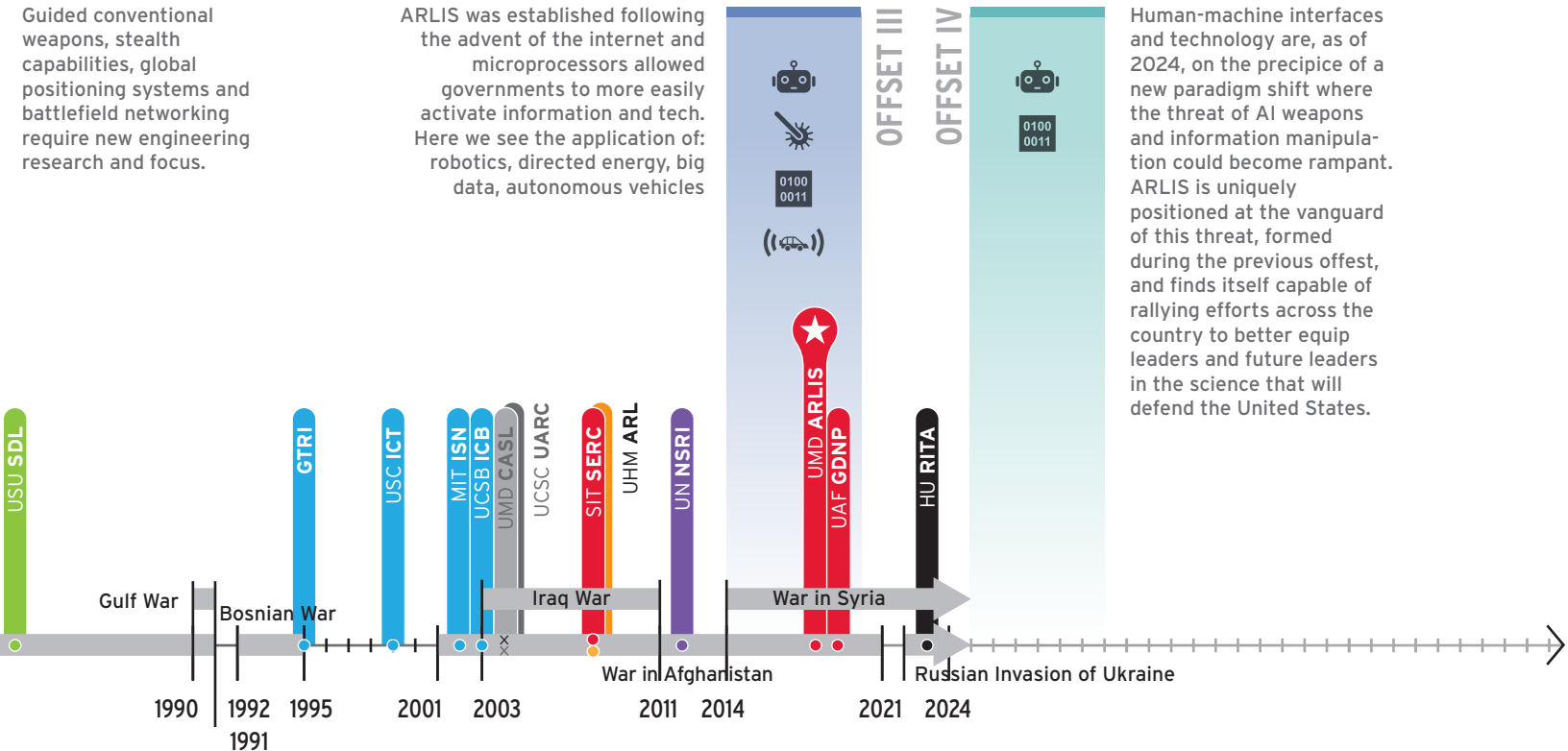
ARLIS was created as a highly multi-disciplinary UARC focused on how humans and machines working together can provide socio-technical solutions critical to national security and democracy.

SPONSORS
- Air Force
- Army
- MDA
- Navy
- OSD
- USSTRATCOM
- NASA (inactive)
- NSA (inactive)

PARADIGM
- WWI
- WWII
- Offset I
- Offset II
- Offset III
- Offset IV

Guided conventional weapons, stealth capabilities, global positioning systems and battlefield networking require new engineering research and focus.

ARLIS was established following the advent of the internet and microprocessors allowed governments to more easily activate information and tech. Here we see the application of: robotics, directed energy, big data, autonomous vehicles

OFFSET III

OFFSET IV

Human-machine interfaces and technology are, as of 2024, on the precipice of a new paradigm shift where the threat of AI weapons and information manipulation could become rampant. ARLIS is uniquely positioned at the vanguard of this threat, formed during the previous offest, and finds itself capable of rallying efforts across the country to better equip leaders and future leaders in the science that will defend the United States.

USU **SDL** · GTRI · USC **ICT** · MIT **ISN** · UCSB **ICB** · UMD **CASL** · UCSC **UARC** · SIT **SERC** · UHM **ARL** · UN **NSRI** · UMD **ARLIS** · UAF **GDNP** · HU **RITA**

Gulf War · Bosnian War · Iraq War · War in Syria · War in Afghanistan · Russian Invasion of Ukraine

1990 · 1991 · 1992 · 1995 · 2001 · 2003 · 2011 · 2014 · 2021 · 2024

x University of Maryland, College Park: Center for Advanced Study of Language
x University of California at Santa Barbara: Institute for Collaborative Biotechnologies
● Stevens Institute of Technology: Systems Engineering Research Center
● University of Hawaii at Mānoa: Applied Research Laboratory

● University of Nebraska: National Strategic Research Institute
● University of Maryland, College Park: Applied Research Laboratory for Intelligence and Security
● University of Alaska Fairbanks: Geophysical Institute
● Howard University: Research Institute for Tactical Autonomy (RITA)

✕

CORE CAPABILITIES

ARLIS RESEARCH IS ALIGNED ACCORDING TO THREE CORE CAPABILITIES THAT ARE TAPPED TO SUPPORT FOUR SPECIFIC MISSION AREAS.

HUMAN AND SOCIAL SYSTEMS

Recruits, maintains, and develops expertise in foreign languages and dialects; linguistics; disciplines relevant to the acquisition and practice of analysis and critical thinking such as psychology, cognitive science, neuroscience, computer science, organizational science, political science, anthropology, criminology, economics, education, philosophy, and second language acquisition. It also includes disciplines relevant to the manipulation, use and sharing of information of varying quantities and diverse forms, such as artificial intelligence, knowledge acquisition, knowledge representation and reasoning, data mining, and virtual reality/augmented reality.

ADVANCED COMPUTING & EMERGING TECHNOLOGY

Supports the human-focused mission of the intelligence community. This core capability researches, develops, and tests use-cases focused on the Human Domain in the areas of computational and data infrastructures; application and mission testbeds; emerging technologies for acquiring, disseminating, processing, or communicating information; and relevant disciplines such as engineering, mathematics, operations research, integrated systems, and quantum information sciences.

INTELLIGENT HUMAN-MACHINE SYSTEMS

Research includes developing and prototyping tools and methodologies that leverage technology to automate and augment intelligence and security workflows, and optimally support the humans that are ultimately responsible. A complementary line of research involves developing tools and methodologies to evaluate the effectiveness of technology in terms of its operational impact on missions. Finally, another line of research focuses on assessments and learning, especially around improving successful technology adoption.

MISSION AREAS

INSIDER RISK

Modeling and Mitigating Insider Risk mission area assists sponsors to deliver and sustain uncompromisable workforces and workforce environments for government, industry, and academia .

ARLIS supports the identification of insider risks through a robust validated process for vetting a trusted workforce broadly. ARLIS grounds its scientific approach in operational context and mission-driven activities. It also provides knowledge and methods for testing, evaluation, verification, and validation of existing and nascent technologies that claim to address some dimension of insider threats.

SUPPLY CHAIN

The Acquisition and Industrial Security mission area helps government sponsors protect critical U.S. technology by creating actionable recommendations to improve supply chain resilience and trustworthiness, including identifying what technologies are critical to protect.

ARLIS supports the uncompromised delivery and sustainment of systems, capabilities and workforces critical to the Defense Intelligence and Security Enterprise by conducting applied research, working with sponsors to mitigate risks and threats to critical supply chains and platforms, and protects the foundational technologies operating these socio-technical systems.

TECHNOLOGY ENGAGEMENT

The Artificial Intelligence, Autonomy, and Augmentation mission area supports the insertion of AAA technologies into operational workflows for the warfighter by testing and evaluating relevant solutions that can be trusted, reliable and safe. ARLIS's approach ensures advanced technologies will augment human decision-making to support the mission and national security. ARLIS develops and expands expertise in the technical areas of human-computer interactions, human factors, and related topics. Leveraging the University of Maryland, which is a leading center of human-computer interactions research, ARLIS reimagines how the security and intelligence community can use AAA research for its mission.

COGNITIVE SECURITY

The Cognitive Security mission area develops capabilities for online and offline influence campaigns in the information environment, and for protecting against malign influence by foreign adversaries. ARLIS supports strategic mastery of the information environment, particularly online and offline influence at scales ranging from individuals to large societies, by addressing the unique challenges of Operations in the Information Environment. ARLIS takes an interdisciplinary approach to conduct targeted and overarching research on a range of OIE activities using computational social science, social media, language, culture, modeling, simulation and wargaming.

INFORMATION COMPETITION SIMULATOR

Malicious actors threaten democracies through information warfare or influence operations at a scope and scale never before imagined; current and former secretaries of defense agree it's only getting worse. DoD has responded by investing in cybersecurity and improving interagency coordination and training. These are partial solutions that do not address the human factor.

ARLIS is developing an Information Competition Simulator to address the threat posed by bad actors engaging in information warfare and influence operations against democracies. The simulator combines technology and social science to create a training environment for influence operations in the Human Domain.

ARLIS creates digital representations of specific populations with human-like behaviors, information consumption habits, and social interaction patterns. Real-world users can interact with these simulated populations, bringing their own biases and behaviors into the simulation. Simulated populations can consist of tens of thousands of members who interact with each other, consume live information from social and traditional media, and react to physical and cyber actions, mirroring real-world dynamics.

Simulating both the cognitive and physical behavior of populations has not been possible until now. ARLIS researchers expect the ICS to support offensive and defensive operations in the information environment.

MEASURING SOCIAL MEDIA SHARING WITH EMOTIONS

Social media evokes a spectrum of emotions from anger to love, all of which could be quantified except one: the feeling experienced after seeing something cute. ARLIS researchers found a way to measure cute content.

As part of the Emotions in Social Media project, funded by the Minerva Research Initiative and the Office of Naval Research, the first part of the project studied various emotions' impact on content sharing in Polish and Lithuanian socio-political social media, including nuanced emotions like cute/kama muta, defined as

heart-warming. Native Polish speakers annotated tweets for emotional reactions. These objective measurements were used to further investigate the role of cuteness in social media engagement and sharing behaviors using these newly developed tools.

The second part of the project focused on the impact of various individual emotions expressed in social media posts and their likelihood to be shared. In this research, independent judges analyzed more than 4,000 posts on Facebook from Poland and Lithuania, evaluating more than 20 different emotions expressed in these posts. The study aimed to understand the relationship between these emotions and the frequency of post sharing.

Specific emotions such as anger, contempt, love, admiration, cute/kama muta, wonder, pride, sadness, and amusement had a significant positive impact on post sharing. The study introduced a new research method to analyze emotions in social media posts, which contributed to a better understanding of the relationship between emotions and sharing behavior, and that method challenged and expanded upon existing theories of emotion, uncovering insights that might not have been discovered using older theories.

This study shed light on the complex relationship between emotions and social media sharing and offered valuable insights for understanding user behavior on social platforms. It suggested that specific emotions play a crucial role in determining whether a post will be shared, and this understanding can have implications for social media strategies and content creation.

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In 1998, John W. Carlin, the archivist of the United States, wrote about "electronic records challenges" and the steps being taken to "assure the public that valuable records in electronic forms will be preserved and made accessible."

Twenty-five years ago, it was already apparent there were mounting quantities of electronic records when Carlin published his thoughts in the January issue of "The Record," from the National Archives and Records Administration.
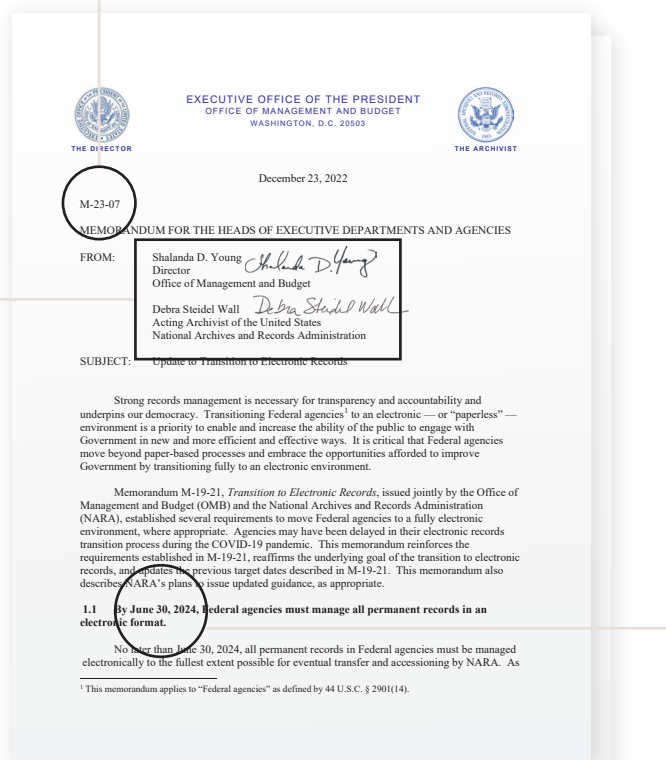
IS CHANGING

ISSUE
MEMORANDUM M-23-07

EFFECTIVE
JUNE 30, 2024

EXECUTION
THE OFFICE OF MANAGEMENT AND BUDGET (OMB)

THE NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

THE DIRECTOR

THE ARCHIVIST

December 23, 2022

M-23-07

MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

FROM: Shalanda D. Young
          Director
          Office of Management and Budget

          Debra Steidel Wall
          Acting Archivist of the United States
          National Archives and Records Administration

SUBJECT: Update to Transition to Electronic Records

Strong records management is necessary for transparency and accountability and underpins our democracy. Transitioning Federal agencies[1] to an electronic — or "paperless" — environment is a priority to enable and increase the ability of the public to engage with Government in new and more efficient and effective ways. It is critical that Federal agencies move beyond paper-based processes and embrace the opportunities afforded to improve Government by transitioning fully to an electronic environment.

Memorandum M-19-21, *Transition to Electronic Records*, issued jointly by the Office of Management and Budget (OMB) and the National Archives and Records Administration (NARA), established several requirements to move Federal agencies to a fully electronic environment, where appropriate. Agencies may have been delayed in their electronic records transition process during the COVID-19 pandemic. This memorandum reinforces the requirements established in M-19-21, reaffirms the underlying goal of the transition to electronic records, and updates the previous target dates described in M-19-21. This memorandum also describes NARA's plans to issue updated guidance, as appropriate.

1.1 **By June 30, 2024, Federal agencies must manage all permanent records in an electronic format.**

No later than June 30, 2024, all permanent records in Federal agencies must be managed electronically to the fullest extent possible for eventual transfer and accessioning by NARA. As

[1] This memorandum applies to "Federal agencies" as defined by 44 U.S.C. § 2901(14).

THE SCALE

THE NEW ELECTRONIC RECORDS CHALLENGE

Transferring existing hard copies to digital formats – while also reviewing them for classified information, examining new digital records for classification and analyzing 25-year-old records eligible for routine review – is creating a new "electronic records challenge" that is compounded every day as documents outnumber reviewers.

For example, records created during the Clinton administration, when Carlin served as archivist, are under review now. President Clinton's presidential library alone includes 4 terabytes of data, or about 350 million sheets of paper. In three years, 80 terabytes from former President George W. Bush's library are up for review followed by 250 terabytes from former President Barack Obama's library.

These are only presidential records. The scale of classified records is unknown.

THE ROLE OF ARLIS

With the challenge comes an opportunity to modernize. The digitization effort is part of a larger initiative to better manage and protect classified information. Designating information as classified or unclassified is currently a laborious manual process, requiring a page-by-page review that will be unsustainable as previously classified information comes up for review and new documents are created.

Over the past year, ARLIS RISC interns tested technologies and created a framework to consolidate and aid aligning more than 1,700 declassification and security classification guidelines across agencies. The project is continuing into the new year, as researchers aim to balance the challenge of classifying a large volume of information with the need for more efficient declassification processes. The RISC team demonstrated how state-of-the-art tools, such as artificial intelligence, can be used to enhance declassification processes when implemented correctly. ARLIS continues to collaborate with OUSD (I&S) to develop transformation strategies for modernizing the declassification process.

When complete, technology augmentation will significantly amplify the ability of individuals to examine documents.

QUANTUM

College Park has become a quantum hub over the past five years, as quantum information science harnesses the principles of quantum mechanics to create advanced computers, sensors, and communication devices that will be capable of performing currently impossible tasks.

Boasting more than 200 quantum scientists and engineers, the University of Maryland has become a prominent center for quantum research and development. Recently, the university celebrated the opening of the National Quantum Laboratory. This new quantum computing facility offers access to one of the world's most powerful quantum computers, allowing experts from around the world to tackle complex challenges.

The team at ARLIS is anticipating significant growth of quantum computing across several industries and government organizations. Their specific goal is to revolutionize the government's use of quantum computing to enhance national security applications. They are currently working to establish a government-controlled quantum computing facility as a testbed for studying novel algorithms and examining cybersecurity implications of this emerging technology. Using their expertise in cryptographic modernization, data science, language analysis, and quantum information technologies, the ARLIS team aims to advance the government's understanding of how quantum information science relates to national security.

> **QUANTUM CAN BE FOR US WHAT SILICON WAS FOR SILICON VALLEY. THIS IS THAT BIG PLAY FOR THE STATE OF MARYLAND AND THIS ENTIRE REGION."**

Darryll J. Pines
President
University of Maryland

ARTIAMAS

Artificial Intelligence and Autonomy for Multi-Agent Systems Field Experiment

ARLIS researchers participated for the second time in the Artificial Intelligence and Autonomy for Multi-Agent Systems Field Experiment, hosted at the Army Research Laboratory Robotics Research Collaboration Campus in Middle River, Md.

The experiment demonstrated how multi–agent systems leveraging cutting-edge autonomy technologies can execute critical missions. ARLIS teams contributed work on human–machine teaming and cloud–based simulation of future autonomy.

One team showcased the migration of existing robotic simulation capabilities from desktop computers to the cloud, while another team supported a situational awareness display where Boston Dynamics Spot robots supplied information to a command post about potential concealed threats, guided by voice and gesture control in Augmented Reality.

ARLIS is actively engaged in developing models, tools, and experiments for multi–agent systems and human–machine teaming. On the simulation side, focus is on streamlining, automating, and scaling test of simulations using a cloud-based infrastructure to improve the test and evaluation process. On the human–machine teaming side, focus is on instantiating goals and determining when and how autonomous systems should interrupt humans who are engaged in team-based objectives. This effort includes identifying testbeds and tasks that can be used to assess effective human interaction with autonomy technologies.

CREDIBILITY ASSESSMENT

A machine to help determine whether a person might be lying based on changes in blood pressure, breathing and heart rate was first used in the United States to support legal proceedings in 1923; and 100 years later, the polygraph continues to be used to identify physiological changes indicative of potential deception. It is among many measures known collectively as "credibility assessment" (CA) used to help the DoD protect its people, technology, and other resources from compromise.

The National Center for Credibility Assessment is the organization responsible for setting standards for polygraph testing and other assessments it provides to help DoD build and sustain a trusted workforce.

In 2023, OUSD (I&S) asked ARLIS, in its trusted agent role, to review the current state of credibility assessment technology, tools, and techniques within the Department of Defense for the NCCA. ARLIS will also analyze associated privacy and ethical implications of emerging CA capabilities and recommend a forward-looking test and evaluation framework that is operationally relevant, replicable, ethical and defensible.

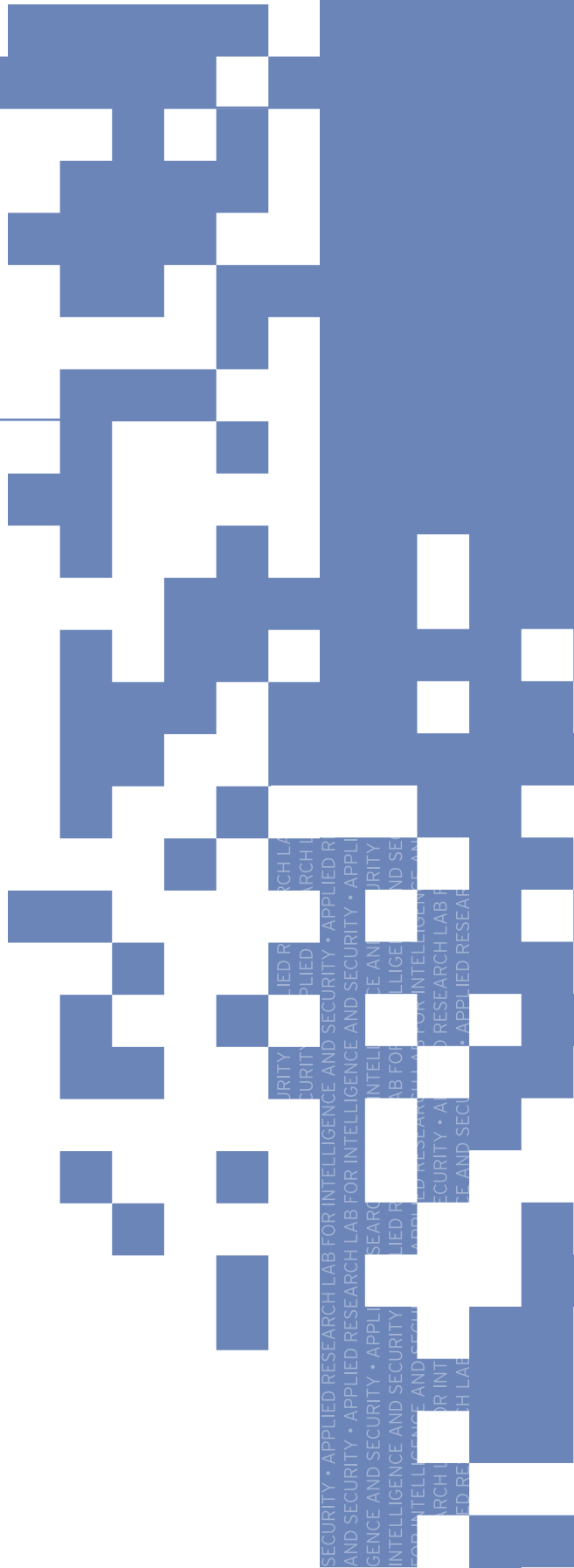The project is scheduled to run through 2024.

COUNTERING INSIDER THREAT

Security professionals now have a way to become certified in preventing insider threats through the Global Counter-Insider Threat Professional (GCITP) Program, launched in partnership with OUSD (I&S) in 2023.

This Counter-Insider Threat (C-InT) program is the first certification program of its kind developed and made available to both government and private industry professionals. The program was created to counter the rise of classified information released into the public domain, causing great damage to the interests and activities of U.S. and Allied forces across the world. Its goal is to deter, detect and mitigate actions by employees presenting a threat to national security. The order also established the National Insider Threat Task Force as the government-wide means for assisting departments and agencies as they develop and implement their own C-InT programs.

The GCITP program is part of an ongoing DoD and OUSD (I&S) initiative to bring all department and agencies into compliance, and standardize and professionalize the C-InT workforce across the federal government.

The program will be overseen by OUSD (I&S).

BUILDING BENCH
STRENGTH

RISC

Research for Intelligence and Security Challenges

In 2020, ARLIS launched the Research for Intelligence & Security Challenges (RISC) initiative to help fill the deficit of government employees needed to address today's intelligence and security challenges, particularly those with training in Science, Technology, Engineering and Mathematics (STEM) fields and rigorous research-driven analysis.

The ARLIS RISC program provides a pipeline of student talent at both graduate and undergraduate levels, providing students an opportunity to work on real-world problems within ARLIS focus areas.

Over an intensive 10-week virtual program, competitively selected interns work in teams under guidance from faculty mentors and government champions. Government operators pose problems supported with realistic data sets and other materials. The interns visit ARLIS in College Park at the end of the summer for a capstone event allowing them to brief their projects and interact in person with their teams, sponsors and mentors.

✷ INSURE

Intelligence and Security University Research Enterprise

ARLIS launched the Intelligence and Security University Research Enterprise (INSURE) in 2020 to expand the talent base and stakeholder reach required to advance its mission to serve as a national resource for the Defense Intelligence and Security Enterprise.

INSURE members include top R-1 research institutions around the country, working together with other strong research institutions too often left out of the defense innovation pipeline such as Historically Black Colleges and Universities and Minority-Serving Institutions.

ARLIS and its university partners coordinate applied and use-inspired research activities at member institutions, aligning projects with specific Department of Defense and Intelligence Community program managers and activities. This alliance improves the translation of projects into operational use and enhances the pipeline of students and faculty to work directly on technology problems for the national security community. With 15 member institutions in 13 states, INSURE continues to expand its network.

CONNECTING THE
INTELLIGENCE COMMUNITY

One of ARLIS's on-going initiatives, called the Phoenix Challenge, connects defense and intelligence organizations in forums several times a year to work real-world challenges and promote collaboration.

Phoenix Challenge is organized by ARLIS and the Information Professionals Association on behalf of the Office of the Under Secretary of Defense for Policy.

In 2023, ARLIS worked with another UARC, the Georgia Tech Research Institute, to host the largest gathering of government, academic and industry organizations of the year to dis-cuss how misinformation, disinformation, and the propagation of bad information affect the world – and how organizations across those three sectors can work together to address the threats. One of the main topics during the summer event centered on the role of artificial intelligence on critical operations in the information environment.

Phoenix Challenge produces recommendations from working groups that are briefed to appropriate offices in the DoD and other agencies.
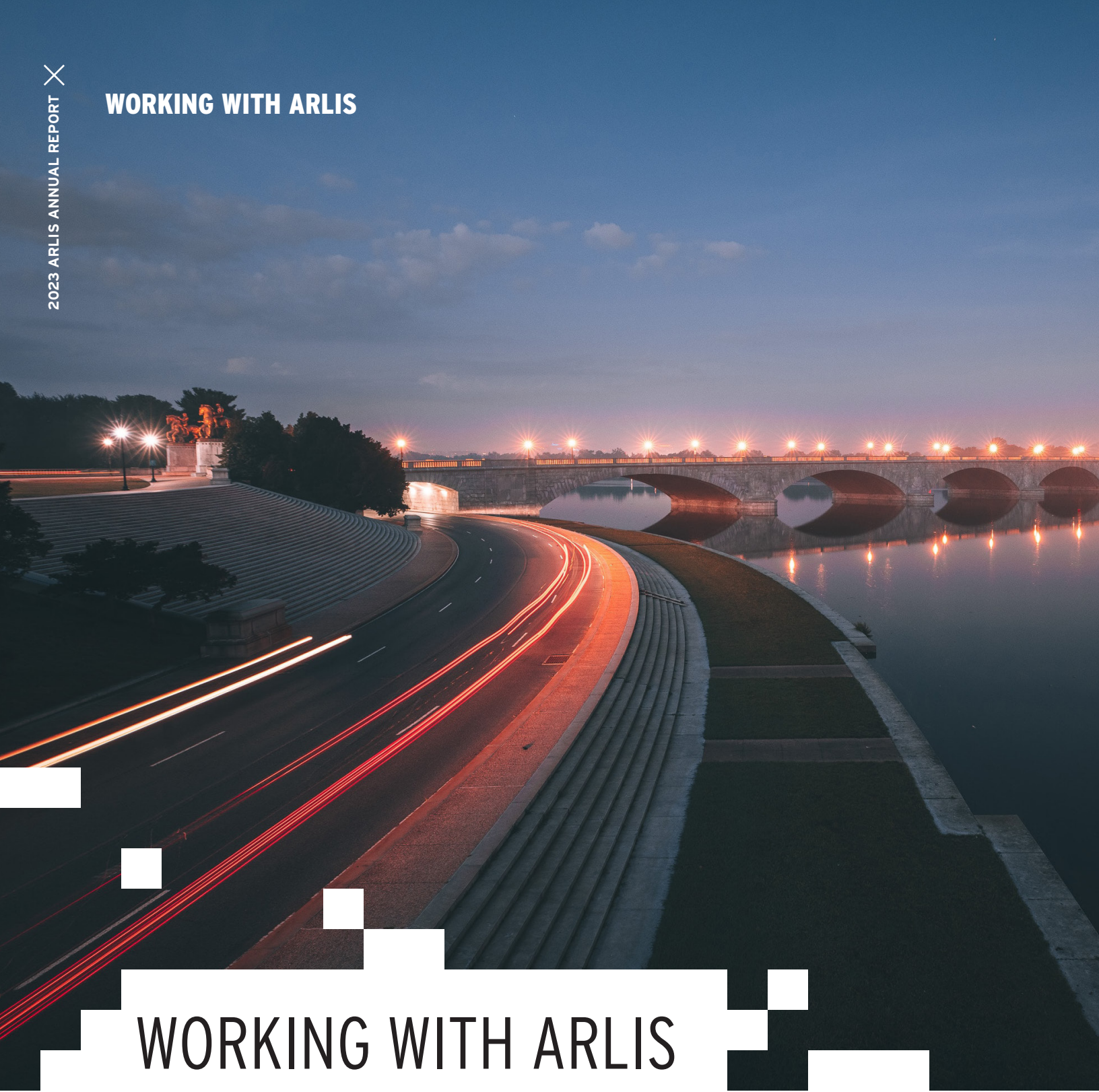
WORKING WITH ARLIS

To leverage the Department of Defense's UARC authority, agencies can directly access ARLIS through a sole-source contract established by the Washington Headquarters Services Acquisition Directorate between the lab and OUSD (I&S). This five-year, indefinite delivery-indefinite quantity contract allows for decentralized ordering for entities throughout the DoD, the Intelligence Community and other interested federal agencies.

OUSD (I&S) advises on, plans for and oversees intelligence, counterintelligence, security, sensitive activities, and other intelligence-related matters.

FINANCIAL REVIEW

ARLIS remains one of the fastest-growing units at the University of Maryland, ending 2023 with 19 percent year-over-year growth in research expenditures, the nationally accepted measure for university research activities. The Department of Defense, the Intelligence Community and other federal agencies contributed about $140 million in current contracts across all four mission areas.

ARLIS has responded to the increasing demand for its unique research by hiring more faculty and support staff, ending the calendar year with 140 full-time employees and more than 100 part-time employees and students. Of the full-time workforce about half started within the last 12 months.

ARLIS's role as an objective, trusted partner has continued to resonate with government sponsors interested in working with a neutral party focused on the public interest. In 2024, ARLIS plans to expand relationships across the DoD and Intelligence Community.
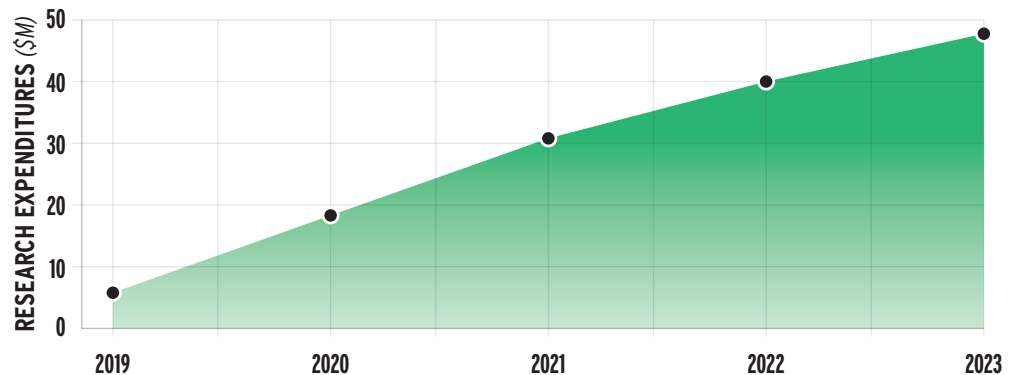
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