UMLARC

UMASS LOWELL APPLIED RESEARCH CORPORATION

DEFENSE INNOVATION PLAYBOOK

From Capability to Warfighter Impact

YOU BRING THE TECHNOLOGY. UMLARC HELPS BUILD THE PATHWAY.

What UMLARC Does

UMLARC is the Northeast Defense Innovation Ecosystem: a trusted connector and integration layer between founders and small businesses, UMass Lowell, government mission owners, operational users, defense industry, research organizations, test infrastructure and acquisition/transition organizations.

Our job is not to sell a product or promise a government award. We help a promising capability find the right mission, assemble the right team, close technical and integration gaps, prove performance in relevant environments, and create a credible path to a Department of War buyer.

ARMY & AIR FORCE PIAs

Army/ARL and Air Force partnership intermediary relationships support technology transfer, connections to technical and mission organizations, and appropriate collaboration and transition pathways.

UML + CORE RESEARCH FACILITIES

UML faculty, labs and CRFs provide technical depth and specialized infrastructure for R&D;, prototyping, materials characterization, robotics, advanced manufacturing, environmental evaluation and domain-specific testing.

SECURE / CLASSIFIED ENVIRONMENT

The UMLARC SCIF and secure processes provide a pathway for appropriately authorized classified engagement when mission, threat or performance discussions require a secure setting.

TEST INFRASTRUCTURE & USERS

UMLARC connects companies from university/partner facilities to government labs, test ranges, operational organizations, integrators and end users so technologies progress from technical proof to mission-relevant evidence.

The Operating Principle

Start with the mission problem - not the product. Identify the operational user, technical sponsor, requirements/acquisition stakeholders, evidence required and likely transition path as early as possible. A demonstration is valuable only when it supports a government decision.

DISCOVER	ALIGN	ASSEMBLE	MATURE	SECURE & TEST	DEMONSTRATE	TRANSITION
Capability	DoW Problem	UML + Ecosystem	Close Gaps	Build Evidence	Decision Event	Buyer / Path

UMLARC PRIMARY FOCUS AREAS



AUTONOMY | BIOSECURITY | OPERATIONAL ENERGY | CYBER | HUMAN PERFORMANCE

THE UMLARC PATHWAY: FROM FOUNDER TO BUYER

A repeatable process for navigating, validating and transitioning defense-relevant capability

1. DISCOVER - Assess the Capability	**Company brings:** capability, maturity/TRL, test data, IP position, use cases and integration needs. **UMLARC:** conducts a Mission Fit Assessment and identifies gaps. **Output:** Mission Alignment Brief.
2. ALIGN - Tie Technology to a Real DoW Problem	Translate commercial language into an operational problem. Map Warfighter/user, mission area, technical sponsor, requirements influence, acquisition/program stakeholders and potential buyer. **Output:** Stakeholder & Transition Map.
3. CONNECT - Select the Right Pathway	Use Army/ARL and Air Force PIA relationships when technology-transfer/intermediary activity fits; otherwise identify SBIR/STTR, xTech, CRADA, test services, BAA, OTA, prime/integrator or program-office pathways. PIAs are not generic research/contracting vehicles. **Output:** Engagement & Vehicle Strategy.
4. BUILD - Assemble UML and the Ecosystem	Bring together UML faculty, students, centers and **CRFs**, plus FFRDCs, primes, integrators, government labs and partners. Use CRFs for prototyping, characterization, advanced materials/manufacturing, robotics, environmental evaluation and specialized technical needs. **Output:** Capability Maturation Plan.
5. SECURE & TEST - Prove It Before the Test	Progress from controlled validation to relevant and operational environments. Use UML/CRFs and partner facilities first, then government labs, military test infrastructure, ranges and operational organizations. Use the UMLARC SCIF for appropriately authorized classified mission engagement. **Output:** Test & Demonstration Plan.
6. DEMONSTRATE - Create a Decision Event	Convene end users, technical sponsors, requirements stakeholders, acquisition/program offices, integrators and funding organizations. Design the event around a defined government decision, not product exposure. **Output:** Government-Relevant Evidence + Decision Brief.
7. TRANSITION - Build the Path to the Buyer	Identify transition partner, funding source, acquisition/contract path, integration owner and next decision. Continue convening until responsibility transfers to the organization positioned to acquire, integrate, scale or field. **Output:** Transition Roadmap - Buyer + Funding + Vehicle + Next Decision.

HOW IT ALL COMES TOGETHER

One ecosystem. Multiple assets. One path toward transition.

ELEMENT	ROLE IN THE PATHWAY
UMLARC	Mission translation; founder intake; Army/ARL & Air Force PIA facilitation; defense ecosystem convening; secure/classified engagement; government/test connections; operational demonstrations; transition orchestration.
UMass Lowell / CRFs	Faculty/student expertise; research; prototyping; specialized instrumentation; materials characterization; robotics; advanced manufacturing; environmental/domain-specific evaluation; technical evidence.
LINC / Industry Engagement	Institutional industry relationships; visible innovation environment; partner navigation; workforce/student engagement; cross-university coordination; scalable partner experience.
Government / Operational Partners	Mission problems; users; requirements context; technical expertise; test environments; feedback; funding/acquisition pathways; transition decisions.
Industry / Integrators / Capital	Commercial technology; engineering; manufacturing; integration; scaling; supply chain; investment; routes into larger defense programs.

What We Expect From a Company

A real and sufficiently mature capability; clear ownership/IP; technical documentation and existing evidence; willingness to accept Warfighter/government feedback; ability to modify and integrate; leadership commitment; and readiness to pursue federal business requirements and participate in testing when appropriate.

HOW WE MEASURE SUCCESS

Mission problems sourced
Companies assessed and aligned
Government sponsors identified
UML/CRF engagements generated
Technologies matured/tested
Operational demonstrations completed
Funding/contract paths identified
Technologies transitioned/integrated
Revenue generated for UML/UMLARC
Capability delivered to the Warfighter

RULES OF THE ROAD

No guaranteed awards. Government retains funding/acquisition authority.

No demo without a decision objective. Define what must be proven and what happens next.

Use the right vehicle. PIAs support technology transfer/intermediary activity; use other mechanisms when appropriate.

Protect the mission and company. Apply appropriate IP, CUI, ITAR, security and classified processes.

UMLARC Ecosystem Execution Model

Intake & Assess: repeatable founder intake and Mission Fit Assessment. **Portfolio & Route:** organize by priority mission/technology areas and route to UML/CRFs, PIAs and partners. **Test & Convene:** recurring mission-focused reviews, test events and executive engagements. **Transition:** track sponsor, buyer, funding/vehicle, next decision and owner for every active capability.

VETERANS-FOCUSED INITIATIVES

UMLARC is invested in veterans-focused initiatives developed and advanced with our industry partners.

Contact Us

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UMLARC FAST FACTS & CAPABILITIES

Northeast Defense Innovation Ecosystem | Innovate. Test. Transition.

33,000	9,000	2	501(c)(3)
TOTAL SQ FT	SECURE / SCIF SQ FT	ARMY & AIR FORCE PIAs	NONPROFIT

TRUSTED UNIVERSITY PARTNER	SECURE CLASSIFIED ENVIRONMENT	TEST CAPABILITY BEFORE THE TEST
UMass System access World-class faculty, labs and students Engineering, cyber, AI, human systems, autonomy and more	**SCIF / TS-SCI capable** CUI / ITAR compliant spaces and processes Secure IT infrastructure	**Prototype, integrate and test in-house** Domain-specific test and evaluation support Ready for faster adoption

OUR FACILITY

- 33,000 total square feet
- 9,000 sq ft secure / SCIF environment (TS/SCI)
- Large conference space onsite
- Sprint execution
- Executive roundtables & conferences
- Collaborative innovation workspace
- Secure IT infrastructure
- Ample parking & easy access

WHAT UMLARC ENABLES

- Accelerated technology testing and validation
- Secure collaboration for classified and CUI work
- Access to government end users and transition pathways
- Events, sprints and executive engagement
- A bridge from innovation to procurement
- Support for both exquisite capability and affordable mass

WHO WE SERVE	HOW WE WORK	PIA RELATIONSHIPS
Startups & Small Businesses Investors & Venture Capital Government Agencies & Labs University Researchers & Students Prime Contractors & Integrators	**CONVENE** - align mission owners, innovators and experts. **EXECUTE** - run focused innovation sprints and testing. **TRANSITION** - connect to funding, users, acquisition pathways and buyers.	**U.S. ARMY PIA** Collaboration and transition with the Army. **U.S. AIR FORCE PIA** Collaboration and transition with the Air Force.

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