



## UOL: Promoting and Prioritizing Emerging and Current Technologies

The Urban Operations Laboratory (UOL) was formed by M2 Technologies, Inc., (M2) in partnership with Kansas State University (KSU) under the auspices of the U.S. Marine Corps to support Marine Corps Systems Command's (MCSC) modernization efforts.

M2 and KSU have further partnered with industry and governmental agencies to support both national and international security objectives.

UOL focuses on capabilities that minimize collateral damage to non-combatants and the environment. Our primary objective is the exploitation of emerging technologies to enhance the warfighting and security capabilities of U.S. military and security forces in the operational continuum.

UOL combines path-finding researchers with operational problem solvers to envision future engagements today. Through environmental research, technology development, and assessment, UOL is able to find better ways to address and reduce unintended consequences of military, law enforcement, and emergency operations.

UOL encompasses seven primary tasks areas that consist of multiple, interrelated and supporting subtasks. For instance, **Bomb Detection and Countermeasures** projects are developing the means to rapidly and reliably detect and destroy Improvised Explosive Devices and unexploded ordnance at safe distances.

**Robotics and Sensors** efforts are the necessary stepping stones to achieve the goal of seamlessly employing Human-Robotic teams on

the battlefield of the future, reducing the need for human operators.

Explorations in the field of **Human Factors** will lead to the optimization of small unit performance long-duration, high-threat environments.

UOL's **Nanotechnologies** efforts have already yielded formulations for use in tracking and countering threats from enemy personnel and materiel.

**UOL Engineering Support** provided to the MERS Integration Facility (GRUNTWORCS) ensures that systems engineering for equipment modernization results in ergonomically sound systems for operators at the squad level.

Since 2002 the National Environmental Evaluation and Remediation (NEER) Center has built and maintained EKAT (Environmental Knowledge and Assessment Tool), which provides decision support software to forecast and address negative environmental impacts of military systems in compliance with DoD Directive 3000.3 – streamlining the entire environmental assessment phase of systems development.



Sweating manikin used in Human Factors work at KSU.

## The Way Ahead...

M2 is at the forefront of exploring and developing non-lethal and novel capabilities. Future conflicts – whether regional or global – require the ability to protect personnel and infrastructure from collateral damage, separate belligerents from non-hostiles, and rapidly achieve situational control. M2 and our academic and industry teaming partners are pioneering non-traditional technologies and applications to aid and enhance these abilities.

Our work enhances U.S. National Security by providing military, law enforcement, and emergency responders with enhanced flexibility and capabilities. Our criteria for developing new technologies are that they be **life-conserving, environmentally friendly, and fiscally responsible.**

Our operational focus and predictive analysis provide decision makers with non-traditional solutions to neutralize or defeat threats posed to U.S. National Security interests at home and abroad.



## M2 Technologies, Inc.

*Solving complex problems with innovative technologies.*

## Points of Contact – UOL Partners



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