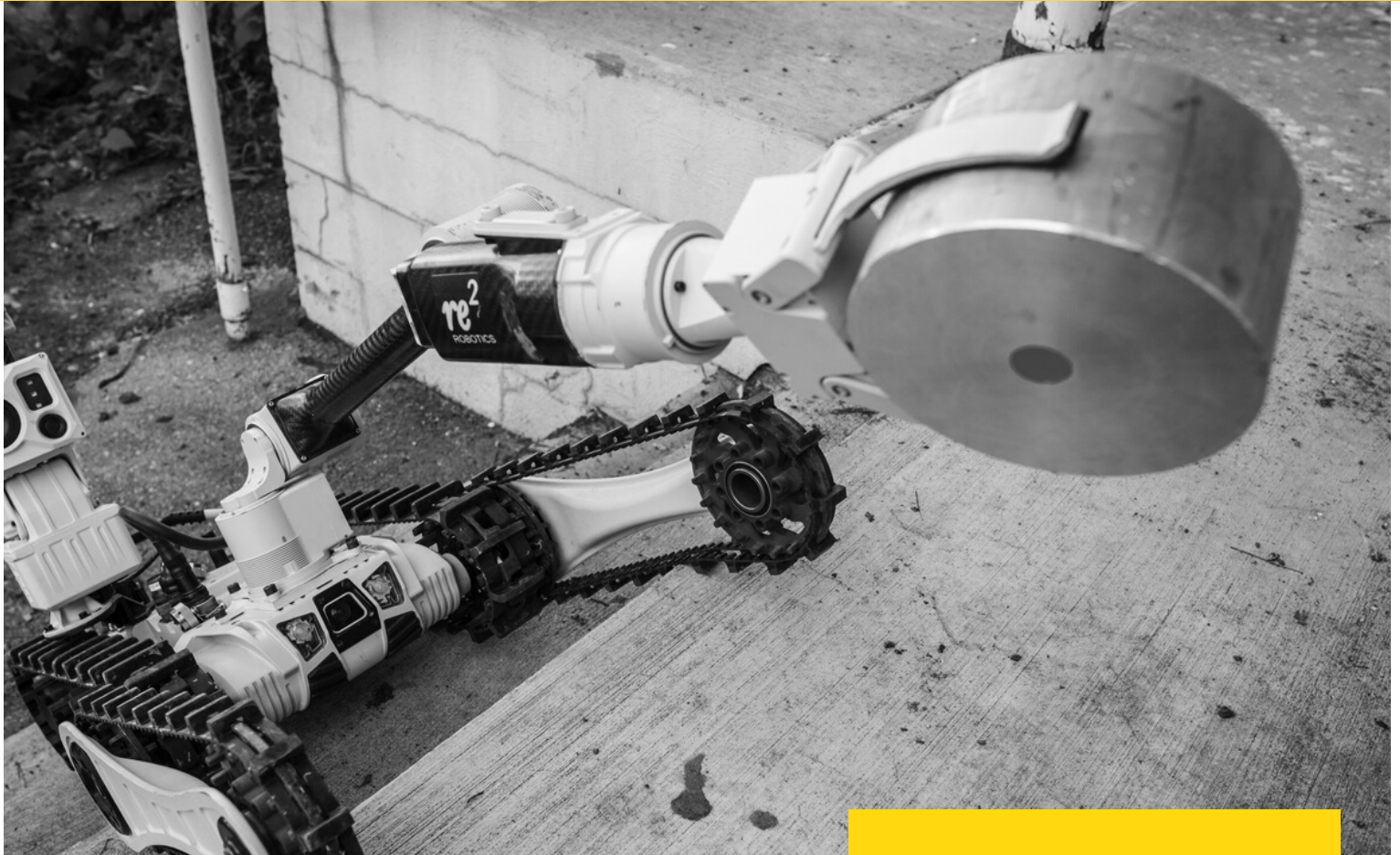




RE2 ROBOTICS

MOBILE MANIPULATOR ARMS FOR ANY ENVIRONMENT

INTELLIGENT • RUGGED • OUTDOOR • UNDERWATER • FIELDDED



COMPANY MISSION

The Mission of RE2 Robotics is to develop intelligent mobile manipulation systems that empower humans to do their jobs faster and safer.

ADDRESS

RE2 ROBOTICS
4925 Harrison Street
Pittsburgh, PA 15201
www.resquared.com

CONTACT

info@resquared.com
412.681.6382

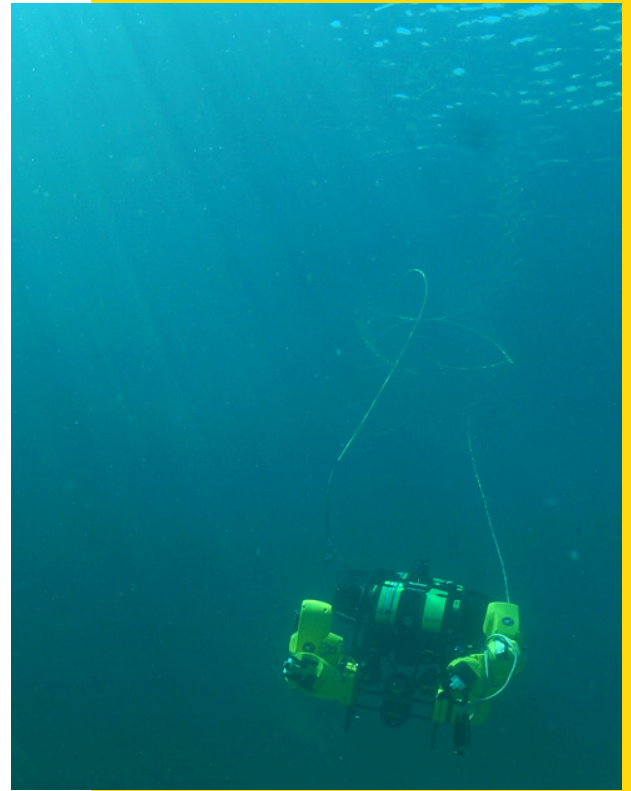


OUR TECHNOLOGY

RE2 Robotics is a leading developer of intelligent mobile manipulation systems. Our company is committed to creating manipulator arms with human-like performance, intuitive robot interfaces, and advanced autonomy capabilities for use in any environment.

Our arms combine strength, dexterity, and efficiency all in a compact, rugged, lightweight package. Our systems are developed for outdoor ground and underwater applications.

RE2 has developed ground systems that perform complex tasks and keep humans out of harm's way. From small robotic arms with interchangeable end-effector tools for EOD missions to dexterous manipulation systems for hazardous material handling, aircraft maintenance, and autonomous casualty evacuation, RE2's mobile manipulation systems enable organizations to improve productivity while keeping their personnel safe.



RE2 has adapted its ground systems for use in subsea applications. For example, our **Maritime Dexterous Manipulation System (MDMS)** presents an unmatched level of human-like control in the field of underwater robotics.

In addition to hardware, RE2 has robust software capabilities. Our robots have the ability to see, learn, and interact via our computer vision and autonomy modules - **RE2 Detect™** and **RE2 Intellect™**. Utilizing artificial intelligence, computer vision, and machine learning, our innovative robotic systems can operate with humans in the loop or autonomously depending upon the application.

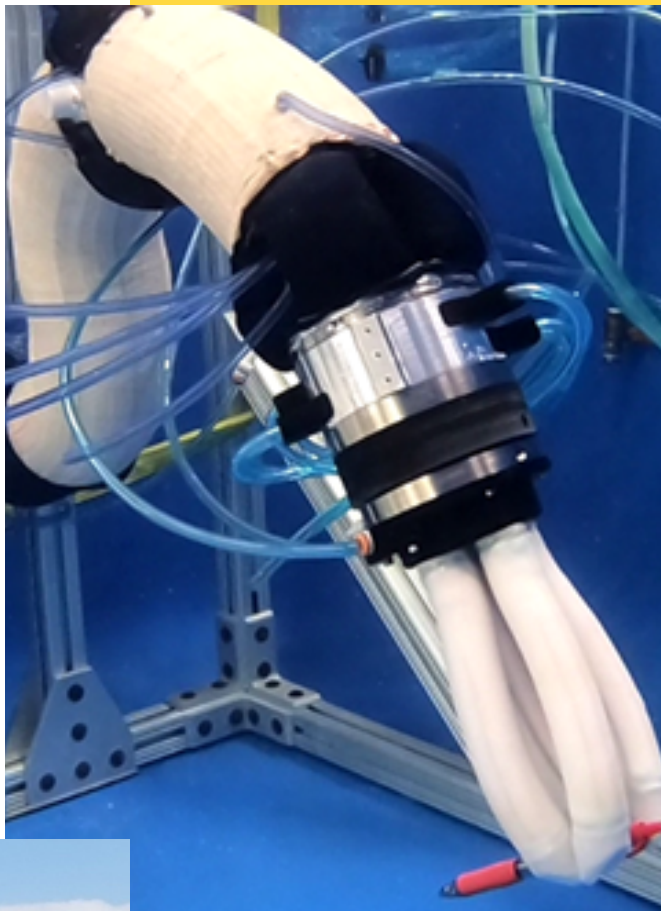
Unlike other perception systems that must operate in constrained indoor environments with controlled illumination, RE2's systems can perceive the world in unstructured environments. RE2's arms operate using multi-modal 2D and 3D imaging sensors and algorithms that can adapt to various lighting and environmental conditions. Our RE2 Detect perception software can detect and track objects in just about any indoor or outdoor environment.

RE2 is at the forefront of designing truly intelligent robotic systems. Our autonomy algorithms fuse traditional machine learning and computer-vision-based techniques to provide human-like decision processing. Traditional autonomy algorithms rely on a single method and only work in structured environments with controlled lighting. RE2 Intellect can handle anomalies that are common in unstructured, outdoor environments, similar to the way human brains perceive and process information.

DEFENSE PROGRAMS

RE2 Robotics has been developing robotic technologies for the Department of Defense since its founding in 2001. The company served as a subcontractor to Carnegie Mellon's National Robotics Engineering Center to develop teleoperated ground vehicles for the DARPA PerceptOR Program.

Since its early days, RE2 has developed numerous robotic manipulation technologies through DoD SBIR and BAA programs, including its **Highly Dexterous Manipulation System**, **Maritime Dexterous Manipulation System**, **Autonomous Casualty Extraction**, **Rapid Airfield Damage Repair system** (pictured below), and **Underwater Dual Manipulator-Inflatable** (pictured right), which is currently in the Navy's SBIR Transition Program (STP).



DEFENSE CUSTOMERS



OUR CAPABILITIES

- Mobile manipulation
- Intuitive controllers
- Manipulator trajectory and grasp planning
- Perception and situational awareness
- Artificial Intelligence applications
- Rapid prototyping
- Manufacturing and production

OUR MARKETS

- Defense
- Energy
- Aviation
- Medical

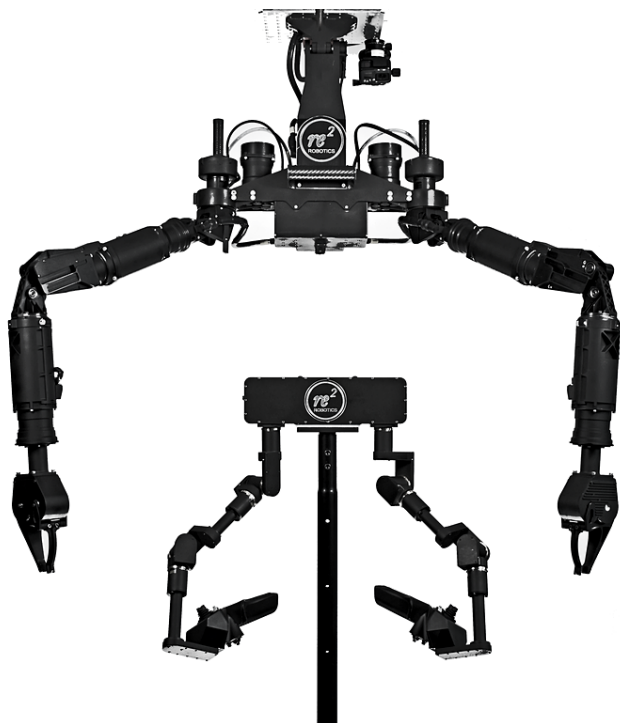


ABOUT RE2 ROBOTICS

Founded in 2001, RE2 Robotics is a **Carnegie Mellon** spinout located in Pittsburgh's historic Lawrenceville neighborhood – home to **Robotics Row**. Today, RE2 is thriving in the Rust Belt by developing innovative core robotic technologies for defense, aviation, energy, and medical applications.

RE2's facility is a multi-building campus with a state-of-the-art machine shop, robotic R&D labs, dedicated assembly/test labs, and indoor/outdoor testing spaces. RE2 has the capability to test underwater robotic systems within its facility, utilizing its 4250 gallon test tank.

RE2's focus is on improving personnel safety, productivity, and efficiency through the use of intelligent mobile robotic systems. Our technology empowers humans to do their job faster, safer, and better using human-like robotic arms.



To learn more about RE2 Robotics' capabilities and mobile manipulation technology, contact info@resquared.com.

