

 **MRI Global**
Innovative Solutions to
Important Challenges



LEADING MOBILE LABS

DEVELOPMENT AND DEPLOYMENT

**PORTABLE AND EXPANDABLE
SOLUTIONS FOR RAPID MEDICAL CARE
AND INFECTIOUS DISEASE RESPONSE**

www.mriglobal.org

ACCELERATING LIFE-SAVING CARE



The world is continuously faced with point-of-care medical needs, infectious disease outbreaks, epidemics, and a global pandemic that has impacted nearly every facet of our lives. Each situation demands development and deployment of rapidly customized tools and a team with the right expertise to meet the challenge. A series of very different mobile labs developed by MRIGlobal – Vesta Mobile Laboratory, Athena Mobile Lab, and Mercury Lab – leads the response.

MRIGlobal's development and deployment of mobile labs provide response capabilities to accelerate life-saving care and diagnostics for medical treatment.



VESTA MOBILE LAB

PROVIDING CARE IN RURAL AREAS

When demand for testing and vaccination in rural areas of Kansas expanded dramatically during the COVID-19 pandemic, mobility became increasingly important. Working with the Kansas Department of Health and Environment (KDHE) and Kansas Health and Environmental Laboratories, MRIGlobal designed and customized two Vesta Mobile Labs and one sample transit van.

These units were deployed across the state

to bring COVID-19 vaccines to residents living in rural areas far from medical facilities, while also reducing the time between the collection of COVID-19 samples and reporting those results, broadly supporting public health.

Vesta Mobile Lab is built on a heavy-duty box truck chassis (Freightliner MT-55), which can deploy with all the equipment necessary to run PCR analysis on site. Like all MRIGlobal mobile laboratories, Vesta can run on- or off-grid, using an integrated generator. The unit allows ample space for multiple technicians to work in a safe laboratory environment like what is found in a typical laboratory building.

Vesta reduces barriers to necessary care.

When easier access to care is needed, Vesta enables you to ensure your commitment to patients.

Vesta is built on a platform that can be modified to include waiting rooms, exam rooms, a laboratory, and other clinical specifications. By taking care on the road, you will help reduce travel distances, wait times, and other barriers to accessing necessary services.

ATHENA MOBILE LAB

ENHANCED PLATFORM
SAVES LIVES



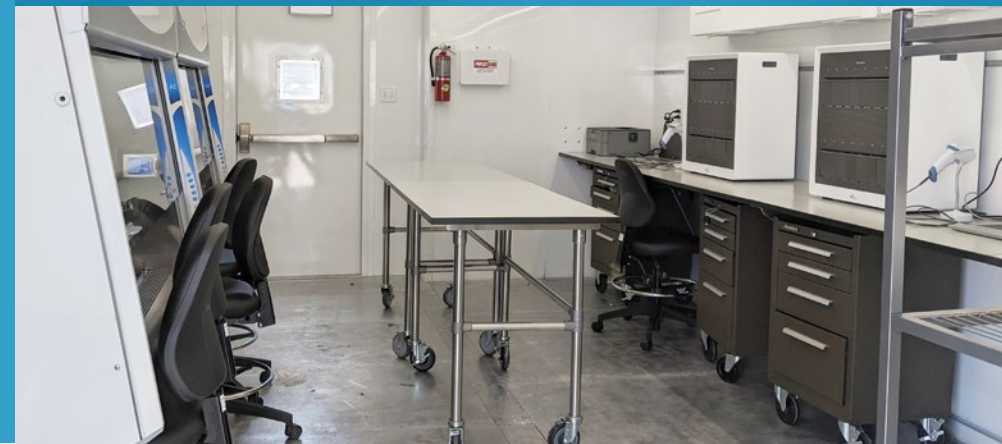
In 2014, during the Ebola epidemic in West Africa, existing laboratories were located too far away from the epicenter of those outbreaks to provide results in an acceptable response time. In partnership with the governments in those countries and the U.S. government, MRIGlobal was contracted to design, assemble, equip, deploy, and staff rapid response mobile diagnostic laboratories for molecular detection of Ebola virus in patient samples. Similarly today, easy access to care has been compromised in many states across the country. Ability to set up points-of-care close to patients in need is crucial.

Athena Mobile Lab is a new container that provides an enhanced mobile laboratory workspace capable of rapid deployment.

The platform is custom built to eliminate the limitations involved with modifying a shipping container into a lab. This allows for an enhanced structural design and better insulation to provide a more ergonomic workspace better protected from harsh environmental conditions. Its expansion capability increases the amount of laboratory space so analysts can comfortably, efficiently, and safely work without increasing the shipping footprint or deployment cost. Even with 82 percent more floor space and 40 percent more laboratory bench space than the previous model, it maintains ISO shipping container specifications when retracted.

Through numerous deployments, Athena has proven to be highly customizable to the needs of the client and demands of the mission.

When a cruise ship was overrun with COVID-19 patients early in that pandemic, Athena was deployed to serve as a decontaminated space for healthcare workers to temporarily remove their PPE, eat, and rest before returning to work. Most recently, an Athena unit has been deployed onsite at a federal laboratory to serve as a training space for researchers in advance of their new permanent labs being commissioned and available for use.





We believe this platform will fill a critical role in addressing long-standing gaps in equity of access to medical care and services.

MERCURY LAB

SUPPORTING FIELD FORWARD DIAGNOSTICS

Today, hardware designed for quantitative PCR, antibody and protein detection, and even genomic sequencing can easily fit in your coat pocket. We're living in an age when advanced molecular diagnostics, biosurveillance, and forensic testing no longer require transporting a sample back to a central reference laboratory. Samples can now be processed on site, at the point-of-need, alleviating processing bottlenecks, and dramatically reducing the time to acquire an actionable result. However, these technologies have not yet been fully optimized. Despite molecular hardware now having a remarkably small footprint, the operational footprint of the work is not equally small. MRIGlobal developed Mercury Lab to address this problem.

Mercury Lab is the only portable laboratory workbench designed for point-of-need operations

that can be set up on site in a few minutes and then packed up just as quickly. Its lockable, grab-and-go case can be wheeled through an airport and checked as luggage, thrown in the back of a pickup truck, or even strapped to the back of a motorbike. Processing samples for advanced molecular diagnostics, biosurveillance, and forensic testing can now take place on site without the need for a pallet full of equipment. Its portability makes rapid, reproducible deployment of advanced genomic technologies to field-forward locations now strategically feasible. Such logistical streamlining dramatically reduces the time to acquire an actionable result and safeguards the quality of the sample by eliminating the need for extended transport.

Embedded within are the logistical requirements needed to operate the platform, including computational capacity, power management architecture, lighting, human-centered laboratory workbench, cold-chain storage, biohazard waste disposal strategies, and other necessities.



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Through the development and deployment of these unique mobile labs, MRIGlobal leads rapid medical and infectious disease response with the tools and team to accelerate life-saving diagnostics and care.