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IMPACT

YEAR IN REVIEW



2019

ANNUAL REPORT

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2019 MILESTONE YEAR

FROM THE CEO

This year was marked by many accomplishments. Our plan to open a state-of-the-art diagnostics center of excellence came to fruition, making it possible for us to address the growing demand for MRIGlobal’s expertise in the areas of infectious disease, medical countermeasures, and global health engagement.

MRIGlobal’s deep experience in navigating the complex process helped multiple clients achieve FDA approval on products that impact the health of people world-wide.

A one-of-a-kind training facility with enhancements designed, fabricated, and installed by MRIGlobal for the Department of Defense became fully operational. The facility is the global venue of choice for military training operations to defend against live toxic, chemical, biological, radiological and nuclear threats.

Our partners at Exxon Mobile, the Department of Energy and the National Renewable Energy Laboratory that we manage and operate announced a remarkable \$100 million, 10-year plan to develop advanced energy technologies to reduce emissions.

We celebrated our 75th anniversary throughout the year, capping it off with an event honoring more than 500 civic leaders, community partners and friends who have supported our mission.

These are just a few of the highlights showcased in this edition of IMPACT.

While we’re proud of our accomplishments and the legacy we’ve built, we’re even more excited about the road ahead. The unwavering vision and inspiration of our people – combined with a commitment to our core mission to improve the health and safety of all people – will continue to guide our next 75 years and beyond.

Thomas M. Sack, Ph.D.

President and Chief Executive Officer

CELEBRATING 75 YEARS OF IMPACT





CELEBRATIONS COMMEMORATE MRIGLOBAL'S HISTORIC 75TH ANNIVERSARY

June 17, 2019 – the actual anniversary of our founding – MRIGlobal, civic leaders, current and former board members and trustees gathered at the historic Congress ballroom of the President Hotel in downtown Kansas City, the site of the very first Midwest Research Institute (now MRIGlobal) board meeting 75 years ago. President and CEO Tom Sack and Chairman David Oliver paid tribute to the nine visionary founders who signed articles of agreement to make MRIGlobal a reality. Four new MRIGlobal Life Trustees were announced, selected for their exceptional service and commitment to MRIGlobal (see page 21).

In July, Missouri U.S. Representative Emanuel Cleaver II sponsored a resolution that was read into the U. S. Congressional Record recognizing MRIGlobal's 75th anniversary and its contributions to the community, impact on research, and leadership in furthering STEM education programs. Later in August, Representative Cleaver visited MRIGlobal and presented the resolution to MRIGlobal staff.

Throughout the year staff on the Maryland, Virginia, Florida and Kansas City campuses celebrated the milestone with outings at major league baseball games, a family fun day at the lake, a trip to the Kennedy Space Center, themed lunches, blood drives, community service days, and with gifts of 75th anniversary logo wear. A reception for retirees was held in October at the Kansas City Headquarters.

More than 500 community leaders, science enthusiasts, clients and peers gathered on September 12 at a luncheon honoring those who have supported MRIGlobal's mission. The event featured a Science Showcase of projects from MRIGlobal and STEM work by students mentored by MRIGlobal scientists and engineers. Bill Nye the Science Guy, well-known science educator, television star, and mechanical engineer, presented a thoughtful, engaging and entertaining keynote address.

SOLVING GLOBAL CHALLENGES IN NATIONAL SECURITY AND WORLD HEALTH

Meeting the demand for diagnostics excellence

MRIGlobal's plan to establish a Diagnostics Center of Excellence at its Headquarters in Kansas City became a reality in 2019. The new lab expanded space for the benefit of clients, added 45 new highly skilled employees to the Kansas City metro and will contribute millions in research and development dollars to the local economy.

The 1,100-square-foot College of American Pathologists (CAP) accredited and Clinical Laboratory Improvement Amendments (CLIA) certified laboratory features sophisticated workflows and approaches to assist with the development, evaluation, and validation of diagnostic assays.

An additional 7,500 square feet of newly renovated space opened in November with flexible laboratories designed to support all phases of *in vitro* diagnostic product development.

The expansion is a direct result of growing demand for MRIGlobal's expertise in diagnostics research and clinical development. It also supports the organization's ability to solve its clients' problems in the areas of infectious disease detection, surveillance, and global bio-engagement.

In vitro diagnostics programs at MRIGlobal range from the development of cutting edge, molecular-based assays focused on detecting low levels of highly pathogenic diseases to the advancement of novel, ultra-sensitive diagnostic panels for identifying and quantifying different strains of the influenza virus.



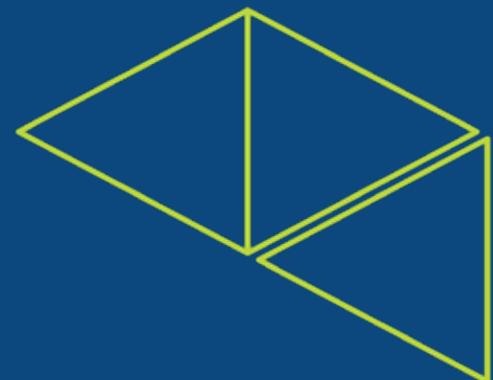
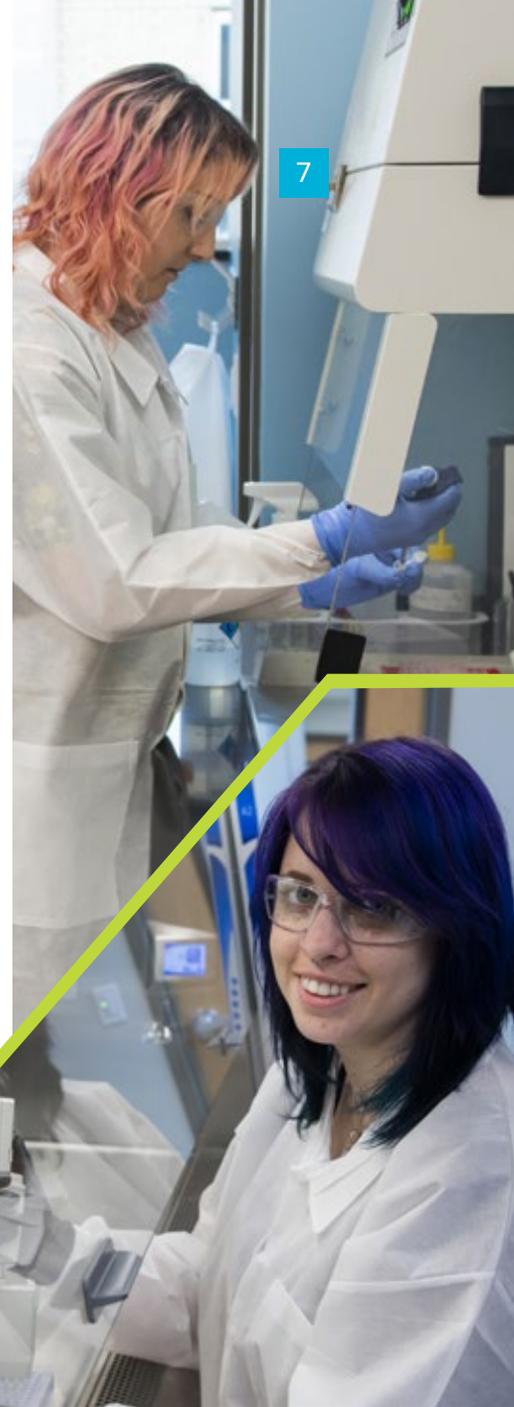
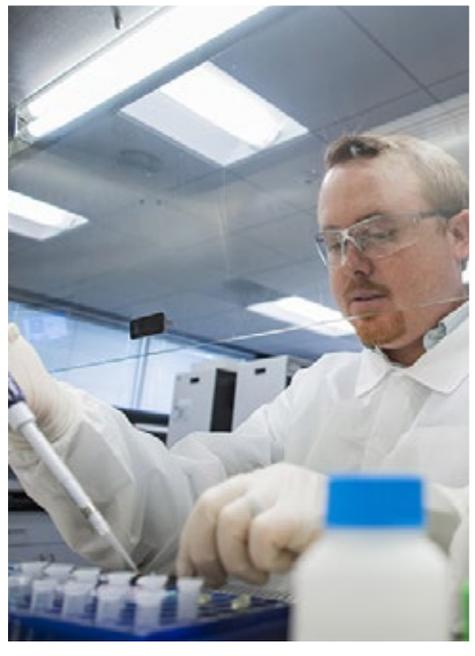
EXPERTS WITH IMPACT

Kristine Werking leads the Diagnostics Center of Excellence team. She has more than 22 years of laboratory science and project management.

Werking is responsible for growing the diagnostics business unit, program management and staff for government and industrial clients in need of clinical research support. Projects range from small fixed-fee programs to multi-million dollar contracts with the Department of Defense, Joint Program Executive Office, Biomedical Advanced Research and Development Authority and the Defense Threat Reduction Agency.

IMPACTS:

- Field diagnostics save time and expedite treatment decisions.
- Rapid and specific pathogen detection with actionable results saves lives.
- Advanced diagnostic capabilities improve patient treatment outcomes.
- New diagnostic tools increase the opportunity for reliable diagnoses, resulting in more effective treatment.
- Development of diagnostic assays and molecular diagnostic tools for commercial and government clients make way for new programs and novel medical countermeasures.
- In-field diagnosis, training, and tools prevent the spread of highly infectious diseases that threaten global health.





PROPELLING FDA APPROVALS WITH QUALITY, REGULATORY EXPERTISE

MRIGlobal's deep expertise in the complex drug approval process plays a key role in helping clients navigate and fulfill requirements to meet U.S. Food and Drug Administration (FDA) approval. Our scientists accelerate their timelines and reduce the risks of getting a product to market. We provide customized solutions to their product program with strict adherence to quality and regulatory requirements. These programs have a significant impact on the health of people world-wide.

INNOVATIVE TREATMENT FOR LIFE-ALTERING MUSTARD GAS INJURIES

MRIGlobal and Argentum Medical achieved a milestone in the long-standing effort to defend the country against potential use of chemical weapons: the first U.S. Food and Drug Administration clearance of a product designed for use with certain injuries caused by exposure to sulfur mustard, commonly known as mustard gas.

Exposure to sulfur mustard can cause painful, life-altering injuries. Introduced in World War I as a chemical warfare agent, no medical countermeasures for sulfur mustard existed — until now. Since 2013, MRIGlobal and partner Argentum Medical developed comprehensive treatment regimens and models to evaluate the efficacy of antimicrobial burn contact dressings as advanced treatments for wounds caused by chemical threat agents.

The Biomedical Advanced Research and Development Authority provided technical expertise and funding to develop the studies. Research showed that the product, Silverlon, is appropriate for use on certain injuries caused by exposure to sulfur mustard.

MRIGlobal is partnering with NexoBrid to bring its innovative severe burn treatment to market. The product addresses an unmet need in the treatment process known as debridement, the removal of dead or infected burned skin tissue caused by sulfur mustard exposure.

The topical, non-surgical application product is easy to use and apply at the patient's bedside. Rich in enzymes derived from the stem of a pineapple plant, the product removes burned tissue safely without harming surrounding viable tissue, allowing the wound to heal.

IMPACT: *Development of innovative burn treatment products opens historic new treatment options for victims of mustard gas poisoning.*

“WHAT WE HAVE ACCOMPLISHED IS AN AMAZING EXAMPLE of what can happen when government, the scientific community and industry collaborate for the common good. Today the American people are better prepared to face a significant mass casualty event as a result of your hard work and determination. I want to thank and acknowledge our BARDA colleagues, MRIGlobal, and the Argentum medical team. Without all of you, this would not have been possible.”

—Argentum Medical President and CEO Raul Brizuela

NEW TREATMENTS FOR CANCER AND DIABETES

MRIGlobal partnered with a biotech client to propel FDA approval on its Phase 3 oncology drug for patients with targeted reoccurring cancers resistant to current drugs on the market. The drug functions by selectively binding to and blocking proteins that allow cancer cells to grow. The breakthrough medication provides adult patients a new therapeutic option to treat their disease. Since 2016, MRIGlobal's role has involved qualifying and managing the reference standards for analysis of the drug and its numerous starting materials and intermediates.

Another MRIGlobal client received FDA approval on a drug formulation that helps patients regulate blood glucose levels and efficiently administer the medicine. MRIGlobal initiated the first project for analytical chemistry method development and added repository operations and distribution support responsibilities, proving to be a valued partner in its client's success. Studies are ongoing with long-term stability testing of the drug product over a range of temperature and humidity specifications.

IMPACT: *New treatments for cancer and diabetes improve quality of life and save lives.*

STOPPING THE THREAT OF TULAREMIA

Highly infectious diseases pose both a public health threat and have application as a biological weapon. Sometimes called rabbit or deerfly fever, tularemia is naturally found in small mammals like rabbits, rodents, squirrels and the insects that feed on them. It's transmitted by handling infected animal material, eating or drinking contaminated water, or inhaling the bacterium.

Despite decades of research, an effective vaccine has yet to be developed and brought to market.

In a study funded by the Defense Threat Reduction Agency, MRIGlobal conducted pre-clinical testing to determine the efficacy at 30 and 90 days of a promising new Live Vaccine Strain tularemia vaccine. Research focused on development of an immunoassay to test response to the vaccine, and studies to determine the duration and onset of protection. Continued studies will determine if the vaccine is effective at 360 days. The research contributes to next phase human clinical trials that could lead to FDA approval of a safe and effective vaccine.

IMPACT: *A vaccine for tularemia can protect the general public and the military against a potential bioterrorism threat.*





IMPROVING TREATMENT FOR SEVERE ALLERGIC REACTIONS

Anaphylaxis – a severe, life threatening allergic reaction to food, medications, insect bites or other substances – kills about 1,500 people in the U.S. each year. MRIGlobal tested a novel device to deliver epinephrine, a drug used in emergencies to treat severe allergic reactions, through a nasal spray product - a much-needed alternative for patients at risk for life-threatening anaphylaxis. Many patients and caregivers are hesitant to use epinephrine auto injectors out of fear of needles, concern about harming the patient while administering the drug, inconvenient bulky size, or cost.

The needle-free, intra-nasal spray is patient and caregiver friendly, easy to carry and use, and potentially more cost-effective, encouraging increased compliance. The product is now in human clinical trials.

IMPACT: *A simple-to-use device to administer epinephrine nasally can increase compliance in critical rescue situations.*

FASTER, MORE ACCURATE DIAGNOSIS FOR CYANIDE POISONING

Cyanide poisoning is a serious, potentially lethal chemical threat as a warfare agent and in industry as a danger to fire-fighters and civilians exposed to smoke from residential and industrial fires.

MRIGlobal performed testing for Seacoast Science on a novel, hand-held prototype medical device for the rapid and accurate diagnosis of cyanide exposure. Our researchers validated the device's accuracy in measuring cyanide exposure and extent of exposure, which can aid first responders and health professionals in triage settings.

IMPACT: *Rapid and accurate diagnosis of cyanide exposure can save lives.*



SAFETY SOARS WITH EXPANDED TOXICITY DATA

Thousands of chemical substances exist in the world, but only a small fraction have been adequately assessed for their potential toxicity to humans. The Tox21 program, a collaboration among several government agencies including the National Toxicology Program, aims to improve environmental health and pharmaceutical safety by evaluating ways to rapidly and efficiently evaluate the safety of commercial chemicals, pesticides, food additives, contaminants, and medical products.

For the Tox21 program, MRIGlobal procured more than 3,500 chemicals, determined the purity and identity of each, prepared and transferred chemical solutions to 384-well plates for further testing, and contributed the data to an online library that launched in July. The library is publicly available for researchers and those involved in regulatory decisions.

IMPACT: *Environmental health is enhanced when researchers and regulators have access to improved and widely expanded chemical toxicity data.*

EXPERTS WITH IMPACT

MRIGlobal researchers Claire Crutch, Ph.D., and Eric Peters published in the *Journal of Chromatography* and in *Drug and Chemical Toxicology* on promising new countermeasures to treat exposure to methyl isocyanate (MIC), a highly toxic chemical commonly used in industry. Their research focused on better understanding the inhalation toxicity of MIC, contributing to development of more effective therapeutic interventions.



AROUND THE WORLD, MRIGLOBAL DESIGNS AND DELIVERS SOLUTIONS THAT ADDRESS THE THREAT OF INFECTIOUS DISEASE and biological threat agents, whether naturally occurring or intentional, at home or abroad. We develop and implement capabilities to enhance threat agent detection, surveillance and response, solving complex global health challenges.



BUILDING SMARTER WORKFORCES FOR A SAFER WORLD

A well-trained, competent workforce is critical to protecting human and animal safety from threats posed by infectious diseases or bioterrorism. The challenge: frequently, the necessary knowledge and resources to train and maintain such a workforce are not located where they are needed most.

MRIGlobal's capacity-building approach combines on-site engagement and shared mentored augmented reality technology (SMART) tools to make knowledge transfer unique, dynamic, and customized to the needs of learners.

MRIGlobal developed the Operating Workforce Network (OWNit) to deliver critical operational technical learning processes using its distance learning platform. OWNit training models offer student engagement, expert facilitation, applicable tools, reality-based training and troubleshooting skills with real-time mentoring and support.

IMPACT: *Training programs build communities of practice locally and internationally and ensure that newly acquired skills are shared and maintained efficiently and cost-effectively.*

EXPERTS WITH IMPACT

Dr. Gene Olinger (pictured above) published research in the journal *Viruses* about methods to isolate and culture Ebola virus from difficult-to-culture human specimens, semen and breast milk. Researchers were able to validate several methods to isolate and culture Ebola from these human fluids. The findings increase understanding of these latent sources of virus and could lead to new drugs and treatments to reduce transmission.

ASSESSING THREATS IN THE AG INDUSTRY

Outbreaks of diseases like foot and mouth disease can have devastating impacts on the country's economy, food security and agricultural industries. Disease can travel through many potential routes including human travel, animal imports, nefarious release, and bird migration. The ability to rapidly test and monitor disease in the field can improve industry preparedness and disease response, U.S. biosecurity and biocontainment capabilities, and animal health management programs.

MRIGlobal, in collaboration with Kansas State University and with support from the USDA's Agricultural Research Service and the Plum Island Animal Disease Center, is developing a rapid, sensitive, portable pen-side testing system that will allow end users to distinguish between endemic and high consequence disease and determine freedom from disease after an outbreak.

IMPACT: *The threat of agricultural industry disease outbreak is mitigated with the ability to more rapidly test and monitor disease in field and herd environments.*

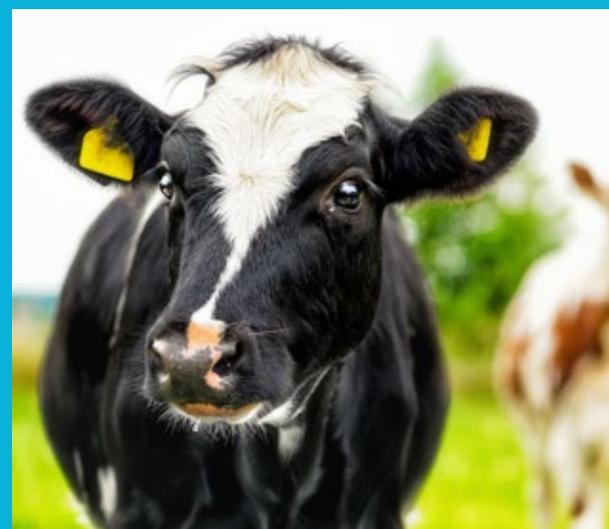
DIAGNOSIS FOR CHEMICAL WARFARE EXPOSURE

Finding a simple way to diagnose exposure to chemical threats can mean the difference between life and death to military personnel in the battlefield.

MRIGlobal is leading the development of a portable, hand-held, sample-to-answer system for the diagnosis of exposure to chemical warfare agents. This device speeds medical care and treatment, reducing debilitating effects. The simple-to-use, lightweight handheld meter requires only a small blood sample from a finger stick and can be immediately administered by soldiers and medics in the field.

Developed for the Department of Defense, MRIGlobal scientists, with partners the U.S. Army Medical Research Institute of Chemical Defense and Conductive Technologies Inc., are leading the team to develop, manufacture, and obtain FDA clearance to rapidly bring the technology to market.

IMPACT: *Rapid and advanced detection of chemical warfare agent exposure in symptomatic and non-symptomatic individuals saves lives.*





SAFEGUARDING THE HEART OF OUR NATION'S SECURITY

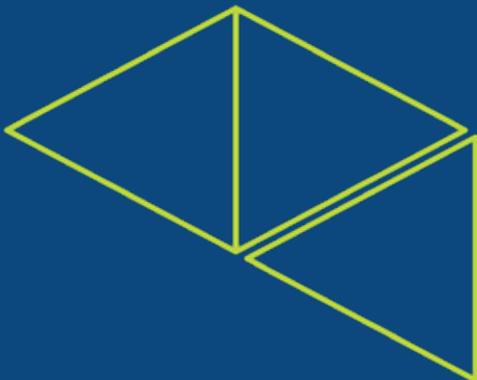
The traumatic events of September 11, 2001 changed the lives of everyone in America, especially those working for the Department of Defense. Terrorists proved that the Pentagon - the very symbol of our national security - was not impenetrable when hijackers flew an American Airlines flight into the Pentagon, killing all on board and more inside the building.

Nineteen years ago, the Department of Defense bolstered its security by engaging MRIGlobal. As a trusted partner through the Pentagon Force Protection Agency program, MRIGlobal provides technical subject matter expertise for bio-threat detection and laboratory operations, safeguarding the occupants, visitors and infrastructure of the Pentagon, and other delegated Pentagon facilities.

Scientists analyze environmental samples 24/7/365 for biological threats using microbiological, immunological, and molecular methods at the Pentagon's chemical, biological, radiological, nuclear, explosives Directorate Laboratory and MRIGlobal's laboratory in Maryland.

Part of this mission is to screen inbound mail and parcels for biological hazards or contamination. The technology for detecting bio-threat agents requires accurate identification of a broad array of biological threats that can cause severe disease or death.

IMPACT: *Vigilant monitoring protects our nation's defense leaders from bio-threat agents and ensures timely medical care and treatment for potentially exposed individuals.*



PROTECTING THE ONES WHO PROTECT AND SERVE

Every day, first responders put themselves in harm's way. But what is being done to safeguard them while performing their duties in often highly stressful situations? A real-time assessment of their physiological status during a mission would give commanders the ability to rapidly make informed decisions that reduce the risk to their safety as well as those they are assisting.

MRIGlobal developed and tested a device that integrates a commercially available ear-bud health monitor with a custom-developed, miniature transmission device. Enabled with an SOS trigger, the device tracks first responders' position and health status and transmits the information to remote mission commanders in real-time. Encrypted data is transmitted via cellular or satellite.

IMPACT: *Monitoring first responders' health during incidents improves commanders' ability to manage situations and protect the health of first responders on the front lines.*

READY FOR ACTION: TRAINING FOR CHEMICAL DEFENSE

A one-of-a-kind facility with training enhancements designed, fabricated, and installed by MRIGlobal for the Department of Defense became fully operational in April.

Dignitaries gathered to unveil the enhanced facility at a ceremony at Fort Leonard Wood, Missouri.

The U.S. Army Chemical, Biological, Radiological, and Nuclear (CBRN) School, Chemical Defense Training Facility (CDTF) is now the global venue of choice for live toxic CBRN defense training.

Enhancements to the facility included 11 realistic scenarios for basic, intermediate, and advanced CBRN training programs and enable immersive training in diverse environments to challenge the senses and skills of future Joint Force leaders and units.

Modifications transformed the gray masonry walls and institutional feel with high resolution 3D graphics and state-of-the-art lighting, sound, and furnishings to provide a modern, gaming-style atmosphere through which students are trained.

MRIGlobal designed and executed facility upgrades in concert with HHI Corporation fabrication and installation efforts.

IMPACT: *Nearly 5,000 Army, Air Force, Marine Corps, Navy, Coast Guard, and allied nation military personnel will be trained at the CDTF in the next year.*



“ABSOLUTELY AMAZING TRANSFORMATION of this one-of-kind facility in the Department of Defense - truly a first class enhancement effort that has without a doubt made the CDTF the global venue of choice for live, toxic dismantled chemical reconnaissance and counter-weapons of mass destruction mission training for our Joint uniformed service members and international partners.”

—Brigadier General Andy Munera, Commandant, U.S. Army Chemical, Biological, Radiological, and Nuclear School, Fort Leonard Wood, Missouri





MAKING PROTECTIVE GEAR EVEN SAFER

Effective protective gear is sometimes all that lies between safety and life-threatening injuries for warfighters exposed to potential chemical agents. Current technology doesn't allow ensemble developers to test and measure real-time penetration of chemicals.

MRIGlobal partnered with Australian Defence Science and Technology Group to design and test a wearable, battery-operated chemical vapor sensor that wirelessly communicates real-time breakthrough data to the test operator. Penetration can now be monitored to specific locations like seams, closures, and test subject movements.

IMPACT: *Improvements in testing drives advances in protective suit design for the warfighter.*



DRIVING ADVANCES IN ROAD SAFETY

Our Transportation Research Center (TRC) develops innovative solutions that address the challenges of highway safety, congestion, and roadway design in the U.S. and abroad.



A TURN FOR THE BETTER

MRIGlobal's TRC is developing a 3D sightline modeling tool to assist state and local highway agencies design and implement safer right-turn lanes on rural and suburban highways. The tool will provide guidance to road designers on the implementation of offset right-turn lanes to improve visibility and safety at intersections.



KEEP ON TRUCKIN'

Passenger cars share the roads with trucks, pedestrians and bicyclists. Truck routes divert large trucks from mainline roadways ill-suited for large truck travel and improve safety and traffic flow for smaller vehicles.

MRIGlobal research was the basis for new guidelines for state and local highway agencies to improve access and design for trucks, including clear designation for truck routes and truck consideration in roundabout, intersection, and driveway design.

IMPACT: *Roads are safer for all users when truck access is factored into roadway design.*



PREDICTING CRASH POTENTIAL

MRIGlobal is leading research to assist the National Cooperative Highway Research Program in safety management and planning.

Engineers worked with 16 state highway agencies to develop new crash predictive models for rural and urban intersections, with and without traffic signals. The predictive models support safety decisions for roadway networks and are included in national guidance for state highway and transportation officials.

For another project, the TRC developed evaluation methods and guidance to help transportation engineers assess the risk of vehicle collisions with roadside fixed objects like signage, concrete barriers or traffic signals. Research helps planners mitigate potential crashes with improved design.

IMPACT: *Design guidance developed by MRIGlobal engineers and transportation experts makes roads safer for travel.*

ON A MISSION TO IMPROVE POWER SECTOR ACCESS AND RESILIENCY

Category 5 hurricanes Irma and Maria devastated the electrical infrastructure all over islands in the Caribbean. When the U.S. Trade and Development Agency (USTDA) organized initiatives to inform infrastructure decision-makers about more independent, reliable and energy-efficient electrical options, MRIGlobal was invited to lend its expertise.

Even with access to electricity in the Caribbean and Latin America, there are still regional disparities, especially between rural and urban areas. Local governments and utilities are looking for solutions that will improve the quality and resiliency of electricity access across the region.

MRIGlobal's energy technology expert Sayan Chakraborti was the microgrid technical specialist on a team that organized and supported two USTDA Reverse Trade Missions for power sector infrastructure decision-makers from the Caribbean and Latin America. The trade missions comprised delegates from Caribbean countries including Belize, Jamaica, the Dominican Republic, and Brazil, Peru, and Panama in Latin America.

As the technical specialist, Chakraborti presented an overview of the U.S. microgrid sector and answered technical questions as delegates visited microgrid facilities, utility companies, electrical component manufacturers, and state regulators in Washington D.C., Philadelphia, New York, and Chicago.

The visits showcased U.S. microgrid solutions such as distributed power systems and other infrastructure for power sector resiliency. The delegation included representatives from energy ministries, utility regulators, and public and private utility companies.

IMPACT: *Crippling power outages could be avoided or restored to power faster with advanced, sustainable microgrid energy solutions. Reverse Trade Missions facilitate discussions that could potentially help foreign delegates achieve their infrastructure development goals.*



M&O EXPERTISE: NREL'S PARTNERSHIP TO REDUCE EMISSIONS

Since 1977, MRIGlobal has been the management and operating partner for the U.S. Department of Energy's (DOE) National Renewable Energy Laboratory (NREL). In recognition of NREL's outstanding performance, the Department of Energy recently extended this management contract through 2023.

This year NREL, ExxonMobil and other DOE laboratories announced an exciting \$100 million agreement to focus on developing transformative advanced energy technologies with a focus on reducing emissions. ExxonMobil is funding the new partnership over the next 10 years.

IMPACT: *The agreement fosters research collaboration on projects with the potential to move beyond the laboratory, improving energy efficiency and reducing emissions on a global scale.*

INFORMING SYSTEM OPERATORS – ANY WAY THE WIND BLOWS

Harnessing wind power to generate electricity is a naturally sustainable form of energy. Wind power grid system operators need the ability to forecast to plan and meet power needs, whichever way the wind blows. That requires real-time information that's easily navigable and visually coherent.

They now have access to such information with WindView, a tool for visualizing wind power forecasts, created by NREL, Argonne National Laboratory, and the University of Texas at Dallas. WindView is a response to system operators' call for new situational awareness tools.

"The important thing for system operators is to develop an intuitive feel for what the wind on their system typically does," said Bri-Mathias Hodge, chief scientist at NREL. "WindView gives them as much information as possible to make decisions."

WindView unites a free forecaster, M3, which uses the best available machine learning forecasting techniques, both deterministic and probabilistic, with a clear presentation of wind data. Users can customize and visualize WindView forecasts, creating a sort of playground for wind power. Most important, WindView's forecasts complement an operator's fast-paced control decisions.

"Operators don't want to be wasting time or writing a query to find wind power data," said Erol Chartan, NREL researcher and principal investigator for WindView. "WindView is real time; you can see the wind events happening quickly."

Next step? DOE's Solar Energy Technologies Office is funding a rework of WindView for wind's variable resource cousin, solar energy. The design of WindView benefits forecasting in both energy resources.

WindView is beneficial for utilities, system operators, researchers, and forecast providers.

IMPACT: *The ability to more accurately forecast varying wind characteristics results in more efficient generation and distribution of wind power.*



INSPIRING AND NURTURING TOMORROW'S PROBLEM SOLVERS

Long before the movement gained momentum, MRIGlobal pioneered programs to nurture the next generation of researchers and encourage interest in Science, Technology, Engineering and Math (STEM) disciplines.

In 1956 Midwest Research Institute (now MRIGlobal) was instrumental in initiating Science Pioneers, Inc., a non-profit organization that supports the annual Greater Kansas City Science Fair, attracting thousands of student participants. Since its inception, MRIGlobal has provided leadership, funding and mentorship to the Science Pioneers and continues to support the Science Fair as its visionary sponsor.

MRIGlobal has sponsored and coached Paseo's FIRST Robotics team since its beginning in 2006, impacting the lives of more than 150 students from Paseo Academy of Fine and Performing Arts.

At the collegiate and post-graduate level, MRIGlobal has partnered with Kansas City University of Medicine and Biosciences students since 2014, providing mentorship and research opportunities in the areas of neurodegenerative

and infectious disease, cancer, Zika virus, and bioterrorism. Students advised by MRIGlobal scientists report research results at scientific meetings with an aim to publish in peer reviewed research journals.

MRIGlobal's influence extends far beyond its Kansas City headquarters. Scientists and researchers are frequently invited to speak at colleges across the country, serve on university faculty or mentor STEM students in the U.S. and as far away as Zimbabwe and Liberia, where MRIGlobal is actively engaged in research.

In the Gaithersburg, Maryland community where MRIGlobal has an office and lab, staff are engaged in local and regional science fairs, networking and mentorship activities from Boy Scout troops to graduate-level organizations that inspire and empower women in the field of science.

IMPACT: *MRIGlobal is committed to STEM education involvement in the community to cultivate the next generation of problem solvers.*



MRIGLOBAL ANNOUNCES FOUR NEW LIFE TRUSTEES

Tom Bowser, Barrett Brady, John McKelvey, and James L. Spigarelli were named Life Trustees – MRIGlobal’s highest honor – for their exceptional contributions and long-term service to the organization. The announcement was made at a June 17 reception celebrating MRIGlobal’s founding in 1944.

“MRIGlobal is indebted to each of you, Barry, Jim, John, and Tom,” said Thomas M. Sack, MRIGlobal President and CEO. “My heartfelt thanks. You have embodied your commitment to MRIGlobal, making exceptional contributions to our Board and community.”

BARRETT BRADY, Retired Senior Vice President of Highwood Properties, Inc., served on the MRIGlobal Board of Trustees for 21 years. He was a Member of the Board of Directors for eight years, serving four years as Vice Chair. Mr. Brady served on many committees including the Audit Committee; Compensation and Human Resources Committee; and Executive Committee, guiding MRIGlobal’s Executive Management Team in the areas of compensation, staff development and benefits.

JOHN MCKELVEY, Retired President and Chief Executive Officer of Midwest Research Institute (MRI), joined in 1964. He served as President and Chief Executive Officer from 1976 until he retired in 1999. Mr. McKelvey led the successful effort to obtain the award of the management and operations of the Solar Energy Research Institute (SERI) in 1977. In 1991, SERI was designated a National Laboratory under the Department of Energy and renamed the National Renewable Energy Laboratory (NREL), expanding MRI’s research roles regionally, nationally, and internationally. He was appointed to the Board of Trustees in 2013.

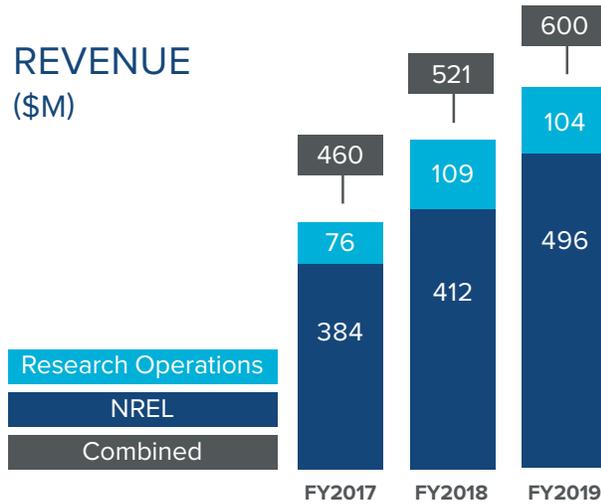
DR. JAMES L. SPIGARELLI, Retired President and Chief Executive Officer of Midwest Research Institute, joined in 1970 as an Associate Scientist. He served as President and CEO from 1999 until his retirement in 2009. Under Dr. Spigarelli’s direction, MRI established its thriving National Capital Region operation. In 2008, he led the effort to create the Alliance for Sustainable Energy, LLC, serving as the first Board Chair. The Alliance for Sustainable Energy, LLC continues to successfully manage NREL today.

TOM BOWSER, Retired President and Chief Executive Officer of Blue Cross Blue Shield of Kansas City, joined MRIGlobal’s Board of Trustees in 2008. He was appointed to MRIGlobal’s Board of Directors in 2011 and served as Board Chair for four years. He served as a member and/or chair of the Audit; Compensation and Human Resources; Nominating and Governance; and Executive Committees. Mr. Bowser provided leadership to the strategic direction of MRIGlobal and its mission.

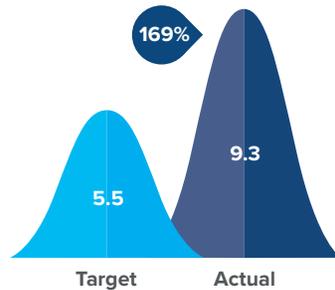


FINANCIALS

REVENUE (\$M)



2019 NET INCOME (\$M)

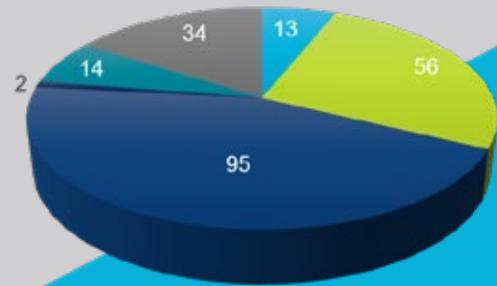


ECONOMIC IMPACT

- Awarded nearly \$810 million in federal research and development contracts and grants since 2013, boosting the local and regional economy
- MRIGlobal's workforce has grown to over 400 people; nearly 300 are based in Kansas City

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- We demonstrate and market scientific expertise to create brand awareness, gain reputation in the scientific community and increase professional development by building staff credentials
- We build scientific stature through publications, presentations, press releases, symposia and more



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