

RESONAR®

**ENHANCE
YOUR
EXPERIENCE.**



THE FATAL FLAW.

WHEN THE AVERAGE RIDER PUTS ON A HELMET, THEY'VE AUTOMATICALLY REDUCED THEIR ABILITY TO ACCURATELY PERCEIVE SURROUNDINGS.

The perception of space and distance in 360 degrees is built from the information we perceive through a combination of vision and hearing. This “re-connection” of these 2 senses is more than the simple sum of their 2 parts—it is an improvement of total sensory and spatial awareness.

The full-face and 3/4 helmets with bat 8D™ technology increase perception of location and distance of the surroundings in real time. It's like echolocation for bats.



THE SOLUTION



RESONAR® HAS DEVELOPED ACOUSTIC TECHNOLOGY THAT MIMICS THE SPATIAL AWARENESS OF A BAT IN FLIGHT.

The technology is designed to be seamlessly integrated into most full-face and 3/4 helmets that have been up to now exclusively designed to mitigate head trauma while an accident is occurring. Why could a protective helmet not evolve to assist a rider in collision avoidance in the first place?

Using the battery-less and cordless bat 8D™ technology by RESONAR®, more accidents could be avoided simply by restoring auditory awareness and reconnecting our hearing sense to our visual sense. Applicable to both street and off-road motorcycle use, this restored awareness fills in “deaf spots” we never knew were lost by covering up our ears with a protective helmet. Attenuated ear plugs for hearing protection work synergistically with bat 8D™ by limiting excessive decibels while reconnecting spatial awareness when riding in crowded traffic conditions or racing without the use of rearview mirrors.



bat 8D™

BINAURAL
ACOUSTIC
TECHNOLOGY



DESIGNED TO FIT ALL EXISTING HELMET DIMENSIONS, OUR DEVICE IS A REVOLUTIONARY (AND SIMPLE) ADAPTATION.

RESTORES DIRECTIONALITY

A rider who cannot determine the origin of an unseen and oncoming danger is at risk. RESONAR®'s proven research will enlighten scientists, helmet manufacturers, traffic safety organizations, insurance companies and riders about the need to reconnect the ears to improve all-around sensory perception.

REDUCES LATERALITY ERROR

Accurate proprioception (awareness of body position and movement) is essential in reducing the laterality effect. If the brain, via our 2 ears, cannot instantly "hear" the direction and distance of passing vehicles or traffic threats, our safety is compromised. Why would we choose to decrease hearing abilities and increase the loss of binaural auditory cues by covering up both our ears while operating a motorcycle?

RECONNECTS HEARING TO EYESIGHT

Our pair of eyes and our pair of ears have evolved over millions of years to work synergistically together, to greatly improve our overall awareness, well beyond what our eyes can do alone. RESONAR®'s bat 8D™ technology reconnects our ears' 360-degree spatial abilities to respond more quickly to changing environments while moving through space on an open motor vehicle.



**EACH ENVIRONMENT PRESENTS A
UNIQUE PERIMETER OF ACOUSTICS,
DRIVING THE NEED FOR ACUTE
SPATIAL AWARENESS.**



**A MOTORCYCLE MOVES UNIQUELY AND NIMBLY THROUGH SPACE AND TRAFFIC
HAVING THE UNIQUE ADVANTAGE OF BEING SMALLER AND MORE MANEUVERABLE
THAN AN AUTOMOBILE.**

For this reason, the rider needs to be fully enabled with all their natural senses operating at peak performance levels.

RESONAR®'s bat 8D™ technology does not amplify or modify surrounding sounds; to the contrary. It restores the rider's ability to hear naturally so the audio-visual connection that has evolved over millions of years enabling us to "survive" ...is **reconnected** while wearing a helmet.

THE DATA

**THIS INCREASED
AWARENESS OF A
RIDER'S IMMEDIATE
SURROUNDINGS
HELP IDENTIFY AND
NAVIGATE PERIPHERAL
THREATS.**

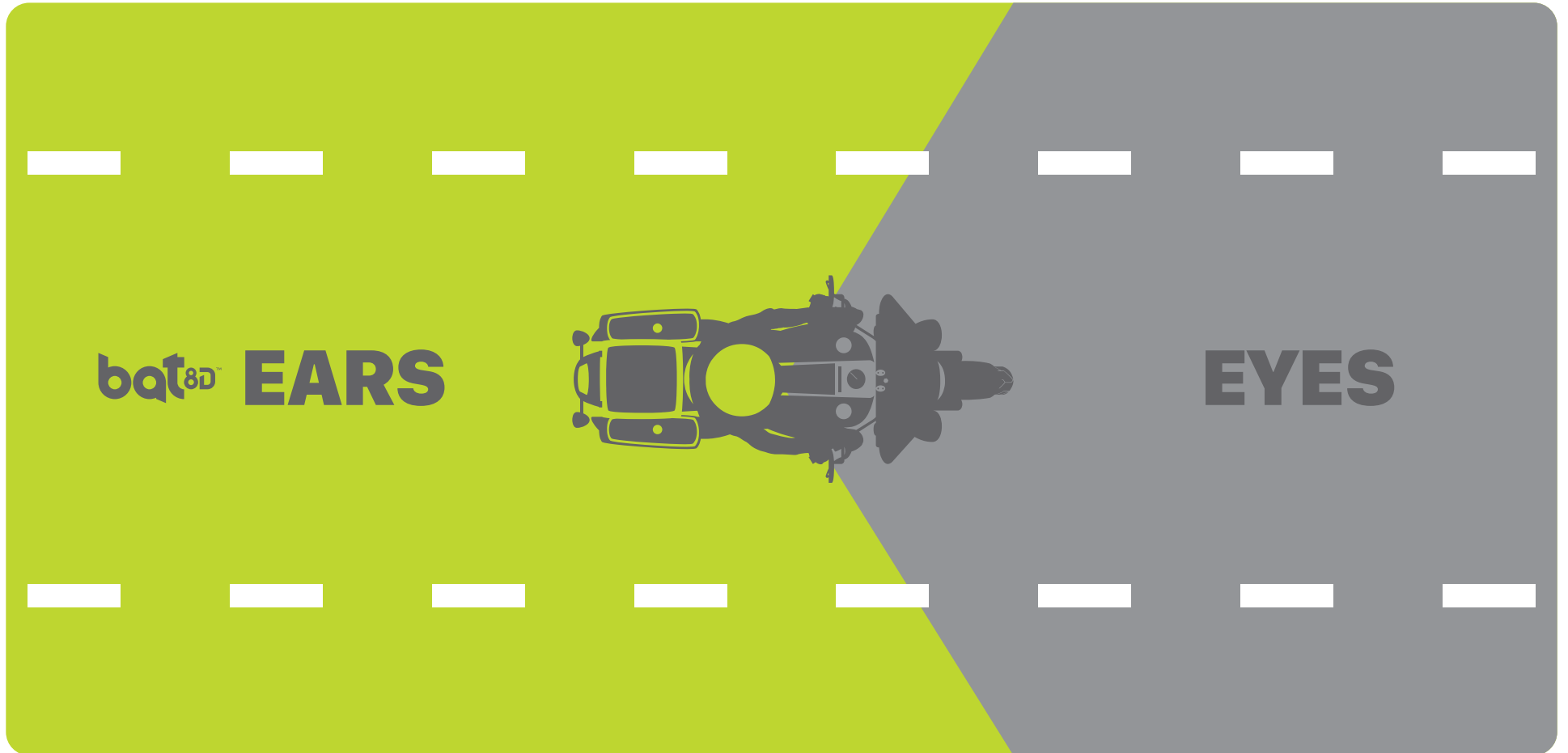
Using RESONAR®'s bat 8D™ technology equipped helmets provides enhanced sensory perception in noisy, crowded urban traffic environments and slower speed activities including motocross racing, mountain biking, football, lacrosse, equestrian sports, military, industrial and hunting applications.

The data taken in enclosed audiometry test-chambers, acoustic laboratories and in real-world traffic situations demonstrate this simple technology's effectiveness.

More details of the research and associated scientific papers are available on our website.

www.resonar.com

360-DEGREE SPATIAL-AWARENESS ZONE



THE TECHNOLOGY

**INSPIRED BY
THE ADVANCED
GEOMETRY OF
THE HUMAN EAR,
bat 8D™ USES DUAL
RECEIVERS TO
ANALYZE AND
DIRECT SOUND.**





NATURAL EAR CONTOUR

Imitating Nature is usually a good place to start. To create a simple, affordable, maintenance-free RESONAR® began with a study of the human ear. The convolutions of the external pinnae (outer ear) is highly evolved and reflective of RESONAR®'s bat 8D™ technology outside.

TURBULENCE CONTROL

An additional feature of RESONAR® bat 8D™ technology is an array of acoustic filters and materials that help control wind turbulence at speeds up to 50 mph. This allows the rider to focus on specific sounds generated by possible and peripheral threats.

CONE-SHAPED TRANSDUCER

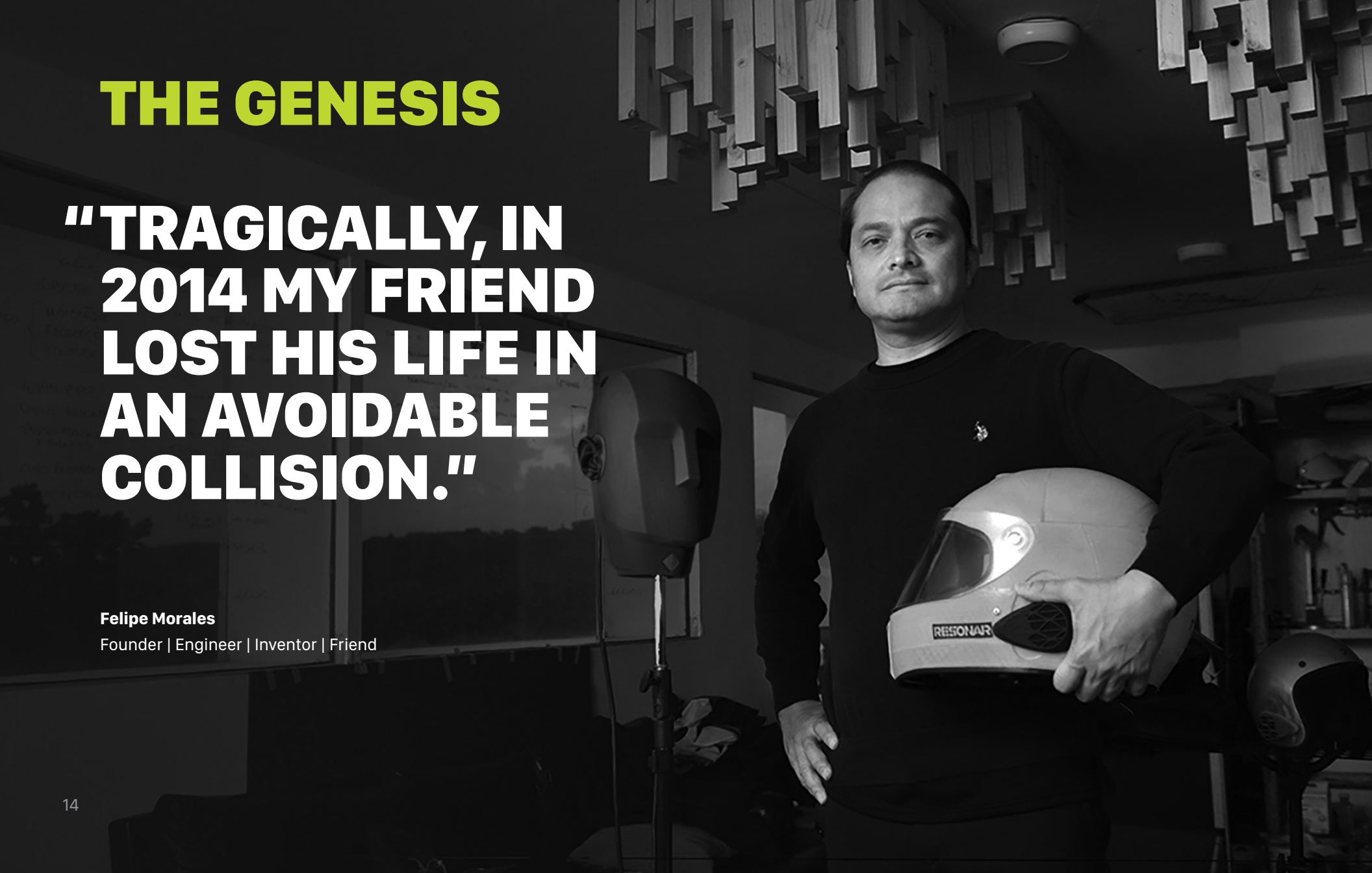
On the inside, biomimicry continues with a patented set of an acoustic canal and a cone-shaped transducer resembling the human hearing system. Designed to be tough, long-lasting, and waterproof, RESONAR® bat 8D™ inner ear carries sounds directly through the hard helmet's shell in a canal to the human ear where it can once again be heard...rather than muffled or canceled.

THE GENESIS

**"TRAGICALLY, IN
2014 MY FRIEND
LOST HIS LIFE IN
AN AVOIDABLE
COLLISION."**

Felipe Morales

Founder | Engineer | Inventor | Friend



MICHEL WEHE
FELIPE MORALES
ERIC ANDERSON



MARIO GOLAB
JOSE RAMIREZ
KEN POHLMAN



RODRIGO POSADA
JESSICA BRAGA
ALEJANDRA BEJARANO



ADRIANA MARIN
TONY CAVALIERE
JULIO UVA



SCIENTISTS ENGINEERS RESEARCHERS EXPERTS

From this tragic event an idea was born and Felipe called on his international colleagues to join in his mission. Sharing his vision, the team formed RESONAR® as an organization motivated to develop a practical, functional, and affordable solution to prevent this from happening to other motorcyclists.

The collaboration of audiometric researchers and acoustic experts resulted in a product that would use science to reconnect a rider's sense of hearing while riding with a protective helmet.

GLOBAL PATENTS

UNITED STATES CANADA MEXICO COLOMBIA
ICELAND DENMARK UNITED KINGDOM LATVIA
ESTONIA NETHERLANDS BELGIUM LUXEMBOURG
AUSTRIA GERMANY CZECH REPUBLIC HUNGARY
SLOVENIA FRANCE PORTUGAL MONACO SPAIN
CYPRUS ALBANIA MALTA GREECE RUSSIA ISRAEL
INDIA THAILAND CHINA VIETNAM SOUTH KOREA
INDONESIA AUSTRALIA...



**A PERU BRAZIL IRELAND NORWAY
IA LITHUANIA FINLAND SWEDEN
OURG LIECHTENSTEIN SWITZERLAND
GARY BULGARIA SERBIA TURKEY ITALY
AIN SAN MARINO CROATIA MACEDONIA
SRAEL EGYPT NIGERIA SOUTH AFRICA
OREA JAPAN PHILIPPINES MALAYSIA**

**"IN OUR GLOBAL RACE TOWARDS
UNPRECEDENTED PROTECTIVE
INNOVATION AND TECHNOLOGICAL
ADVANCEMENT, IT SEEMS WE FORGOT
ABOUT ONE OF THE MOST
FUNDAMENTAL OF SENSES."**

Michel Wehe

Co-Founder | Entrepreneur | Engineer | Friend

OUR PROMISE IS TO CONTINUOUSLY PROVIDE RELIABLE AND AFFORDABLE ACOUSTIC SOLUTIONS TO THE EVER-GROWING COMMUNITY OF HELMETED RIDERS, ACTION SPORTS ATHLETES AND INDUSTRIAL WORK FORCES.

OUR VISION IS TO FURTHER EXPLORE ENHANCED QUALITY AND IMPROVED SAFETY APPLICATIONS FOR SMARTER, MORE SENSORY-CONNECTED TECHNOLOGIES IN WORKING AND RECREATIONAL ENVIRONMENTS.

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bat^{8D}

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