

# FIRST RESPONDERS GROUP

## PRIORITIZING THE SECURITY AND WELL-BEING OF AMERICANS

### PUBLIC SAFETY TODAY

Today's first responders have more responsibilities, face increased threats and have smaller budgets than ever.

**240 Million 9-1-1 Calls per Year**

**LAW ENFORCEMENT** **56% More Officers Killed** in Firearm-Related Incidents in 2016 vs. 2015  
**1.2 Million** Violent Crimes Reported in 2015  
**11.2 Million** Arrests Made in 2014  
**\$14.3 Billion** in Losses from Property Crimes in 2015  
**213** Active Shooter Incidents Since 2000

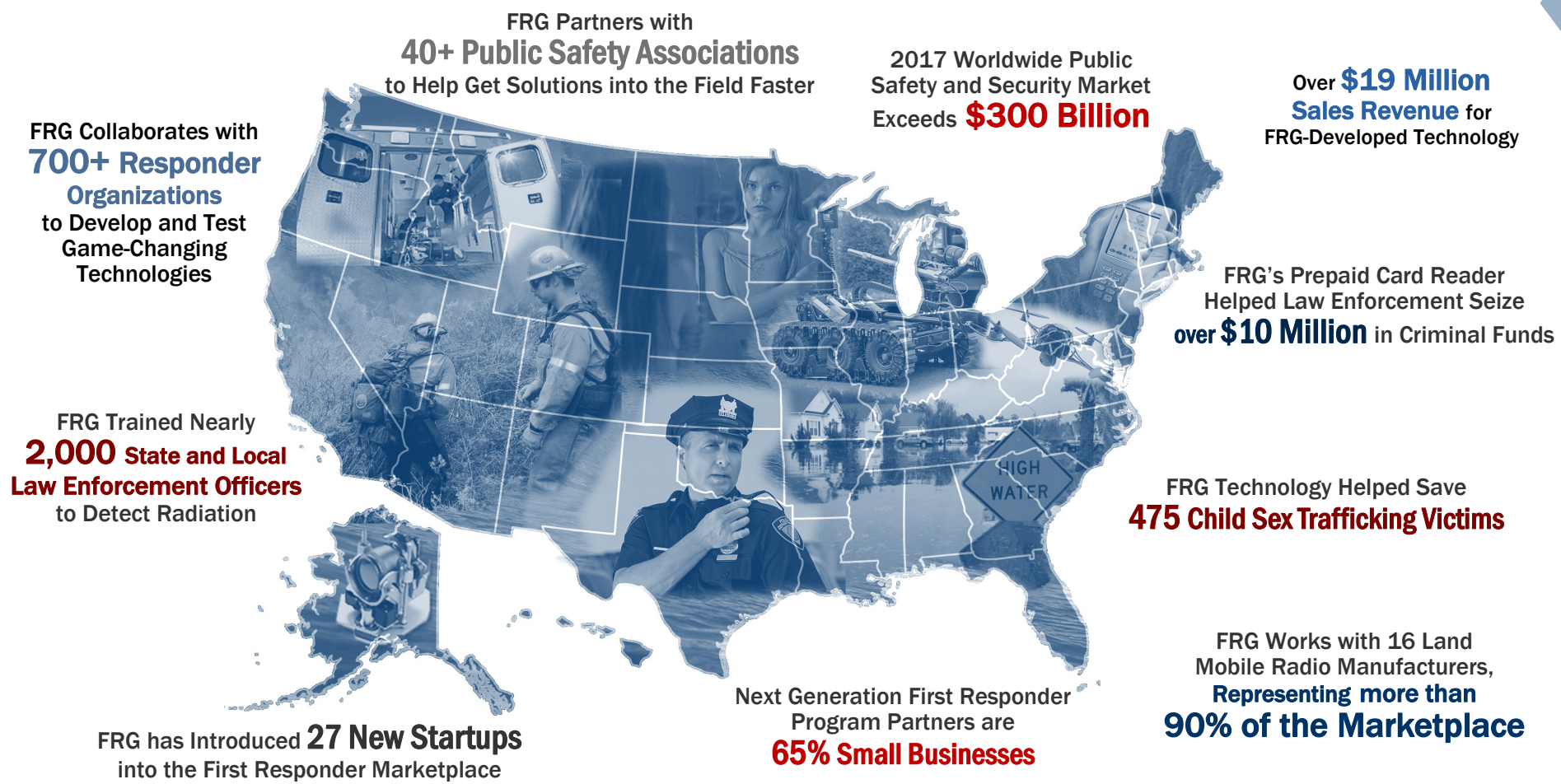
**FIRE & RESCUE** **68%** of Firefighters Get Cancer  
**\$14.3 Billion** in Property Damage from 2015 Fires  
 Over **3,000 Deaths** and 15,000 Injuries in 2015 Fires

**EMERGENCY MEDICAL SERVICES** **21,300** EMS Work Injuries in 2014  
 Of EMS Providers Surveyed in 2015, **37% Contemplated Suicide** due to Job Stress and **86% Experienced Critical Stress**

**9-1-1 & DISPATCH** **18-24%** of Dispatchers Exhibit Post Traumatic Stress Disorder Symptoms due to Job Stress  
**60%** of States had 9-1-1 Public Safety Answering Points Targeted by Cyber Attacks

**EMERGENCY MANAGEMENT** 30-year Average of **82 Deaths** and **\$7.9 Billion** per Year in Property Damage Caused by Floods  
**266 Disaster Declarations** Required Federal Assistance from 2014-2016

When law enforcement, emergency medical or fire services answer a call, the first responders must be prepared to deal with both **known and unforeseen threats and hazards**. Since 2003, the DHS Science and Technology Directorate has created **powerful public-private partnerships** to improve the security and well-being of America, and formed the First Responders Group (FRG) in 2010 to focus specifically on providing the Nation's 3.3 million first responders with the tools they need to **increase safety and effectiveness** as well as positioning American companies to be highly competitive in the **\$17 billion global first responder technology marketplace**.



**FRG Partners with 40+ Public Safety Associations** to Help Get Solutions into the Field Faster

**2017 Worldwide Public Safety and Security Market Exceeds \$300 Billion**

**Over \$19 Million Sales Revenue** for FRG-Developed Technology

**FRG Collaborates with 700+ Responder Organizations** to Develop and Test Game-Changing Technologies

**FRG Trained Nearly 2,000 State and Local Law Enforcement Officers** to Detect Radiation

**FRG has Introduced 27 New Startups** into the First Responder Marketplace

**Next Generation First Responder Program Partners are 65% Small Businesses**

**FRG's Prepaid Card Reader Helped Law Enforcement Seize over \$10 Million** in Criminal Funds

**FRG Technology Helped Save 475 Child Sex Trafficking Victims**

**FRG Works with 16 Land Mobile Radio Manufacturers, Representing more than 90% of the Marketplace**

### RETURN ON INVESTMENT

By gathering capability gaps, increasing mission effectiveness, informing and influencing industry, and transitioning solutions into the hands of first responders, FRG demonstrates success by putting impactful solutions into operational use.

#### Maximizing Mission Impact While Reducing Costs

- Launched 14 FRG-developed technologies: **\$19 million** revenue for **34,000 low-cost units** sold to date and now used by first responders
- Improved **emergency management mutual aid** in 40 states, reducing time to identify resources from 72 hours to as little as 30 minutes
- Published **1,000 SAVER Reports**—FRG's version of Consumer Reports® for responder tech—that have been **downloaded 16,000+ times**

#### Expanding the First Responder Industrial Base

- Helped **27 startups** speed up the time-to-market for responder wearable technology through the **EMERGE Program**—connecting them to investors, manufacturers and responder test beds
- Sparked industry development of **multi-band radios** for public safety and influenced commercial availability, which increased **fourfold**
- Increased number of **innovators working on interoperable responder technology** by working with **14 international partner countries**

#### FRG Technologies Get Results in Your Communities

- Identified **475 child sex trafficking victims** using **advanced facial recognition tools**, leading to their rescue from abusers
- Issued **16 bulletins** to **466 bomb squads** across the Nation about technologies and techniques to defeat **Improvised Explosive Devices**
- Advanced cellular geo-targeting to improve **Wireless Emergency Alerts** with **28,149 weather and AMBER alerts** sent since 2012
- Deployed **HURREVAC-eXtended hurricane data analytics tool** during Hurricane Matthew in 2016, informing local decision-making for **evacuations of over 2 million people**

### OUR CONSTITUENCY



**3.3 Million First Responders**

**70,000 Organizations**  
**\$183 Billion in Annual Operating Costs**

### MAKING FIRST RESPONDERS SAFER AND MORE EFFECTIVE

In today's world, first responders are up against increasingly dangerous, evolving threats when they answer the call to keep citizens safe. FRG is working with America's first responders to ensure that they are **protected, connected and fully aware**, regardless of the hazards they face.

### POWERING INDUSTRY AND SPURRING INNOVATION

Industry constantly develops cutting-edge technology, yet responders rarely benefit from the speed of innovation to improve mission response. FRG is creating a culture of public safety innovation to **expand industry capacity, grow jobs and make technology affordable**.

### SECURING COMMUNITIES ACROSS AMERICA

Whatever the cause—auto accident, weather event, terrorist attack—**state and local police, fire and emergency medical services respond first**. FRG is developing and adapting innovative technologies that **help first responders make America's communities more secure and resilient**.

# FIRST RESPONDERS GROUP

## OPENING DOORS TO ENGAGE INNOVATORS: Next Generation First Responder Apex Program

The Next Generation First Responder (NGFR) Apex Program works to make responders better **protected, connected and fully aware** by highlighting industry standards for integrating first responder technology. NGFR will **enable new, non-traditional public safety technology developers**—including startups—to easily “plug and play” their technologies into the system. NGFR **reduces barriers** to developing first responder tech **and opens doors to entrepreneurs while lowering costs and increasing choices for public safety organizations.**

- Since 2014, NGFR has worked with more than 75 technology development companies, of which **65 percent are small businesses or startups**
- NGFR and the DHS *EMERGE* program stimulate startups developing wearables for first responders. **90 percent of responders surveyed about the new tech said it was relevant and could be put to use immediately**
- NGFR **coordinates closely with industry** to refine the NGFR system design and build consensus on optimal solutions

## PUBLIC SAFETY COMMUNICATIONS FOR TODAY AND TOMORROW: Resilient Communications and Information Sharing

FRG is working to **maximize the value of government investment in public safety communications** by collaborating with other federal, state and local agencies, as well as the private sector and research institutions. FRG’s partnerships get results by:

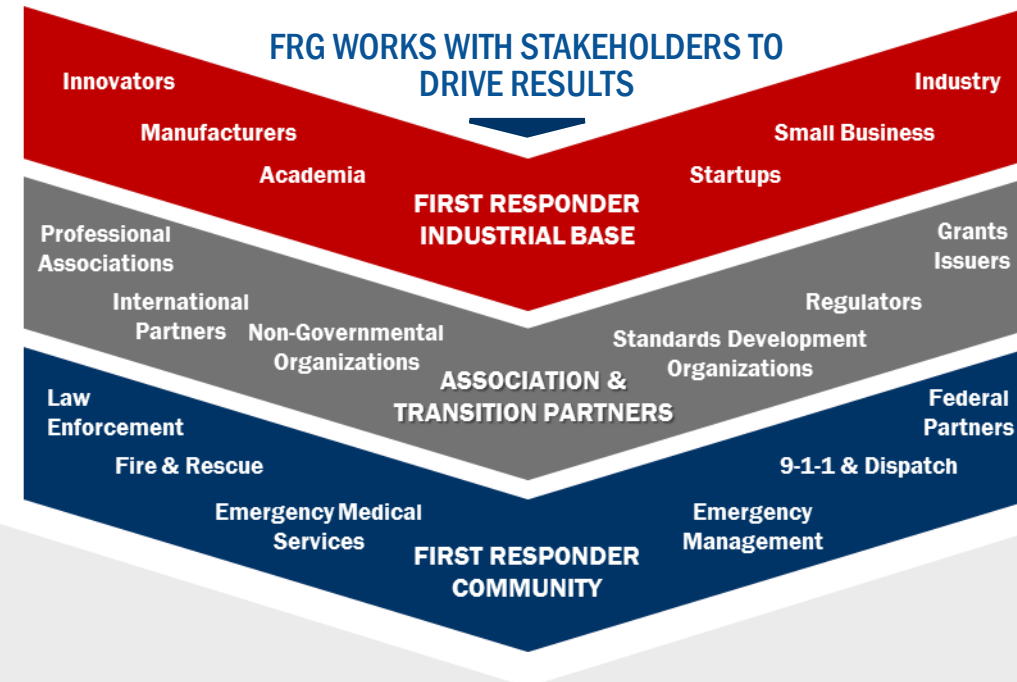
- Ensuring first responders **exchange useful, actionable information in time to make a difference** by advancing data standards, analytical tools and security assurance
- Collaborating with the First Responder Network Authority (FirstNet) to **increase interoperability and resiliency** of the FirstNet nationwide public safety broadband network
- Working with stakeholders from federal, state and local public safety organizations to **assess jamming threats, raise awareness of risks and share recommendations** on improving long-term communications resiliency through FRG’s First Responder Electronic Jamming Exercise program

## MAKING A DIFFERENCE

As the sole federal agency with broad statutory authority to pursue research, development and innovation to support first responder needs across all disciplines—including law enforcement, fire and rescue, emergency medical services, 9-1-1 call centers, and emergency managers—FRG has a **unique mission to strengthen first responder safety and effectiveness.**

### How Does FRG Do it?

- ✔ Works with first responders to identify their needs, and collaborate with them throughout research, development, testing and evaluation
- ✔ Helps vendors and manufacturers penetrate the fragmented first responder marketplace and increase the likelihood of stakeholder adoption
- ✔ Expands the First Responder Industrial Base by working with start-ups, small businesses and innovators
- ✔ Evaluates commercial tech so responders can buy the best solution for their needs
- ✔ Collaborates with other government agencies to create force-multiplying solutions and reduce duplication
- ✔ Partners with the private sector to advance innovative ideas, reduce barriers to entry, ensure interoperability, and limit duplicative research and development



# DEMONSTRATED SUCCESSES

## ENABLING INFORMED DECISIONS THAT SAVE LIVES & PROPERTY: Flood Apex Program

The Flood Apex Program empowers communities with key situational awareness and decision support tools that will **increase their resiliency against devastating floods and provide key predictive analytic tools.** Floods cause a 30-year average of 82 deaths and \$7.9 billion per year in property damage. By leveraging new and emerging technologies, FRG’s Flood program is **helping citizens and communities make better informed decisions about flood safety.** This program will reduce flood fatalities and property damage, as well as maximize flood insurance coverage, **resulting in hundreds of millions of dollars saved annually.**

## PREPARING RESPONDERS FOR DUTY: Virtual Training

FRG works on first responder virtual training environments to enable **low-cost, nationwide training that better prepares responders of all disciplines for the realities of the job**—reducing accidents, increasing effectiveness and improving communications across multiple jurisdictions. FRG’s Enhanced Dynamic Geo-Social Environment (EDGE) system converts emergency scenarios into multi-role, multi-player training for responders with varying levels of difficulty. First responder organizations are using EDGE virtual training to **practice real-life skills in safe, simulated environments without endangering civilians or themselves.**

## EXPANDING GLOBAL MARKET ACCESS: International Forum Advances First Responder Innovation

First responders around the globe share a common mission to ensure the safety and security of the people they serve. FRG launched the **International Forum to Advance First Responder Innovation** in 2014 with 14 partner countries and the European Commission to develop international standards and requirements. In addition to giving the world’s responders a greater voice, the Forum’s standards-based model encourages products developed in America be sold around the world—**more than doubling existing market access for American public safety tech.**



International Forum to Advance **FIRST RESPONDER INNOVATION**

# MAKING AMERICA SAFER, MORE EFFECTIVE AND MORE COMPETITIVE.



Homeland Security

Science and Technology