The Office for Public Safety Research Mission

The DHS Science and Technology Directorate's Office for Public Safety Research (OPSR) applies multidisciplinary research and development to strengthen the safety and effectiveness of first responders, the Homeland Security Enterprise (HSE) and of state and local partners.

OPSR works directly with first responders and the broader HSE to identify operational needs, capability gaps and requirements. As an interdisciplinary research and development hub, OPSR conducts a wide variety of applied scientific research, including social, behavioral and economic science, human identification and human performance, scientific data development, algorithm development, performance measurement, evaluations and advanced analytics to produce innovative science to meet these identified gaps.

The technologies and knowledge products provided to customers from these activities empower communities of practice with real-world solutions and capabilities resulting in the conservation of valuable personnel, time and financial resources.

OPSR focuses on three general problem areas: (1) critical infrastructure protection, (2) violence prevention and (3) enhancement of public security. Currently, five portfolios address these areas:

- Decision Support for Disaster Response
- Digital Forensics
- Human Performance to Enhance Security
- Terrorism Prevention
- Social, Behavioral and Economic Sciences

Example Programs and Portfolios (2017-2018)

Human Trafficking and Child Exploitation

OPSR advances social and behavioral science research to counter the increase in human trafficking. OPSR is also enhancing law enforcement abilities to respond to cyber tips, alerting them to sexual abuse of children. Additionally, new digital forensics tools help in the identification and prosecution of criminals involved in these activities.

Terrorism Prevention

OPSR develops and supports locally tailored terrorism prevention interventions, evaluates their effectiveness and conducts research in emerging areas of interest, including diagnostic assessments and counter narratives to divert radicalization to violence.

Behavioral, Economic and Social Sciences Engine

The Behavioral, Economic and Social Science Engine provides subject matter expertise in evaluation, technology acceptance and individual decision making to priority programs within the Department of Homeland Security (DHS) Science and Technology Directorate (S&T).

Training and Performance Optimization

OPSR is working across DHS security and law enforcement components to identify common capability gaps and operational needs that can be addressed through improved training methods, tools and technologies.

National Hurricane Program

In collaboration with the Federal Emergency Management Agency, OPSR developed a comprehensive decision support platform, enabling emergency managers to make timely and accurate evacuation-related decisions all in one space.

Global Positioning System (GPS) for Critical Infrastructure

Accurate Position, Navigation and Timing (PNT) is necessary for many critical infrastructure sectors that function using GPS. OPSR is focusing on GPS vulnerability and impacts assessments, mitigations, complementary timing technologies, awareness, outreach and education.

Examples of OPSR funded technologies: (top left) relational analysis of terrorist and extremist violence in the United States, (top right) hurricane forecasting decision support tool, (bottom left) performance training platform for TSA screeners, (bottom right) biometric and identity solutions.

To learn more about the Office for Public Safety Research contact First.Responder@hq.dhs.gov.

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