

TECHBeat

Dedicated to Reporting Developments in Technology for Law Enforcement, Corrections and Forensic Sciences

**HOUSTON AND HARRIS COUNTY
DEVELOP PARTNERSHIP TO
COMBAT ELDER ABUSE**
P. 7

UAS AND PUBLIC SAFETY

**NEW YORK PRISON USING
UAS DETECTION TECHNOLOGY**
P. 9

**INFOGRAPHIC AVAILABLE ON
sUAS AND PUBLIC SAFETY**
P. 11

**MICHIGAN STATE POLICE
VEHICLE AND MOTORCYCLE
EVALUATIONS HELP INFORM
PURCHASING DECISIONS**
P. 3

TechBeat is the monthly newsmagazine of the National Law Enforcement and Corrections Technology Center System. Our goal is to keep you up to date on technologies for the public safety community and research efforts in government and private industry.

Subscriptions:

TechBeat is free. To subscribe, go to www.justnet.org and click on subscribe. If you have questions, call (800) 248-2742, fax (301) 240-6730 or email asknlectc@justnet.org.

Photo Credits:

Photos used in this issue © Shutterstock and Michigan State Police.

Federal Program Manager:

Michael O'Shea, (202) 305-7954, michael.oshea@usdoj.gov.

Staff:

Managing Editors, Lance Miller and Ron Pierce; Editor, Michele Coppola; Lead Writer, Becky Lewis; Graphic Designers and Multimedia, Tina Kramer, Amy Ahrens and Christian Baker.

The NLECTC System

The Justice Technology Information Center (JTIC), a component of the National Institute of Justice's National Law Enforcement and Corrections Technology Center (NLECTC) System, serves as an information resource for technology and equipment related to law enforcement, corrections and courts and as a primary point of contact for administration of a voluntary equipment standards and testing program for public safety equipment.

JTIC is part of the realignment of the NLECTC System, which includes the Justice Innovation Center for Small, Rural, Tribal, and Border Criminal Justice Agencies, which focuses on the unique law enforcement challenges faced by those types of agencies; the National Criminal Justice Technology Research, Test and Evaluation Center, which provides technology-related research and testing and operational evaluations of technologies; and the Forensic Technology Center of Excellence, which supports technology research, development, testing and evaluation efforts in forensic science. In addition, a Priority Criminal Justice Needs Initiative exists to assess and prioritize technology needs across the criminal justice community.

For information, visit www.justnet.org or contact (800) 248-2742.



NCJRS is a federally funded resource offering justice and substance abuse information to support research, policy and program development worldwide.

For information, visit www.ncjrs.gov.

ANDROID AND IPHONE APPS AVAILABLE



Android and iPhone apps are now available to access *TechBeat*. Keep current with research and development efforts for public safety technology and enjoy interactive features including video, audio and embedded images.

iTunes:

<http://www.justnet.org/iphoneapp/>

Android:

<http://www.justnet.org/androidapp/>



MICHIGAN STATE POLICE



VEHICLE AND MOTORCYCLE EVALUATIONS

Help Inform Purchasing Decisions

By Becky Lewis

When John Q. Public plans to buy a new car, he often starts by researching websites online.

When Lt. Fleet Manager plans to buy new cars for his law enforcement agency, he often starts by researching the current Michigan State Police's Police Vehicle Evaluation Model Year report.

Every fall since 1975, the Michigan State Police (MSP) have evaluated patrol vehicles and published the results. Along the way they've added motorcycle evaluations, Internet publication and, starting in 1981, the sponsorship of the National Institute of Justice (NIJ) and the National Law Enforcement and Corrections Technology Center (NLECTC) System. Fleet administrators and other law enforcement administrators can, and do, use data from the evaluations to help inform their purchasing decisions.





Lt. Mike McCarthy of the MSP Training Division's Precision Driving Unit says that MSP publishes and shares their evaluation data so that "first, fleet managers can see how the vehicles compare to one another and second, manufacturers are driven to produce better vehicles so it's safer for the police industry. Each manufacturer gets to look at their performance data such as the acceleration of the vehicles, the vehicle's ability to turn and the vehicle's ability to brake. They use it to try to improve their products by either making them turn better, or slow down quicker or accelerate faster."

"Once we're done compiling the results, they become available to police agencies around the country who can use them to make good educated decisions about which police vehicle best meets their needs," says Lt. Jim Flegel of the MSP Traffic Services Section. "We use a closed course environment that simulates real-world driving conditions to test all the capabilities they would need on an emergency run or a pursuit."

In 2016, the agency evaluated 13 vehicles and six motorcycles manufactured for the 2017 model year. That report includes photos and descriptions of all vehicles evaluated, including a specified section of highlights from the manufacturer. Subsequent sections provide methodology and data for vehicle dynamics evaluation, acceleration and top speed evaluation, braking evaluation, ergonomics and communications evaluation, and fuel economy. MSP evaluates all vehicles with a clean roof, meaning there are no overhead lights or light bars, spotlights, radio antennas, sirens or other emergency equipment, and with the manufacturers' original tires.



MSP evaluates the vehicles for acceleration, top speed and braking at the FCA Proving Grounds in Chelsea, Mich., making speed and distance measurements with GPS-based equipment. MSP makes four acceleration runs — two in each direction — to 20 mph on the high-speed oval to account for wind conditions. The last acceleration run goes until top speed is reached. Evaluation also includes 20 braking stops from 60 to 0 mph with a 3-mile 45-mph cooling run at the halfway point. The deceleration rate published is an average of all 20 stops.

MSP evaluates vehicle dynamics two days later at the Grattan Raceway in Grattan, Mich. This testing involves four troopers from MSP's Precision Driving Unit who drive each car eight laps around the raceway. A cooling off period between each run allows the vehicle to be fueled and the brakes to cool. MSP records speeds via a timing loop embedded in the raceway and transponders mounted to the vehicles.

MSP evaluates motorcycles at both locations as well, for dynamics, acceleration and top speed, and braking ability. The same GPS-based equipment and loop and transponder system is used to evaluate the motorcycles. The final report can be found not only on the MSP website (<http://www.michigan.gov/msp/0,4643,7-123-16274--,00.html>), but on JUSTNET (www.justnet.org), the NLECTC System website, as well.

“The purchase of patrol vehicles is one of the largest expenditures a law enforcement agency faces. Police fleet administrators have to weigh a lot of factors when selecting a vehicle, including size, engine and



transmission combinations, and other performance-enhancing options, all of which can affect a vehicle's overall capabilities," says Alex Sundstrom, NIJ Compliance Testing program manager. "Whether an agency operates in an urban, suburban or rural area and the type of climate, also figure into the decision."

Through JUSTNET, which is operated by the Justice Technology Information Center for the NLECTC System, access is provided to the results for evaluation purposes only. Posting the reports does not constitute an endorsement of any of the vehicles or motorcycles included in the evaluation results. In addition to an archive of earlier reports dating back to 1998, which may prove useful to administrators who want to purchase used vehicles, JUSTNET also features a two-part video series titled "Driving Innovation and Improvement: Michigan State Police, Police Vehicle Evaluation Program," one of which specifically explains the value of the program to manufacturers.

To access the latest report, go to <https://justnet.org/compliant/Vehicle-Testing.html>. For more information on the NIJ Compliance Testing Program, contact Alex Sundstrom at rsundstrom@justnet.org, or (301) 240-6749. For more information on the Michigan State Police vehicle evaluations, contact Lt. Mike McCarthy at mccarthym4@michigan.gov, or (517) 230-3184.



HOUSTON AND HARRIS COUNTY *Develop Partnership to Combat* ELDER ABUSE

By Becky Lewis

According to the National Institute on Aging, most infants born in the United States in 1900 did not live past the age of 50, and life expectancy at birth now exceeds 83 years. Although often referred to as the “Golden Years,” for many individuals over age 65, they’ve become the “Vulnerable Years,” as diminished physical and mental capacity make them more susceptible to abuse, both financial and physical.

In Houston and Harris County, Texas, steps are being taken to lessen that vulnerability.

Funded by a Victims of Crime Act (VOCA) grant, the new Harris County Senior Justice Assessment Center brings together a multi-disciplinary team that includes the Houston Police Department, the Harris County Sheriff’s Office, Harris County Protective Services, the district attorney’s office, the Area Agency on Aging, Harris County Health Services, the University of Texas Health Services, and others.

Realizing that the senior population lacked cohesive services and that agencies often worked parallel investigations on the same cases with no coordination, the stakeholders came together to assemble a grant proposal. Using child-focused centers and a similar seniors’ program in California as a model, the Senior Justice Assessment Center creates defined roles and establishes processes and procedures that include determining if a crime has been committed, assessing the client’s mental capacity and ensuring physical safety. The various stakeholders work together to create and implement plans tailored to each client’s needs.

“One thing I think is great about this program is we have the state, the county and the city all acting as partners,” says Barbara Lopez, program manager for the center. “We all work in different fashions to create a good outcome.”

Because of the difficulties involved in investigating cases of elder abuse, it takes all of these varying players to create that good outcome, according to Capt. Bill Staney of the Houston Police Department’s Mental Health Division: “Often, they’re underreported, and even when they are reported, many of the victims no longer have the full mental capacity to understand what’s happening to them. It really takes a multi-disciplinary approach that includes looking at finances and documenting medical findings in order to make a case.”

An officer from the Mental Health Division serves as a coordinator within the HPD, working with other divisions such as the Special Victims Unit and the Burglary and Theft Division. In addition to working to educate investigators about the program and issues involved in elder abuse, Staney’s division will also help set up forensic interviews of center clients, as needed. According to Lopez, the initial client group mainly reported financial crimes, as well as some physical assaults.

“With some cases, we will need to get a capacity assessment, and other clients have already been deemed incapacitated,” Lopez says. “The idea is for the center to bring everyone together: law enforcement, prosecution, the guardian if there is one, a psychiatrist if needed, possibly a nurse for a physical or forensic exam, and any other agency that might provide needed social services. We’ll talk about what we need to do and establish a timeframe for actions.”

“We hope to create a safe environment where we can interview victims in conjunction with individuals who have the proper medical training and know how to communicate with this population,” Staney says. “This will help us get the information we need to conduct a successful investigation without upsetting the clients.”


For more information on the Houston Police Department’s participation in the Harris County Senior Justice Assessment Center, contact Capt. Bill Staney at (832) 394-4210 or William.staney@houstonpolice.org.





UAS AND PUBLIC SAFETY

Following are items related to unmanned aircraft systems (UAS) and public safety, the first in a series that will appear in the next few issues of Techbeat.



NEW YORK PRISON *Using* **UAS** DETECTION TECHNOLOGY

By Michele Coppola

As unmanned aircraft systems become more prevalent, correctional facilities are looking for ways to detect the devices, which have been used in the U.S. and other countries to attempt to deliver contraband to inmates.

A Long Island correctional facility is using UAS detection technology to thwart any attempts to use the flying equipment to breach prison grounds to deliver illicit items.



The Suffolk County Correctional Facility in Riverhead, N.Y., installed the detection technology in May 2016, and after a 60-day trial period of testing the detection system using the county sheriff's office UAS, decided to keep it.

According to Todd Delong, a correctional officer in the Integrated Systems Unit of the Suffolk County Sheriff's Office, the facility decided to install the technology after growing reports of people using UAS to attempt to deliver, sometimes successfully, drugs, cellphones, weapons and other contraband to correctional facilities around the U.S.

"We had not had any incursions from drones we were aware of, but these occurrences were happening more and more at other correctional facilities and we were trying to be proactive, and stay ahead of the curve," he says.

The Riverhead facility is a maximum security facility housing 800 male and female inmates. As of April 2017, the facility had not experienced attempts to penetrate prison grounds using UAS. In early 2017, the system detected two UAS in one day in a public parking lot in front of the prison, which turned out not to be a threat but confirmed the system's reliability.

"The drones were being flown in a public area in a public parking lot. It was not a threat, it was more like people who did not realize they should not be flying drones there, people playing with a Christmas present. But the system alerted us, which was good and the first real test of the system," Delong says. "It's simple to install and use and no extensive training is needed."

The \$40,000 system at the facility has five multisensory trackers installed, each of which uses acoustic, video and radio frequency sensor technology. If the system detects something, an officer at a control station sees a graphic overlay of the facility and will get an alert as to where the technology was detected, in addition to a video of it. In addition to the control station officer, alerts are sent to selected staff via email and text alerts. Data and video collected during the incursion is collected as evidence if needed.

For more information, contact Todd Delong at todd.delong@suffolkcountyny.gov.

Infographic Available on sUAS and PUBLIC SAFETY

As unmanned aircraft systems technology has advanced, so has interest in how the technology can benefit public safety missions.

An infographic is available that provides an overview of law enforcement use of small UAS (sUAS). It is for law enforcement agencies considering the use of sUAS and for communities interested in learning more about the purposes and protections surrounding their use.

The Police Foundation infographic, *sUAS and Public Safety*, highlights operational, training, and legal and regulatory compliance considerations for law enforcement agencies interested in using sUAS for public safety. It is intended to provide the reader with a broad, high-level understanding of the use of the technology for public safety.

The infographic also highlights key recommendations for law enforcement agencies on engaging their communities in the planning process. The infographic can help community members understand public safety application of sUAS.

To view and download the infographic, see <https://www.policefoundation.org/suas-and-public-safety-infographic/>.



Click to view infographic

sUAS AND PUBLIC SAFETY

Harnessing sUAS capabilities for public safety requires:

- Skills to operate the technology
- Compliance with the law
- Community understanding and support
- A pledge from law enforcement to operate the technology transparently.

DRONE: A popular term applied to unmanned aircraft systems. By definition, a drone is an unmanned aerial target.

UNMANNED AIRCRAFT: An aircraft operated without the possibility of direct human intervention from within or on the aircraft.

Terms and Types of Unmanned Aircraft
Terms are often used interchangeably to describe this type

5 Things You Need to Know

Also available from the foundation is a one-page handout on the top five things to know about an sUAS program, including understand the technology and concerns about its use, and engage the community in program planning. View *5 Things You Need to Know About Small Unmanned Aircraft Systems (sUAS) in Law Enforcement* at <https://www.policefoundation.org/publication/5-things-you-need-to-know-about-small-unmanned-aircraft-systems-suas-in-law-enforcement/>.

Source: Police Foundation

TECHshorts is a sampling of the technology projects, programs and initiatives being conducted by the Office of Justice Programs' National Institute of Justice (NIJ) and the National Law Enforcement and Corrections Technology Center (NLECTC) System, as well as other agencies. If you would like additional information concerning any of the following TECHshorts, please refer to the specific point-of-contact information that is included at the end of each entry.

In addition to TECHshorts, *JUSTNET News*, an online, weekly technology news summary containing articles relating to technology developments in public safety that have appeared in newspapers, newsmagazines and trade and professional journals, is available through the NLECTC System's website, www.justnet.org. Subscribers to *JUSTNET News* receive the news summary directly via email. To subscribe to *JUSTNET News*, go to <https://www.justnet.org/subscribe.html>, email your request to asknlectc@justnet.org or call (800) 248-2742.

Note: The mentioning of specific manufacturers or products in TECHshorts does not constitute the endorsement of the U.S. Department of Justice, NIJ or the NLECTC System.

Videos Address Police Interaction with People with Mental Illness and Officer Fatigue

National Institute of Justice

The following videos are available from the National Institute of Justice:

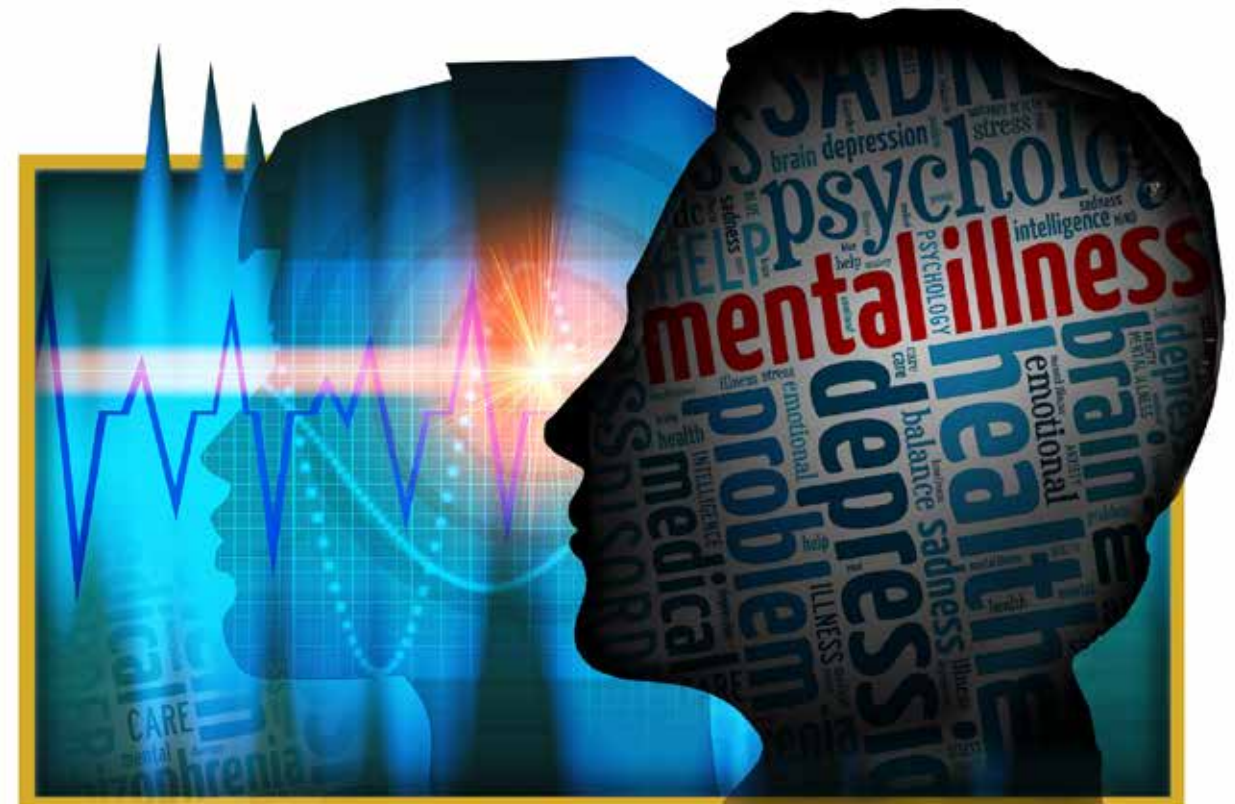
Improving Officer Safety in Interactions With Citizens Suffering From Mental Illness. Research on the brain, and associated biological effects, can help first responders and officers better understand and anticipate their citizen interactions. In this video, expert Cara Altimus discusses the importance of law enforcement and other first responders understanding mental illness, its causes and how it affects the brain. She addresses the correlation between drug addiction and mental illness, and establishing procedures and systems so that first responders can safely and successfully interact with individuals with drug addiction and/or mental illness.

To watch the video, go to https://nij.gov/multimedia/Pages/video-officer-interactions-with-citizens-suffering-from-mental-illness.aspx?utm_source=eblast-govdelivery&utm_medium=email&utm_campaign=multimedia.

Understanding the Effects of Fatigue on Law Enforcement. In this video, two researchers discuss exploring how fatigue and sleep deprivation affect officers when they make critical decisions to use deadly force.

The researchers also discuss how often law enforcement officers are fatigued, the impacts of officer fatigue and drowsy driving and the goal of implementing positive changes.

Access the video at <https://nij.gov/multimedia/Pages/video-understanding-effects-of-fatigue-on-law-enforcement.aspx>.



Report on School Crime and Safety

Bureau of Justice Statistics and National Center for Education Statistics

Indicators of School Crime & Safety: 2016, presents data on crime and safety at school from the perspectives of students, teachers and principals. It contains 23 indicators of crime and safety at school on topics such as victimization at school, teacher injury, bullying and cyber-bullying, school conditions, fights, weapons, availability and student use of drugs and alcohol, student perceptions of personal safety at school, and crime at postsecondary institutions.

Data sources include the National Crime Victimization Survey (NCVS), the School Crime Supplement to the NCVS, the Youth Risk Behavior Survey, the School Survey on Crime and Safety, and the School and Staffing Survey.

Sample findings:

- ⇒ Preliminary data show that there were 48 school associated violent deaths from July 1, 2013 through June 30, 2014.
- ⇒ In 2015, among students ages 12 to 18, there were about 841,100 nonfatal victimizations at school and 545,100 nonfatal victimizations away from school.
- ⇒ Of the 804 total hate crimes reported on college campuses in 2014, the most common type of hate crime was intimidation, followed by destruction, damage, vandalism and simple assault.

To read the report, see <https://www.bjs.gov/content/pub/pdf/iscs16.pdf>.



PUBLIC SAFETY TECHNOLOGY

JUSTNET

In The News

Following are abstracts on public safety-related articles that have appeared in newspapers, magazines and websites.

Three Samples of Carfentanil Found in Mass. for First Time

Boston Globe, (06/07/2017), Felicia Gans

The Massachusetts State Police Crime Laboratory has identified three samples of carfentanil, a lethal synthetic opioid never before identified in the state. The drug is about 100 times more potent than fentanyl and many times more potent than heroin, state police wrote in a statement. It can be absorbed through the skin or accidentally inhaled. Police said they are not aware of any deaths in Massachusetts currently tied to carfentanil, but several recent overdose deaths in New Hampshire are believed to be caused by the substance.

<https://www.bostonglobe.com/metro/2017/06/07/state-police-find-three-traces-carfentanil-first-extremely-lethal-substance-found-massachusetts/qRJ9VqpoUc9feW6zJawEoK/story.html>

St. Joseph County's New 911 Dispatch System to Launch This Month

South Bend Tribune, 06/11/17, Ted Booker

First responders and dispatchers in St. Joseph County in Indiana will soon be using a new dispatch system. When calls are taken by dispatchers, the nearly \$2 million computer-aided dispatch system will automatically give police and fire agencies basic details. In some cases, it could enable firefighters to arrive minutes earlier to a fire. Police officers will automatically receive information such as maps with the fastest routes to crime scenes.

http://www.southbendtribune.com/news/local/st-joseph-county-s-new-dispatch-system-to-launch-this/article_e7225f12-fcb2-5090-99d0-00ac53101bb.html

Cops Given Special Gear So They Don't OD During Drug Busts

The Daily Caller, (06/15/2017), Steve Birr

The Charlotte-Mecklenburg (N.C.) Police Department recently began to train its officers in the use of special protective gear when responding to a drug scene, although the officers are advised, if possible, to wait for trained crime scene technicians to handle any potential drug-related substance. The department responded to 62 drug overdose incidents during the first 70 days of this year, with 42 percent of them related to fentanyl.

<http://dailycaller.com/2017/06/15/cops-given-special-gear-so-they-dont-od-during-drug-busts/>

CONTACT US

Call the NLECTC Information Hotline at 800-248-2742 or email asknlectc@justnet.org

JUSTNET News is a service of the Justice Technology Information Center, a component of the National Law Enforcement and Corrections Technology Center (NLECTC) System, a program the Office of Justice Programs, National Institute of Justice. We are always interested in our readers' comments and feedback about this service. Please send your comments, questions or suggestions to asknlectc@justnet.org.

Subscription Details

[Subscribe to our e-TechBeat newsletter.](#)

Federal Funding Opportunities

See www.nij.gov or www.grants.gov.

Give Us Your Tech Ideas

We are actively seeking ideas to help us identify technology needs and requirements as part of the National Institute of Justice's Research, Development, Testing, and Evaluation process.

Click here for recent public safety-related articles from the news media.



WWW.JUSTNET.ORG

JUSTNET News. Includes article abstracts on law enforcement, corrections and forensics technologies that have appeared in major newspapers, magazines and periodicals and on national and international wire services and websites.

Testing Results. Up-to-date listing of public safety equipment evaluated through NIJ's testing program. Includes ballistic- and stab-resistant armor, patrol vehicles and tires, and more.

Calendar of Events. Lists upcoming meetings, seminars and training.

Social Media. Access our Facebook, Twitter and YouTube feeds for the latest news and updates.

Tech Topics. Browse for information on law enforcement, corrections and courts technologies.

Public Safety Technology in the News.

Click here for recent public safety-related articles from the news media.



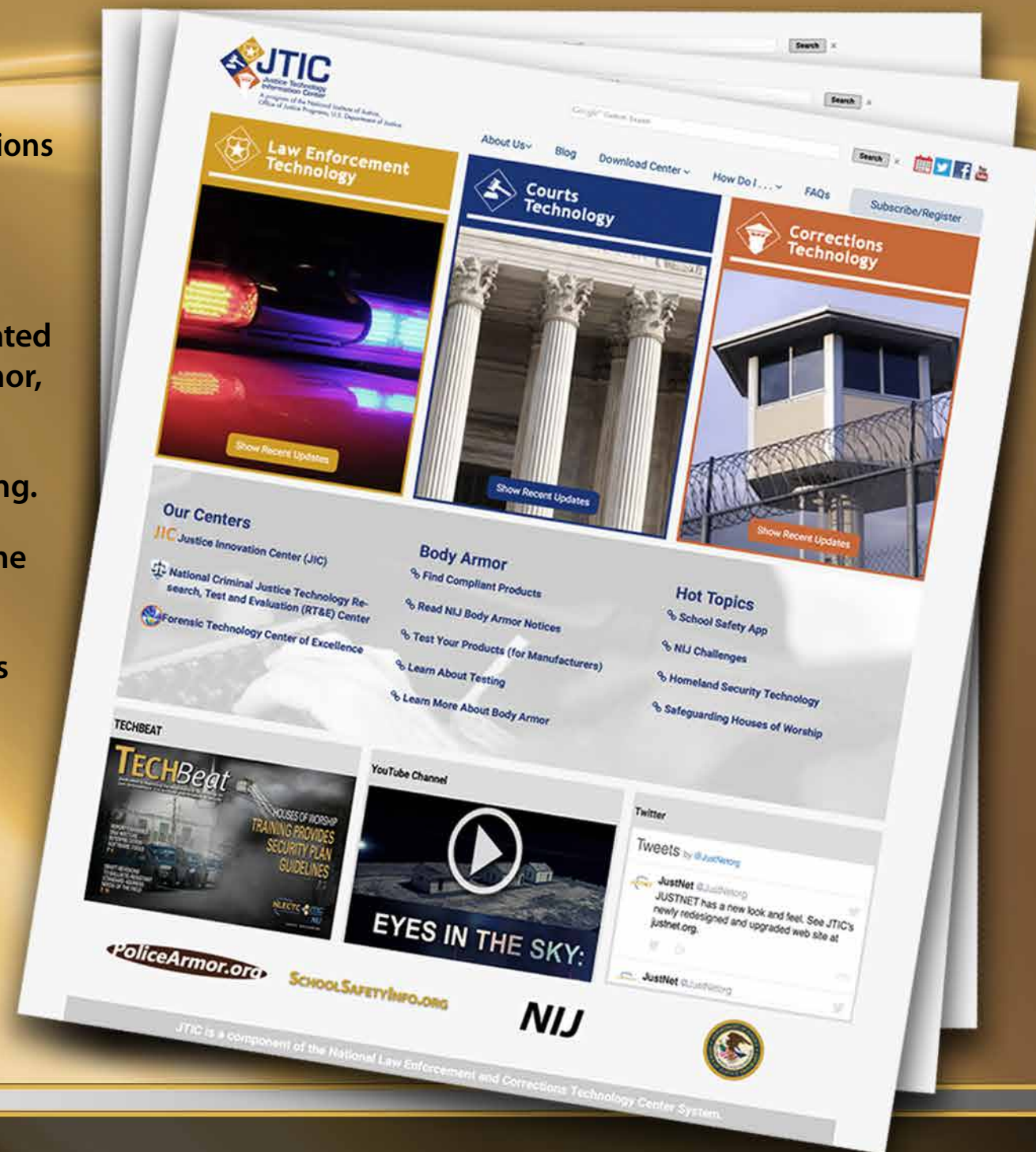
<http://www.youtube.com/JUSTNETorg>



<https://www.facebook.com/JustNetorg>



<https://twitter.com/JustNetorg>



The Justice Technology Information Center, a component of the National Law Enforcement and Corrections Technology Center System, is supported by Cooperative Agreement #2014-IJ-CX-K404 awarded by the U.S. Department of Justice, National Institute of Justice. Analyses of test results do not represent product approval or endorsement by the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice or Leidos Innovations Corporation. Points of view or opinions contained within this document are those of the authors and do not necessarily represent the official position or policies of the U.S. Department of Justice.

The National Institute of Justice is a component of the Office of Justice Programs, which also includes the Bureau of Justice Assistance; the Bureau of Justice Statistics; the Office for Victims of Crime; the Office of Juvenile Justice and Delinquency Prevention; and the Office of Sex Offender Sentencing, Monitoring, Apprehending, Registering, and Tracking.