ORGANIZATION OF SCIENTIFIC AREA COMMITTEES FOR FORENSIC SCIENCE (OSAC)

ORGANIZATIONAL SPECIFICS

Standards Organizations:	
Technical Committees:	
Other Partnering Organizations:	
Government Organizations:	NIST – Organization of Scientific Area Committees for Forensic Science (OSAC)
Industry Sector(s) / Technology:	Forensic Science
Program / Activity Website URL(s):	www.nist.gov/organization-scientific-area-committees-forensic-science

STANDARDS DRIVEN PUBLIC-PRIVATE PARTNERSHIP (PPP) OBJECTIVES

PPP Drivers:

The Organization of Scientific Areas Committees (OSAC) for Forensic Science was established in 2014, in collaboration with the National Institute of Standards and Technology (NIST) and the U.S. Department of Justice (DOJ) to help the forensic science community address some of the issues identified in the National Research Council (NRC) report titled *Strengthening Forensic Science in the United States: A Path Forward*. The report specifically identifies the need to establish standards and best practices within and between disciplines related to terminology, methodologies, and training. The initial DOJ and NIST collaboration was formalized in a Memorandum of Understanding (MOU) signed in February 2013 and later updated in an MOU signed in April 2015. In February 2014, the concept of OSAC was announced to the National Commission on Forensic Science (NCFS). The activity is administered by NIST and is part of NIST's Forensic Science Program.

PPP Goals:

OSAC's mission is to strengthen the nation's use of forensic science by facilitating the development and promoting the use of high-quality, technically sound standards. These standards define minimum requirements, best practices, standard protocols, and other guidance to help ensure that the results of forensic analysis are reliable and reproducible. The efforts work to address a lack of discipline-specific forensic science standards in 22 forensic disciplines, by convening forensic science practitioners and individuals with expertise in scientific research, measurement science, statistics, law, quality, human factors, and policy to work jointly on documents. OSAC fills this gap by:

- drafting proposed standards and sending them to standards developing organizations (SDOs), which further develop and publish them
- evaluating and approving standards for the OSAC Registry
- promoting the use of OSAC endorsed standards throughout the forensic science community

Inclusion on the OSAC Registry indicates that a standard has undergone a technical and quality review process that actively encourages feedback from forensic science practitioners, research scientists, human factors experts, statisticians, legal experts, and the public. Placement on the Registry requires consensus (as evidenced by 2/3 vote or more) of both the OSAC subcommittee that proposed the inclusion of the standard and the Forensic Science Standards Board. Recent additions to the registry cover DNA mixture interpretation, digital evidence examination, and wildlife forensics. The OSAC Registry includes two types of standards:

- **SDO-published standards** have completed the consensus process of an external standards developing organization (SDO) and have been approved by OSAC for placement on the Registry.
- **OSAC Proposed Standards** have been drafted by OSAC and given to an SDO for further development and publication. They have undergone the same OSAC technical and quality review process as the SDO-published standards on the Registry. Each OSAC Proposed Standard may be revised during the SDO development process; once available, an SDO-published standard will replace the OSAC Proposed Standard on the Registry after

completing the technical and quality review at OSAC. To help fill the standards gap while an SDO completes its process, OSAC encourages the forensic science community to implement the OSAC Proposed Standards.

In addition to drafting standards, OSAC may develop and share other work products that support standards advancement and implementation. For example, OSAC documents any research and development (R&D) needs that are identified during the standards development process and shares it with the forensic science community. These needs may benefit a wide variety of stakeholders both associated with the NIST and external to the agency. Documenting R&D needs helps inform NIST researchers and NIST's Center for Statistics and Applications in Forensic Science (CSAFE) regarding valuable projects to consider as they perform research to advance the practice of forensic science. They can also serve as useful input for the National Institute of Justice (NIJ) when making decisions about funding opportunities as NIJ awards various grants and agreements for research, development and evaluation projects that support the forensic science community.

Public Sector Role & Participation:

Administered by NIST, OSAC's 800+ volunteer members and affiliates work in forensic laboratories and other institutions around the country. Following core principles of balance, consensus, harmonization and openness, these experts work together to draft and evaluate forensic science standards via a transparent, consensus-based process that allows for participation by all stakeholders. OSAC collaborates with and supports a wide range of stakeholders with varied interests:

- NIST
- U.S. Department of Justice (DOJ)
- Federal, state, and local government agencies
- Forensic science service providers
- Representatives of the criminal justice system
- International and national standards development organizations (SDOs)
- Professional organizations (forensic science and others)
- Private sector manufacturers and service vendors supplying forensic service providers
- Quality system providers (e.g., accrediting and certifying bodies and proficiency test providers)
- Academic institutions
- The public

OSAC members are appointed on an annual basis (each October) to the Forensic Science Standards Board (FSSB), scientific area committees (SACs), subcommittees and interdisciplinary committees and may also serve on task groups. OSAC affiliates are appointed as needed to serve on task groups. For example, OSAC subcommittees routinely form task groups to address specific forensic science issues. OSAC affiliates are selected from the applicant pool and appointed by the chair of the relevant OSAC committee to help with the specific task group assignments. OSAC membership positions have three-year terms and are eligible for reappointment to a second three-year term.

To ensure balance of representation, NIST also provides funding for OSAC members to attend OSAC's in-person meetings.
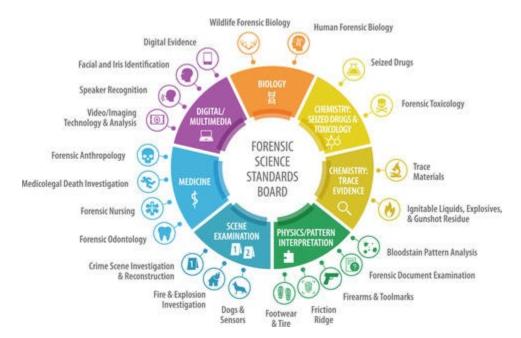
Implementation Methods:

OSAC is governed by a Forensic Science Standards Board (FSSB) which meets virtually each month and in-person each quarter to:
- facilitate the promulgation of standards that will support the development of quality benchmarks and enhance consistency across the forensic science community
- discuss and address issues related to the OSAC standards development process
- coordinate the activities of OSAC's Scientific Area Committees (SACs), subcommittees, and interdisciplinary committees

OSAC's technical mission is carried out by its volunteer members and affiliates organized into committees, subcommittees and task groups including:

- Seven [Scientific Area Committees](#) (SACs)
- 22 discipline-specific [subcommittees](#) (SCs)
- FSSB [Resource Task Groups](#)

The OSAC Program Office at NIST manages OSAC communications including issuing [OSAC News](#), a monthly [Standards Bulletin](#), and a quarterly [newsletter](#).

Measurement of Success:

As of August 26, 2024, there were 199 standards posted on the OSAC Registry in 22 forensic science disciplines, including interdisciplinary standards. As of the same date, there were also 182 FSSPs that had completed and submitted an OSAC Registry Standards Implementation Form from 31 states and four foreign countries. The 182 FSSPs' forms contain the implementation status related to the relevant standards on the OSAC Registry applicable to the disciplines practiced within the agencies. The number of standards reported by the 182 FSSPs that have been implemented either fully or partially continues to grow and OSAC holds a focused open enrollment period each summer encouraging FSSPs to submit new implementation forms or update existing implementation status information.

In measuring the success of OSAC, it is key to assess the degree to which standards on the OSAC Registry have been implemented by the agencies which have submitted implementation forms as of August 2024. While there are many more FSSPs that have implemented standards that have not shared that information and remain unknown to OSAC, the important point is that each year more standards are added to the OSAC Registry and more FSSPs are implementing these standards into their practice, thus making improvements in forensic science in the U.S.

To further illustrate the extent of implementation, the [status table](#) lists the 178 standards on the OSAC Registry (categorized by discipline in alphabetical order) as of January 2024 and the number of FSSPs that have implemented those standards. This data was reported as part of the *Measuring the Impact of Implementation: 2023*.

Key Takeaways:

- The makeup of the U.S. justice system and the forensic science community includes public and private sector experts. The testing and data collection services (for example) make an impact on court rulings and the lives of citizens in every region of this country. Having a balanced representation of experts directly participating in OSAC is critical.

- An open and transparent process to develop standards within OSAC and SDOs, and a mechanism for reviewing all standards that are included in the OSAC registry, helps ensure the technical content is relevant.
- There are complexities in which forensic science standards are utilized in the U.S. and there is not one final acceptance of a standard like there are for other industries. The OSAC Registry provides users with confidence in the standards' technical merit and one location to identify them. This access and trust help the system by which forensics are evaluated and decision making, and society at large.

Advice for Others

OSAC brings together members from the practicing forensic science community and academic researchers, legal experts, quality experts, human factors experts, and statisticians. The diversity of input that goes into documents generated by OSAC is a strength. The practicing forensic science community brings the reality of working in operational laboratories, which include casework backlogs and limited financial resources. The other members share academic research, quality assurance practices, and legal and human factors perspectives which tend to be different than the practicing community. The technical discussions and trade-offs made by these individuals in pursuit of producing useful guidance that continues to move the forensic science community forward is a foundational driver of OSAC's success.

Other public-private partnerships and industries can benefit by involving diverse stakeholders in their document development process to generate healthy discussions which leads to more robust and better-informed outputs.