

ISAO Standards Organization

Improving the Nation's Cybersecurity Posture



ISAO
Standards Organization

2018 YEAR IN REVIEW



ABOUT THE ISAO SO

SELECTION: In October 2015, the U.S. Department of Homeland Security selected a team led by The University of Texas at San Antonio, with support from LMI and the Retail Cyber Intelligence Sharing Center (R-CISC), to form the Information Sharing and Analysis Organization Standards Organization (ISAO SO), a non-governmental organization, to facilitate the implementation of Presidential Executive Order 13691.

EXECUTIVE ORDER: Presidential Executive Order 13691 provides guidelines for robust and effective information sharing and analysis related to cybersecurity risks, incidents and best practices.

MISSION: Improve the nation's cybersecurity posture by identifying standards and guidelines for robust and effective information sharing related to cybersecurity risks, incidents and best practices.



A LETTER FROM THE EXECUTIVE DIRECTOR



The need for two-way information sharing was a regular topic of discussion in 2018, and we can be confident that the need to improve the nation's cybersecurity posture through information sharing will only increase. As the need for standards and guidelines continues, I'm excited to provide an update on the ISAO Standards Organization (SO) and its mission to identify standards and guidelines for effective information sharing with this 2018 Year in Review.

For the third-straight-year, the ISAO

SO successfully published multiple documents with the expert support of volunteers within the information sharing community. This year we began receiving feedback from new and emerging ISAOs on a routine basis about how those documents have helped lay the foundation for their information sharing organization.

We also appreciate feedback from throughout the information sharing ecosystem on documents before publication. Together, we can continue to define best practices as they relate to cybersecurity risks and incidents. This is why, in part, our efforts to foster and encourage open communication among work group leaders and volunteers lead to a new document production process this year. Whereas previous working groups were assigned a new topic per community feedback, each working group is now project-focused, led by a volunteer with support from the members.

Our efforts to engage with the community also resulted in another successful International Information Sharing Conference! Speakers from

around the world, and within both public- and private-industries, all spoke to the value of improving information sharing by providing their unique insights into the work we are doing to make an impact on community and industry leaders.

We were also excited to host the first public meeting of the National Council of Registered ISAOs at the International Information Sharing Conference. The ISAO SO looks forward to working with this member-driven organization on their efforts to act on behalf of organizations within the information sharing ecosystem.

I'd like to take this opportunity to thank our staff, working group volunteers, working group leaders and the ISAO community-at-large for their continued dedication to the information sharing community and for their efforts in increasing the security and resiliency of our nation.

Sincerely,

Gregory B. White, Ph.D.
Executive Director
ISAO Standards Organization

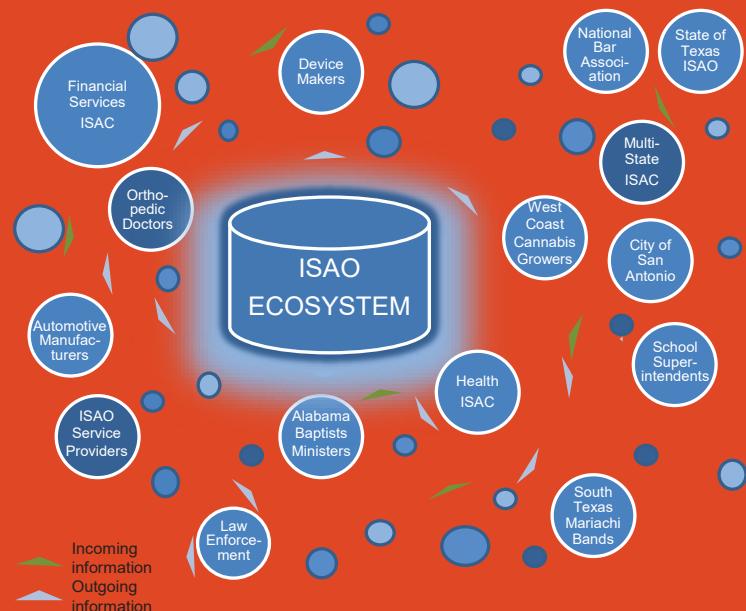
INFORMATION SHARING ECOSYSTEM

DIGEST OF REGISTERED INFORMATION SHARING GROUPS

- Advanced Cyber Security Center
- Arizona Cyber Threat Response Alliance (ACTRA)
- **Arizona Cyber Warfare Range**
- Automotive ISAC
- Aviation ISAC
- Cybersecurity Analysis, Intelligence and Information Research Institute (CAIIRI)
- California Cybersecurity Information Sharing Organization (CalCISO)
- Center for Model Based Regulation
- Columbus Collaboratory
- Communications ISAC
- **Cyber Houston**
- Cyber Information Sharing and Collaboration Program (CISCP)
- **Cyber Resilience Institute**
- **Cyber Threat Alliance**
- **CyberUSA**
- **Cyber Wyoming**
- Defense Industrial Base ISAC
- Defense Security Information Exchange (DSIE)
- Downstream Natural Gas ISAC (DNG ISAC)
- Electricity ISAC
- Emergency Management and Response ISAC
- Energy Analytic Security Exchange (EASE)
- EnergySec
- **Faith-Based ISAO**
- Financial Services ISAC
- **Fortify 24x7**
- **GBC ISAOs**
- GICSR Global Situational Awareness Center (GSAC)
- **Global Directors & Officers ISAO**
- Global Resilience Federation (GRF)
- Healthcare Ready
- HITRUST
- Hospitality Technology Next Generation
- Indiana ISAC
- Information Technology ISAC
- InfraGard
- International Association of

ECOSYSTEM OVERVIEW

The concept of the ecosystem overview demonstrates how the flow of incoming and outgoing information could look as the ecosystem expands from dozens to hundreds of information sharing groups.



- Certified ISAOs (IACI)
- IoT ISAO
- Legal Services ISAO
- Maritime and Port Security ISAO
- Maritime ISAC
- Maryland ISAO
- Medical Device ISAO
- Mid-Atlantic Cyber Center (MACC)
- Multi-State ISAC
- National Council of ISACs
- National Credit Union ISAO
- National Cybersecurity Society
- **National Defense ISAC**
- National Health ISAC (NH-ISAC)
- Northeast Ohio CyberConsortium
- Oil and Natural Gas ISAC
- Real Estate ISAC
- Regional Information Sharing Systems
- Research and Education Network ISAC
- Retail Cyber Intelligence Sharing Center (R-CISC)
- Retail Industry ISAO – National Retail Federation
- **Sensato ISAO**
- Small and Mid-Sized Business ISAO (SMB ISAO)
- **Small Business Supply Chain ISAO**
- Southern California ISAO
- Sports ISAO
- Surface Transportation, Public Transportation, and Over-The-Road Bus ISACs
- Texas CISO Council
- Trustworthy Accountability Group (TAG)
- Water ISAC

***Note:** Information sharing groups in orange were added to the ISAO SO national list of registered information sharing groups in 2018.*

ISAO TESTIMONIALS

“The team at ISAO SO have been an impressive group to work with. They are informed, practical, expedient and forward looking. They have also built a platform which answers the most critical questions we had in forming a new ISAO. Well done.”

“The documents were a critical part of helping us create and plan our ISAO two years ago; it gave us great perspective on other areas that we had to consider in order to achieve success.”



VALUE OF THE ISAOS

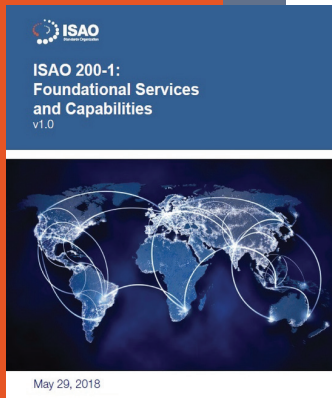
An information sharing and analysis organization (ISAO) is any group of individuals or organizations with a purpose of collecting, analyzing, and disseminating cyber or relevant information in order to prevent, detect, mitigate and recover from risks, events or incidents against the confidentiality, integrity, availability, and reliability of information and systems. Additionally, each ISAO may determine for itself whether it will share information with the government.

Any group with a shared interest in collaborating to improve its members' individual and collective cybersecurity posture can form an ISAO.

What makes the ISAO construct so powerful is its potential to widely and rapidly propagate critical cybersecurity threat and incident response information across numerous communities of interest that are currently underserved from a cybersecurity perspective.

By establishing a scalable model, ISAOs can be constructed to meet the modest needs of a niche local market or the challenging demands of an 8,000-company software trade association. We are now in a position to create a national network of ISAOs that could rapidly share information about threats at a pace and scale that would dramatically reduce the effective lifespan of an adversary exploit and alter the balance between offense and defense.

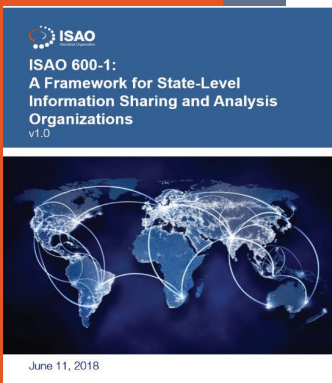
DOCUMENT DEVELOPMENT



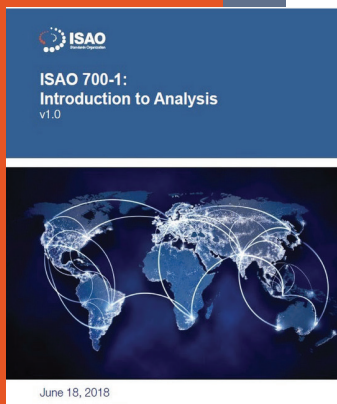
2018 PUBLISHED PRODUCTS ON ISAO.ORG

The ISAO SO published three new documents, including:

- ISAO 200-1: Foundational Services and Capabilities
- ISAO 600-1: A Framework for State-Level Information Sharing and Analysis Organizations
- ISAO 700-1: Introduction to Analysis



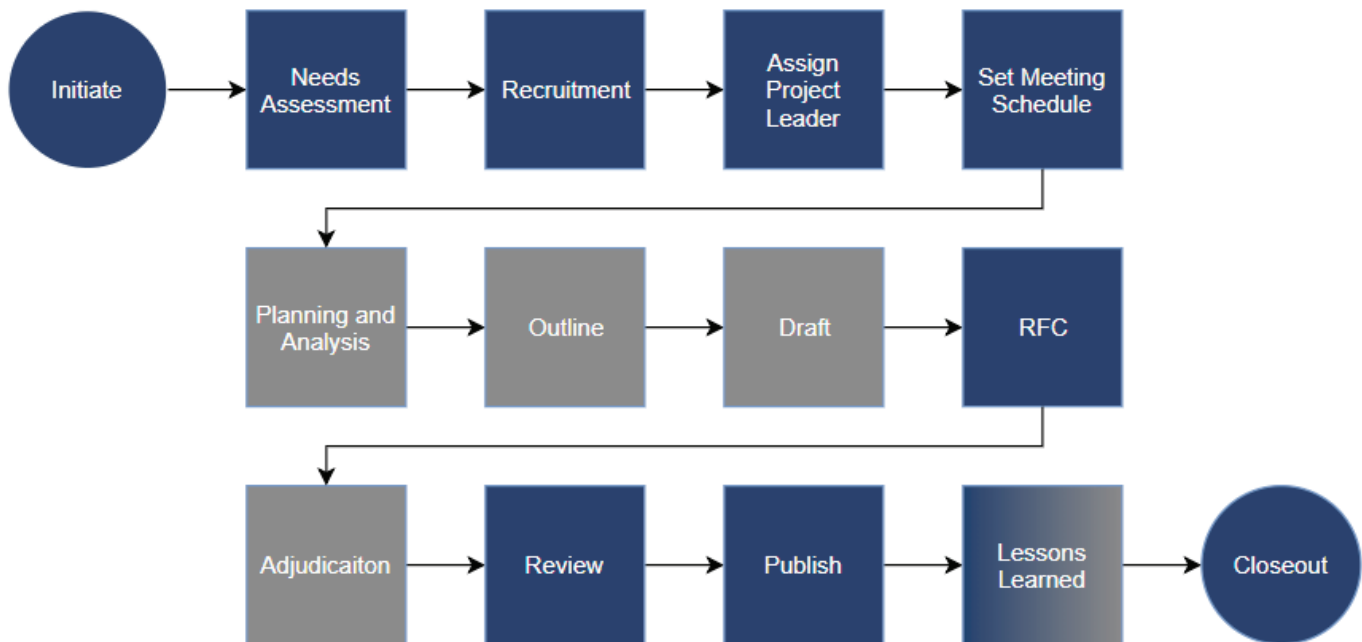
Document Development
is Driven by the Needs
of the ISAO Ecosystem



Documents in Development for 2019:

- ISAO SP 2000: Crisis Action Playbook
- ISAO 300-2: Automated Cyber Threat Intelligence Sharing
- ISAO 500-1: U.S. Transnational Cybersecurity Information Sharing
- ISAO SP 6001: State-Level Enabling and Partnering with Private Sector ISAOs

DOCUMENT REVIEW PROCESS



In July 2018, the ISAO SO announced a restructure to the document review process.

Historically, ISAO SO documents were developed through working groups. The working groups were assigned a focused topic in different areas of concern by the information sharing community. In some cases, volunteers belonged to multiple working groups. In a continued effort to maximize the expertise and passion of these volunteers, the

ISAO SO restructured the format to focus on problem statements for new documents rather than limiting a specific document to a specific group.

Now, as new document topics are determined, working group volunteers are asked to commit to documents that fit their area of expertise and interest.

As part of the new process, the ISAO SO drafts the Needs Statement, and there is a call

for one to two leads to drive the effort. Once the volunteers have been established, the timeline is determined and the document research and development begins.

The review, comment, adjudication and publishing process has not changed.

This new structure provides an opportunity for fresh commitment to working on a document. Visit ISAO.org to learn more.

GROWING AND SUPPORTING THE ECOSYSTEM

NATIONAL LIST OF REGISTERED ISAOs

The ISAO SO national list of registered information sharing groups continued to expand the number of information sharing groups included in 2018. The list not only provides the names of the groups, but also includes a brief synopsis, link to their website, contact information and more. The purpose of this initiative is to provide the community with a comprehensive list of information sharing groups and their services. The listing has proven to be especially helpful to new and emerging ISAOs as they begin to navigate the information sharing ecosystem.

ISAO SO MARKETPLACE

The marketplace is designed to serve as a one-stop shop for information sharing organizations to discover services, tools and capabilities to assist growing their organizations. The marketplace connects ISAOs with solutions for their operational needs. This centralized collection of products, services and capabilities is designed to assist ISAOs as they establish their operations, meet the needs of their membership and grow to be a successful information sharing organization.

ISAO ECOSYSTEM SPOTLIGHT WEBINARS

A new webinar series launched on March 21, 2018 to engage the greater information sharing and analysis community and provide timely information on trending and technical topics of interest. The bi-monthly series, the ISAO Ecosystem Spotlight, covered topics ranging from the Department of Homeland Security's (DHS) Automated Indicator Sharing (AIS) portal and the GDPR Impact on Cybersecurity Information Sharing to how to Optimize ISAO Intelligence into Your Security Workflow.

The ISAO SO is dedicated to supporting the creation and enhancement of new, established and existing ISAOs.

National
Registry
of ISAOs

ISAO SO
Marketplace

ISAO
Ecosystem
Spotlight
Webinars

INTERNATIONAL INFORMATION SHARING CONFERENCE (IISC)

The Information Sharing and Analysis Organization (ISAO SO) hosted attendees from around the world in Tysons Corner, Virginia for the Second Annual International Information Sharing Conference (IISC) on Sept. 11-12, 2018. The two-day event brought together the public and private sector to discuss best practices, lessons learned and the future of information sharing efforts.

The conference began with Acting Director Bradford Willke, of DHS's Stakeholder Engagement and Cybersecurity Infrastructure, as he discussed the shared responsibility of public/private partnerships. He emphasized the value of information sharing

during emergencies and the need for trusted mechanisms to counter cyber threats.

Other highlights from the conference included Steve Ingram, of PwC Australia, as he provided unique insights into Australia's cyber security strategy and how they are addressing the concerns by 89 percent of Australia's CEOs about cyber threats.

Anyck Turgeon, the IBM Global CISO, also captivated attendees by sharing the art of the possible. Turgeon shared three ways we can innovate information sharing practices: by prioritizing cyber-resilience; zooming analysis with AI and Quantum Contextualization of cyber-intelligence; and

delivering unprecedented outcomes with orchestration.

In addition to the IISC featuring many breakout sessions and networking opportunities, the ISAO SO hosted the first public meeting of the National Council of Registered ISAOs (NCRI). The NCRI's Interim Chairman Matt Gardner led the discussion on the NCRI Charter and long-term goals, among other topics, while emphasizing their request for input from the information sharing community to direct their continued efforts.

For a recap of speakers and access to many of their presentations, visit the Past Events page on ISAO.org.



2018 INFORMATION SHARING HALL OF FAME AWARDS

The ISAO SO presented the Second Annual Information Sharing Hall of Fame Awards at the International Information Sharing Conference on Sept. 12, 2018. The awards recognized those individuals and companies who have demonstrated the highest standards of professional competence and selflessness and have contributed significantly to the promotion of the information sharing ecosystem.

Nominations were accepted on the ISAO SO website, ISAO.org. The winners in the two award categories included:

Information Sharing Hall of Fame 2018 Inductee—*Individual:*



Douglas DePeppe, *The Cyber Resilience Institute (CRI)*

DePeppe was honored for being identified as a notable leader and visionary based upon his leadership in advancing, growing and shaping the information sharing community. DePeppe, president of the non-profit Cyber Resilience Institute, is a retired Army JAG officer and a cyber attorney, specializing in advising clients on all matters pertaining to cyber policy, liability, strategy, incident response and other business issues.

Information Sharing Hall of Fame 2018 Inductees—*Organizations:*



Small and Mid-Sized Business ISAO

The SMB ISAO was recognized as an award winner, in part, for their collaborative focus that stimulated education, workforce development, innovation and research and development, specifically aimed for supporting the small and mid-size business, as well as advancing all aspects of cybersecurity, technology, business and organizational resiliency, and security standards through the sharing of threat intelligence.



Information Technology ISAC

The IT ISAC was honored, in part, for their continued engagement and impact on the information sharing ecosystem, their lead role in the creation of the National Council of ISACs, and their leadership efforts in industry engagement in various national exercises, including all six Cyber Storm exercises, which identified ways to improve sharing between industry and government, within industry, and also within government.

PARTNERSHIP

INFRAGARD



The ISAO SO announced its first official strategic partnership with InfraGard on July 2, 2018. As an organization dedicated to sharing information intelligence to prevent hostile acts against the United States, InfraGard complements the ISAO SO's efforts to create a more secure and resilient nation that is connected, informed and empowered.

InfraGard, a non-profit organization, serves as a partnership between the Federal Bureau of Investigation (FBI) and members of the private sector. The InfraGard program provides a vehicle for seamless public-private collaboration with government that expedites the timely exchange of information and promotes mutual learning opportunities relevant to the protection of Critical Infrastructure. InfraGard's members are dedicated to contributing industry specific insight and advancing national security.

The goal of this partnership is to improve the sharing of information and intelligence through collaboration at the national, state, local and organizational levels.

COLLABORATION

NATIONAL COUNCIL OF REGISTERED ISAOs



The National Council of Registered ISAOs (NCRI) is a member-driven organization that was formed in August 2018 to act on behalf of organizations within the information sharing ecosystem. The NCRI was created to be a leading voice in the information sharing ecosystem, representing its members at international, federal and state levels. The organization will focus on the needs of the information sharing community.

The NCRI was developed in response to positive feedback from the information sharing ecosystem as part of a survey developed by the ISAO Standards Organization (ISAO SO). The NCRI held its first public meeting at the International Information Sharing Conference (IISC) on Sept. 12, 2018, and was led by interim chairman Matt Gardner.

The ISAO SO will collaborate with the NCRI on the IISC in 2019. For more information, visit NCRISAOS.org.

CONNECTING WITH THE COMMUNITY

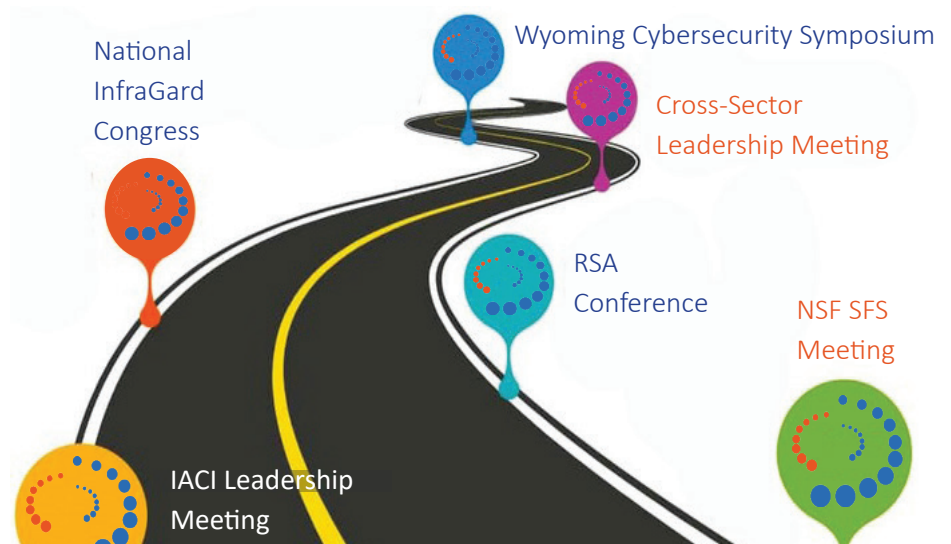
Meeting with and building relationships with various information sharing organizations is key to the success of the ISAO SO, and helps the SO determine what guidelines are needed and what types of support are needed.

The continued effort to connect with the community was seen throughout 2018 as the ISAO SO team hit the road to meet with researchers at the Pacific Northwest National Labs in Richland, Washington, and participate in incident response table top exercises in San Antonio, Texas. Other activities included meeting with IACI leaders and attending international events such as the One Conference on Cybersecurity in the Hague, Netherlands.

The ISAO SO also took advantage of invitations to speak on the increased value of information sharing at events such as the National InfraGard Congress, Wyoming Cybersecurity Symposium and CONSULT 2018 conference.

Other highlights in 2018 included

traveling to San Francisco in September 2018 to exhibit at RSA Conference, one of the largest information security conferences in the world. The team engaged a packed exhibit hall and brought attention to attendees—many found within the information sharing community—about free resources available on ISAO.org.



2018 WEB GROWTH

ISAO.org Continued to Increase its Number of Page Views and Unique Visits


32.5% PAGE VIEWS INCREASED OVER 2017

TOTAL PAGE VIEWS
60,114

UNIQUE USERS INCREASED **30.9%**



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contact@isao.org

ABOUT US

The ISAO Standards Organization works with existing information sharing organizations, owners and operators of critical infrastructure, relevant agencies and other public- and private-sector stakeholders through a voluntary consensus standards development process to identify a common set of voluntary standards for the creation and functioning of ISAOs. These standards address, but are not limited to, contractual agreements, business processes, operating procedures, technical specifications and privacy protections.

We are building best practices and lessons learned from existing information sharing organizations, as well as developing a voluntary consensus standards development process that leverages industry, government, and academic expertise through working groups.