2019
YEAR IN REVIEW

ISAO
Standards Organization

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

As cyber-attacks became one of the fastest growing crimes in 2019, and with targeted attacks on communities on the rise, information sharing and analysis organizations (ISAOs) have become more important than ever to the nation's cybersecurity posture. As the need for standards and guidelines continues, I'm excited to provide an overview on the ISAO Standards Organization (SO) efforts in our mission to identify standards and guidelines for effective information sharing.

Since October 2015, in response to Presidential Executive Order 13691, the ISAO SO has been working in a non-governmental capacity to develop voluntary consensus standards to guide emerging and established information sharing organizations as they navigate a changing landscape of privacy laws and protections, contractual agreements, business processes, operating procedure and more.

In 2019, I'm excited to share that we published our 11th document on *Automated Cyber Threat Intelligence Sharing*, with additional documents being published in the coming year. For the fourth-straight-year, the ISAO SO published documents with the expert support of volunteers and group leaders within the information sharing community. Due to the global interest in these documents, we also translated some documents into Japanese thanks to the volunteer efforts of the Information-Technology Promotion Agency, Japan.

Improving the nation's cybersecurity posture is a truly collaborative effort. The ISAO SO documents wouldn't be possible without support from volunteers; they are developed for the benefit of the entire information sharing community. Together, we can define best practices as they relate to cybersecurity risks and incidents.

Additionally, our efforts to engage with the community resulted in several successful International Information Sharing Conferences over the past several years! Since 2017, speakers from around the world, and within both public- and private-industries, have met with the information sharing community at conferences from Tysons, Virginia, to San Antonio, Texas. Themes targeted timely topics around improving information sharing, engaging communities and how small and mid-size businesses can effectively participate in information sharing organizations activities to prevent and recover from cyber-attacks.

ISAOs are powerful because of their potential to widely and rapidly propagate critical cybersecurity threat and incident response information across numerous communities of interest. Over the past several years, the ISAO SO has facilitated meetings, forums, roundtables, webinars and leadership calls to aid the ISAO community in improving their member resilience and support their efforts.

The ISAO SO has aided the ecosystem through the creation and continued support of the online Marketplace, which was created as a one-stop shop for information sharing organizations to discover services, tools and capabilities to assist in growing their organizations. Additionally, we continue to add to - and enhance - the online listings database of existing ISAOs!

In 2018, we surveyed the ecosystem to assess the need for a council that would represent, collaborate and coordinate with the ISAO ecosystem at the local, state and federal levels of government. After receiving an 85 percent response rate in favor for a member-driven organization that could serve as a voice in the information sharing ecosystem, we were excited to help establish the National Council of Registered ISAOs (NCRI), under direction of ISAO SO Working Group leaders. The NCRI is now a fully developed, volunteer organization that we look forward to working with for the benefit of the information sharing ecosystem in the coming years.

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

Sincerely,

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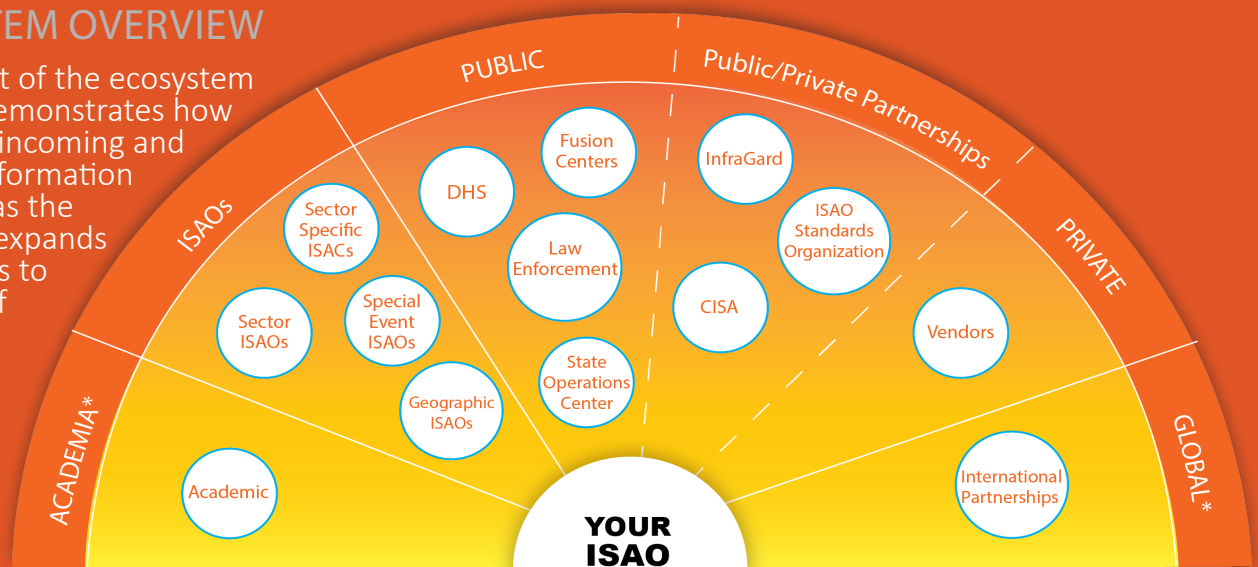Executive Director
ISAO Standards Organization

INFORMATION SHARING ECOSYSTEM

DIGEST OF REGISTERED INFORMATION SHARING GROUPS

- **Accelerate Diagnostics**
- 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
- **CyberHawaii**
- **Cybersecurity Collaborative**
- 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)
- **Global Trafficking ISAO**
- Healthcare Ready
- HITRUST
- Hospitality Technology Next Generation
- **Houston Banking ISAO**

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.

PUBLIC | Public/Private Partnerships

ISAOs

ACADEMIA*

PRIVATE

GLOBAL*

Fusion Centers

DHS

Sector Specific ISACs

InfraGard

ISAO Standards Organization

Law Enforcement

CISA

Sector ISAOs

Special Event ISAOs

Vendors

State Operations Center

Geographic ISAOs

Academic

YOUR ISAO

International Partnerships

*Note: Some aspects of the ecosystem cross multiple areas.

- Indiana ISAC
- Information Technology ISAC
- InfraGard
- **InsuraShield**
- International Association of Certified ISAOs (IACI)
- IoT ISAO
- Legal Services ISAO
- **Los Angeles Cyber Lab**
- **Louisiana Business Emergency Operations Center (LABEOC)**
- 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

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.

ISAO SO DOCUMENTS

ISAO 300-2:
Automating Cyber Threat
Intelligence Sharing
v1.0

April 5, 2019
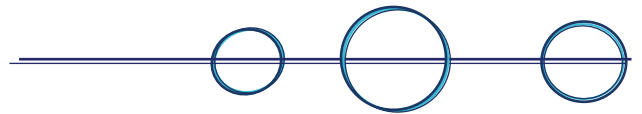
PUBLISHED PRODUCTS ON ISAO.ORG

- ISAO 600-2: U.S. Government Relations, Programs, and Services
- ISAO 100-1: Introduction to Information Sharing and Analysis Organizations
- ISAO 100-2: Guidelines for Establishing an ISAO
- ISAO 300-1: Introduction to Information Sharing
- ISAO SP 1000: Forming a Tax Exempt Entity
- ISAO SP 4000: Protecting Consumer Privacy in Cybersecurity Information Sharing
- ISAO SP 8000: FAQs for ISAO General Counsels
- ISAO 200-1: Foundational Services and Capabilities *(in English & Japanese)*
- ISAO 600-1: Framework for State-Level ISAOs
- ISAO 700-1: Introduction to Analysis *(in English & Japanese)*
- ISAO 300-2: Automated Cyber Threat Intelligence Sharing

Documents in Development for 2020:

- ISAO 400-1: Emerging State and Local Cybersecurity Laws and Regulations Impacting Information Sharing
- ISAO 500-1: U.S. Transnational Cybersecurity Information Sharing
- ISAO SP 6001: State-Level Enabling and Partnering with Private Sector ISAOs

DOCUMENT VOLUNTEERS

When the ISAO SO was tasked with improving the nation's cybersecurity posture by identifying standards for robust and effective information sharing and analysis, the ISAO SO promptly promoted collaboration across the entire information sharing ecosystem. Input from academia, government, industry and members of the public, along with insights from the established information sharing organizations and centers, was welcome and encouraged. Our process has not changed! Let us know if you or your organization are able to volunteer to provide expertise and insights on upcoming documents.

2019 INFORMATION SHARING HALL OF FAME AWARDS

The ISAO SO presented the Third Annual Information Sharing Hall of Fame Awards at the International Information Sharing Conference on August 22, 2019. 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 recognized were the National Council of Registered ISACs (NCI), in the Organizational category, and Bonnie Moss, executive director of the SMB ISAO, in the Indivudal category.

Information Sharing Hall of Fame 2019 Inductee—*Individual:*

Bonnie Moss was honored with the Hall of Fame Award for being identified as a notable leader and visionary based upon her leadership in advancing, growing and shaping the information sharing community. She was nominated, in part, for her positive attitude and continuous efforts to actively engage the information sharing community, and hard work in improving the cybersecurity posture of small- and mid-sized businesses across the nation through effective information sharing and analysis related to cybersecurity risks, incidents and best practices.

Information Sharing Hall of Fame 2019 Inductees—*Organization:*

The National Council of ISACs (NCI) was recognized as an Organizational award winner for their continued efforts to collaborate and coordinate with ISAOs in the private sector with critical infrastructure and government. Since establishing in 2003, the NCI has created a history of helping build the information sharing ecosystem, have set the stage and provided examples for others hoping to become part of the information sharing movement.

Past Inductees

David Powell, CyberUSA and Federal Business Council, 2017

Douglas DePeppe, The Cyber Resilience Institute (CRI), 2018

The MITRE Corporation, 2017

SMB ISAO, 2018

IT ISAC, 2018

INTERNATIONAL INFORMATION SHARING CONFERENCES (IISC)

The Information Sharing and Analysis Organization Standards Organization (ISAO SO) hosted attendees from around the world in Tysons Corner, Virginia for our first two conferences, and to a more central location in San Antonio, Texas in 2019. The two-day events brought together the public and private sector to discuss best practices, lessons learned and the future of information sharing efforts.

Conference themes targeted timely topics around improving information sharing, engaging communities in ISAO efforts and how small and mid-size businesses can effectively participate in information sharing organizations activities to prevent and recover from cyber-attacks. Conference recaps and speaker presentations are available on ISAO.org.
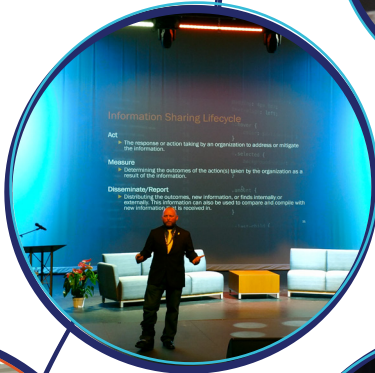
PARTNERSHIP

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 collaborated 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. Connecting with the community helps the SO determine what guidelines are needed and what types of support are needed.

Since launching in 2015, the ISAO SO has continued efforts to connect with the ecoystem through incident response table top excercises, speaking on the increased value of information sharing at events such as the National InfraGard Congress, Wyoming Cybersecurity Symposium and CONSULT conferences, attending international events, exhibiting at RSA to engage attendees about free resources available on ISAO.org and facilitating public forums and webinars, among other events.

11 PUBLIC ONLINE **MEETINGS**

3 ECOSYSTEM **SPOTLIGHT WEBINARS**

4 IN-PERSON **FORUMS**

3 INTERNATIONAL INFORMATION **SHARING CONFERENCES**

9 ONLINE ROUNDTABLE **DISCUSSIONS**

2019 WEB GROWTH

ISAO.org Continued to Increase its Unique Visits and Sessions over 2018

9.8% INCREASE IN SESSIONS

TOTAL PAGE VIEWS **60,105**

UNIQUE USERS INCREASED **24.1%**

![ISAO Standards Organization logo]

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.

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