GLOBAL CYBERSECURITY ALLIANCE

2022
Year in Review

The ISA Global Cybersecurity Alliance (ISAGCA) is a collaborative forum to advance OT cybersecurity awareness, education, readiness, standardization, and knowledge sharing.

The ISA Global Cybersecurity Alliance is made up of 50+ member companies and industry groups, representing more than $1.5 trillion in aggregate revenue across more than 2,400 combined worldwide locations. Automation and cybersecurity provider members serve 31 different industries, underscoring the broad applicability of the ISA/IEC 62443 series of standards.

Advocacy and Adoption

ISAGCA works with a broad spectrum of stakeholders to encourage reliance upon ISA/IEC 62443 in laws, regulations, and other standards across industry sectors. 2022 was a year of strong efforts across all aspects of adoption and advocacy work.

Industry Sector Adoption:

In addition to existing sector-specific security profiles for smart buildings and smart cities (through the ISA Security Compliance Institute (ISCI), National Electrical Manufacturers Association (NEMA), and Building Certification Systems (BCS)) and medical devices (through the Medical Device Innovation, Safety, and Security Consortium (MDISS)), in 2022 the International Association of Classification Societies (IACS) moved to reference ISA/IEC 62443 in maritime standards UR-E26 and UR-E27, requiring mandatory reference for onboard controls beginning in January 2024. In the electric power sector, the ISA99 standard committee and its working group (WG14) initiated development of a security profile for substations with support from the US Department of Energy.

United States Efforts:

- New York state legislators to include cybersecurity requirements based on ISA/IEC 62443 to the Critical Infrastructure Standards and Procedures (CRISP) Act
- Cybersecurity Infrastructure Security Agency (CISA) published Cross-Sector Performance Goals (CPG) document that references ISA/IEC 62443
- ISAGCA leadership invited to brief the White House Office of the National Cyber Director, Strategy and Budget Directorate, on ISA cybersecurity programs, including the utility of the ISA/IEC 62443 series of standards for a potential consumer IoT labeling scheme
- Key ISAGCA suppliers summoned to the White House as industry consultants on Manufacturing and Critical infrastructure Cybersecurity Guidelines to encourage ISA/IEC 62443 standards references
- ISA/IEC 62443 and ISASecure® are now referenced in the latest edition of NFPA 70® National Electric Code® published by the National Fire Protection Association (NFPA).
- Work continues to cross reference the 62443-3-3 standard to the NIST Cybersecurity Framework (CSF). This effort has included a presentation to NIST regarding the IIoT component study and a rough mapping to NIST 800-213A, *IoT Device Cybersecurity Requirement Catalog*, participation in a NIST workshop on the future of IoT security, and recommended enhancements to the ISA/IEC 62443 series of standards to evaluate defining a cloud provider role and addressing patch management in a cloud environment.
- Additional cross reference and mapping activities include a project to map ISA/IEC 62443 to the Cloud Security Alliance Cloud Control Matrix, and another in collaboration with the MITRE System of Trust to map recognized sources for supply chain requirements to ISA/IEC 62443.
- Collaborating with LOGIIC to develop an oil and gas procurement document that includes ISA/IEC 62443 product certification requirements.
- Continued participation in North American Transmission Forum Supplier Sharing calls provides electric sector suppliers exposure to the value of the ISA/IEC 62443 and ISO/IEC 27001/2 standards for ensuring support for sector cybersecurity requirements in procurement.
- Provided post-event comments for the November 2022 Federal Energy Regulatory Commission (FERC) Supply Chain Tech Conference, advocating for use of ISA/IEC 62443 and related third party certification programs (like ISASecure®) to confirm commercial off-the-shelf (COTS) product security capabilities.
- ISAGCA stood up the End User Council in 2022 and elected Scott Reynolds from Johns Manville as the Chairman. The EUC approved a project to develop an ISA/IEC 62443 application usage guide for operating sites. The EUC agreed to merge this effort with a similar initiative already underway in the ISASecure program. Other smaller studies are under evaluation.

European Union and UK Efforts

- ISAGCA leadership presented at SmartGrid Forum in Edinburgh, as well as the SmartGrid Forums 62443 Week.
- Efforts continue to support the designation of ISA/IEC 62443 as a horizontal standard by IEC, the International Electrotechnical Commission

Asia Pacific Efforts

- Standards Malaysia has agreed to adopt ISA/IEC 62443 as a national Malaysian Standard, thanks to continued efforts by ISAGCA member Petronas.

- ISAGCA has engaged the Taiwan government to identify opportunities to reference 62443 into law or national standards. Taiwan has now adopted ISA/IEC 62443 into public policy language for securing operational technology.

Compliance and Prevention

The 2021 Completion of the joint ISCI / ISAGCA study, "IIOT Devices and Gateway Certification Based on the ISA/IEC 62443 Standards," led to the launch of a new ISASecure® IIOT component certification (ICSA) in December 2022.

The follow-on joint ISCI/ISAGCA study, "IIOT System Certification Based on the 62443 Standard," was completed in September 2022 and is in final review with the ISA99 committee. This landmark study is slated for April 2023 release.

ICS4ICS

Part of the ISA Global Cybersecurity Alliance mission is to help operating sites around the globe become resilient to cybersecurity attacks and to have a defined method to respond and recover from attacks. As a result, ISAGCA stood up ICS4ICS, the Incident Command System for Industrial Control Systems.

ICS4ICS
Incident Command System
for Industrial Control Systems

Key accomplishments in 2022 include:

- Megan Samford, ISAGCA Advisory Board Chairman and Schneider Electric VP CPSO Energy Management, testified before US Congress about the value of ICS4ICS

- Continued efforts with the US Department of Homeland Security (DHS) to transition a portion of ICS4ICS to a public-private partnership

- Created exercise materials by customizing Federal Emergency Management Agency (FEMA) and DHS templates for industrial incidents

- Conducted the first demonstration exercise of ICS4ICS at S4 in April 2022, and established schedules to repeat these exercises at five more events around the world

- Established an ICS4ICS credentialing program and credentialed our first three ICS incident commanders, with three additional credentials slated for 2023

- In terms of building awareness, the ICS4ICS community presented ICS4ICS at 22 events around the world, launched a website for the program, and recruited 1,200 volunteers and interested parties
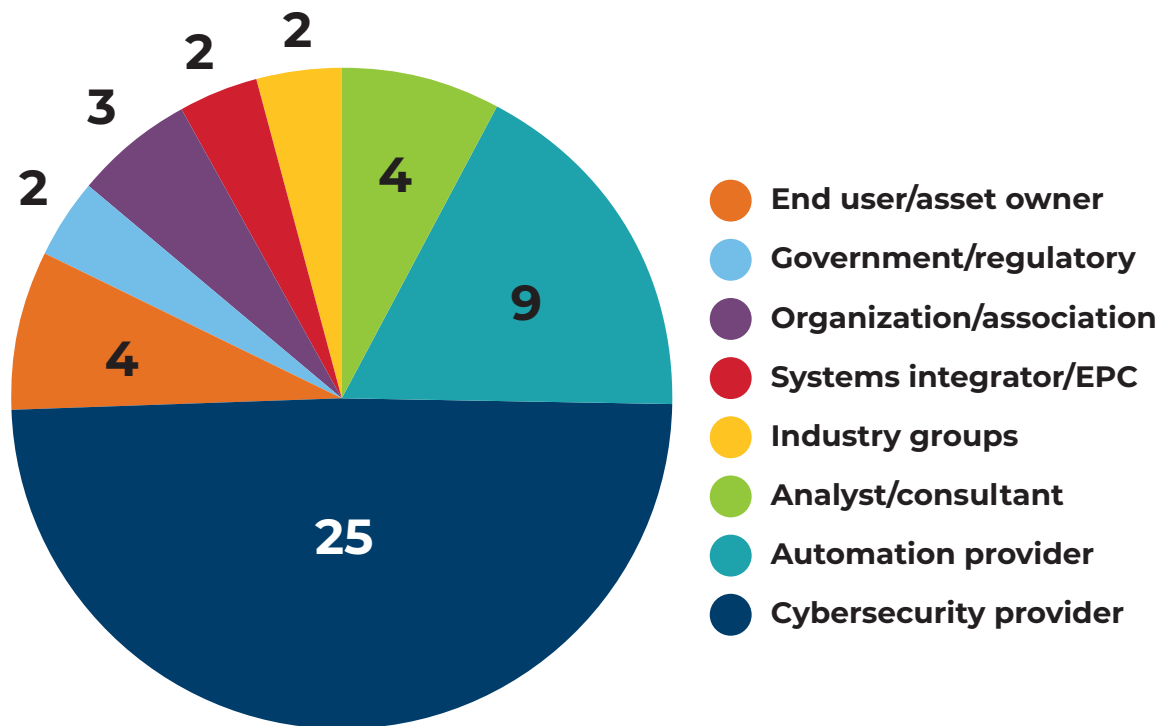
To learn more, visit www.ics4ics.org.

ISAGCA Members

ISAGCA members are leaders in the movement to prioritize OT cybersecurity.

- 51 total members, including industry groups
- Representing more than $1.5 trillion in aggregate revenue
- 2,400 combined worldwide locations
- 31 different industries, underscoring the broad applicability of ISA/IEC 62443 standards

Member type breakdown

Legend:
- End user/asset owner
- Government/regulatory
- Organization/association
- Systems integrator/EPC
- Industry groups
- Analyst/consultant
- Automation provider
- Cybersecurity provider

Awareness and Outreach

Blog/Communications

2022 was a successful year of continued growth for the ISAGCA blog, with 54 total blog posts by 21 contributing authors. Overall, the blog enjoyed a year-over-year readership increase of 74.5%.

Total blog posts views in 2022: 92,609

Year over year readership increase: 74.5%

Total blogs in 2022: 54

Total blog posts views for 2022-published content: 39,223

Average blog post views for 2022 blog posts: 726.35

Number of guest bloggers in 2022: 21

Media/PR

2022 was a terrific year for media and PR growth, with 26 media placements – an 85% increase over 2021. This included national level coverage with Nasdaq. Working together with a deep well of SMEs, many of whom actively participate in the Awareness & Outreach committee, ISAGCA saw broad reach across multiple industry sector publications, including IT security, manufacturing, food, medical, oil and gas, and water wastewater.

Total media placements in 2022: 25

Year over year increase in placements: 84%

Number of SMEs from ISAGCA membership: 14

Total media mentions of ISA and ISA/IEC 62443 in 2022: 5,473

Training and Education

ISA offers industry-leading cybersecurity training courses and knowledge-based certificate recognition program are based on ISA/IEC 62443—the world's only consensus-based series of automation cyber-security standards, and a key component of govern-ment plans.

Improved ISA/IEC 62443 four cybersecurity courses and associated certificate program

- Published ISASecure for Product Suppliers and Assessors (IC47) course and ran two suc-cessful courses
- Published six Microlearning modules to the YouTube platform
- Supported Industrial Cybersecurity Community of Practice (ICSCOP)
- Completed ICS Survey with INL/Idaho State University and ISAGCA. Phase 1 was to collect data on Knowledge Needed to Secure Control Systems

Certificate 1
Prerequisite for certificates 2, 3, and 4

Certificate 2   **Certificate 3**   **Certificate 4**

Take certificates 2, 3, and 4 in any order

Earn all four certificates and receive the Cybersecurity Expert Certificate

Leadership

ISAGCA welcomes its Advisory Board leadership for 2023-2024:

- Chair of the Advisory Board: Matt Bohne, Vice President and Chief Product Cybersecurity Officer at Honeywell
- Vice Chair: Chris McLaughlin, Chief Information Security Officer (CISO) at Johns Manville

As we welcome our new ISA Advisory Board leadership, we also extend our thanks to the outgoing ISAGCA Chair Megan Samford, VP, Chief Product Security Officer for Energy Management at Schneider Electric, as well as our outgoing Vice-Chair, Sharul Rashid, Head of Technical Excellence and Group Technical Authority of Instrumentation and Control at PETRONAS, for their leadership during the startup years of ISAGCA. Megan and Sharul have contributed more that we could have ever hoped in establishing the foundational successes for ISAGCA.