

ISA/IEC 62443 Certifications in 2021: The ISA Secure Program

The presentation will begin at 11:03 AM Eastern US Time.

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30 March 2021



GLOBAL
CYBERSECURITY
ALLIANCE





38,500
MEMBERS

135
SECTIONS

44
COUNTRIES

350,000
CUSTOMERS

STANDARDS

EDUCATION

CERTIFICATION

CONFERENCES

PUBLICATIONS

COMPLIANCE


ISA99 Global Cybersecurity Standards Committee

- Non-IT, Not consumer grade, OT in 16 CI sectors, non-telecom & finance. Water & Wastewater, power generation & distribution, O&G, pipelines, building automation (smart buildings & smart cities), medical equipment, food & pharma, manufacturing & industrial.
- The ISA99 committee was **formed in 2002** – works closely with technical committee 65 of the International Electrotechnical Commission (IEC).
- ISA/IEC 62443 standards contain **over 500 normative requirements** and associated rationale that address all phases of the system life cycle,
- The **committee has over 1,000 volunteer members**, representing a wide range of industry sectors and constituency groups from all areas of the world.
- The ISA99 committee includes **formal and informal liaison relationships with** other standards development organizations, consortia and interest groups such as IEC, OPAF, NAMUR, WIB, NIST, DHS, INL, ISASecure, and ISAGCA.
- The ISA99 committee is **desires to engage with sector, industry, government and company programs** in their efforts to address automation systems cybersecurity. Contact the committee leadership at ISA99chair@gmail.com.








ISA/IEC 62443 Standards



General

- ISA-62443-1-1: Concepts and models 
- ISA-TR62443-1-2: Master glossary of terms and abbreviations 
- ISA-62443-1-3: System security conformance metrics 
- ISA-TR62443-1-4: IACS security lifecycle and use-cases 



Policies & Procedures

- ISA-62443-2-1: Security program requirements for IACS asset owners 
- ISA-62443-2-2: IACS protection levels 
- ISA-TR62443-2-3: Patch management in the IACS environment 
- ISA-62443-2-4: Requirements for IACS service providers 
- ISA-TR62443-2-5: Implementation guidance for IACS asset owners 

System

- ISA-TR62443-3-1: Security technologies for IACS 
- ISA-62443-3-2: Security risk assessment and system design 
- ISA-62443-3-3: System security requirements and security levels 

Component

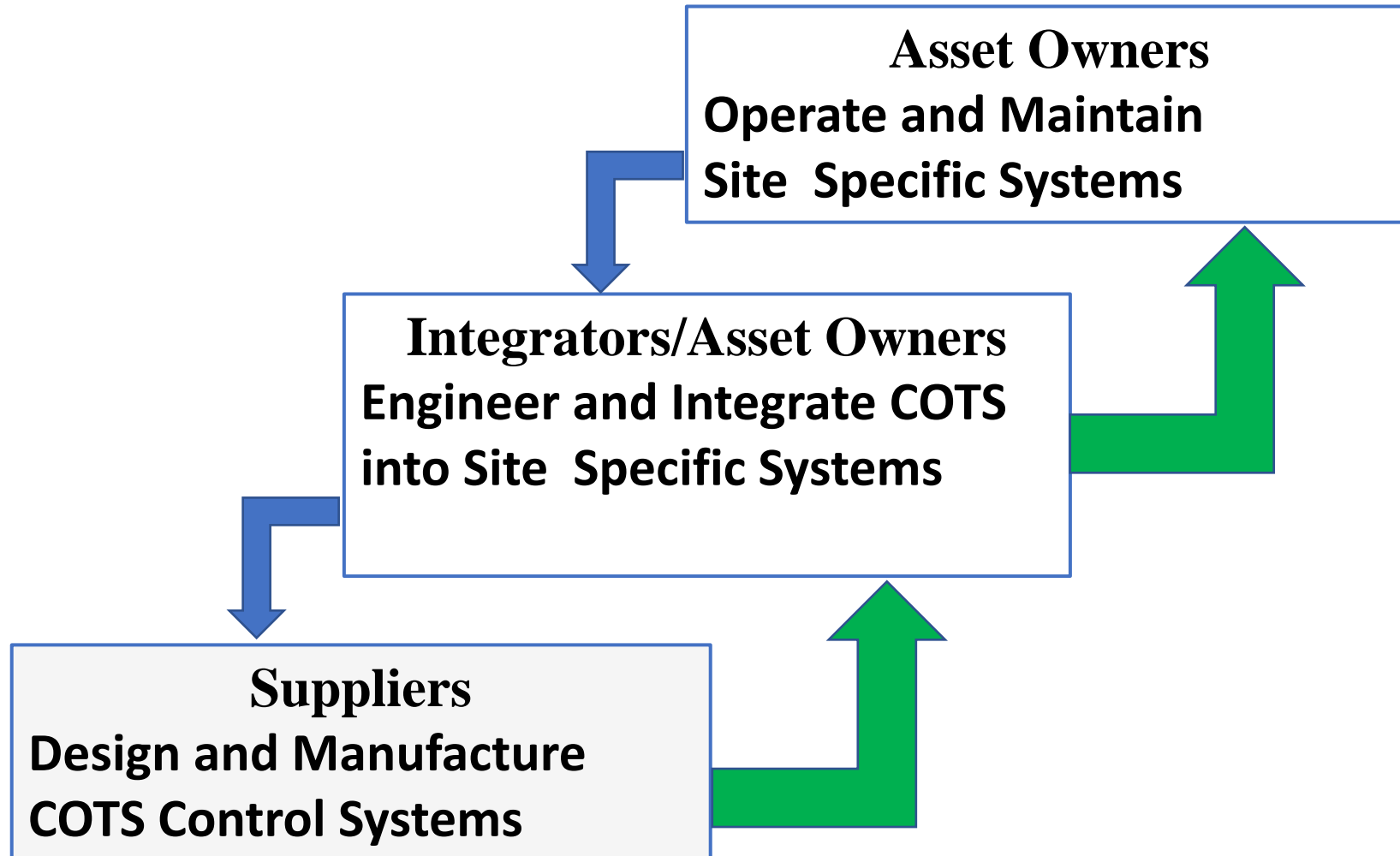
- ISA-62443-4-1: Secure product development lifecycle requirements 
- ISA-62443-4-2: Technical security requirements for IACS components 

Status Key

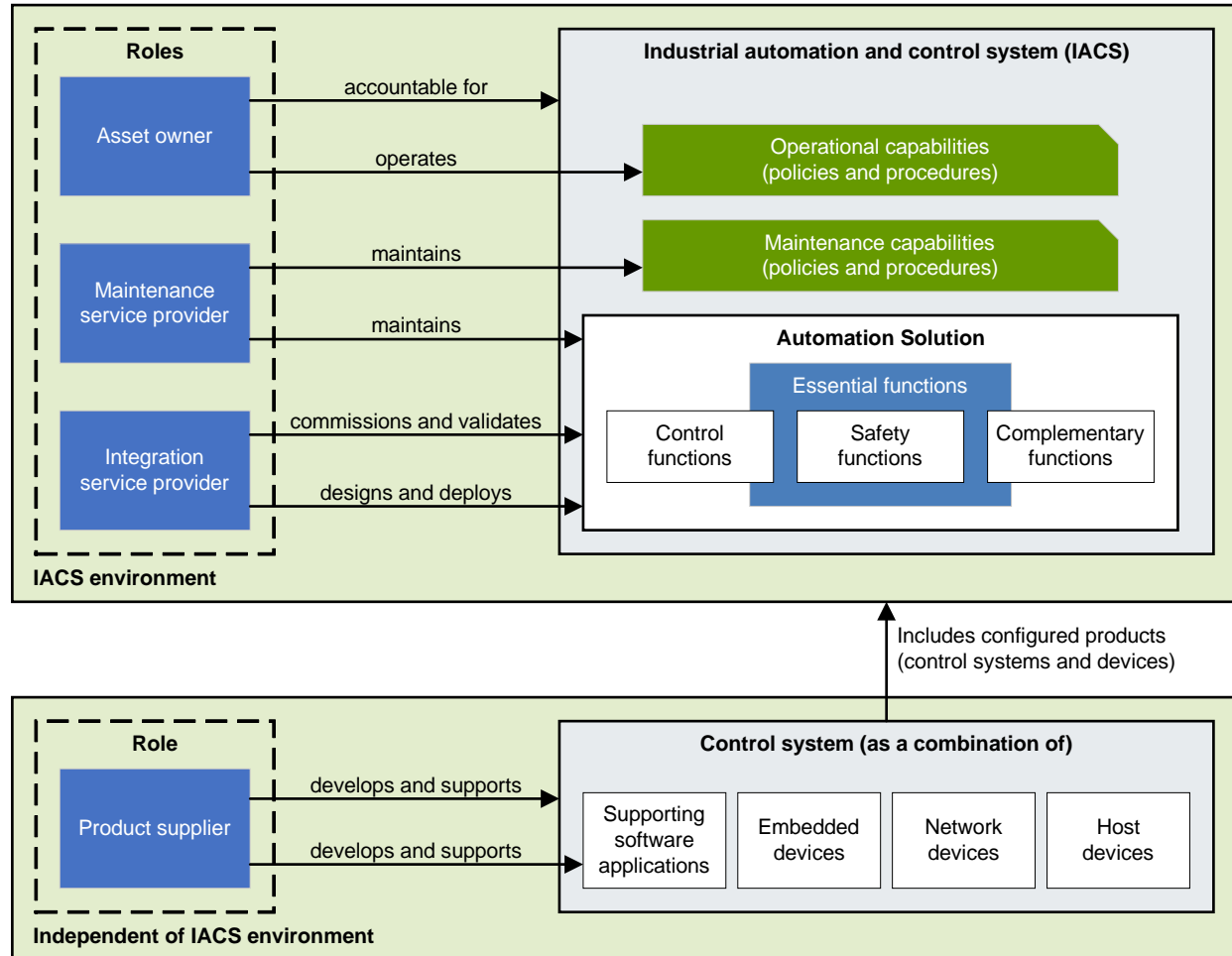
 Development Planned	 In Development	 Out for Comment or Vote	 Approved with comments
 Approved	 Published	 Adopted	 Published (under revision)



ISA/IEC 62443 Automation Security Lifecycle



Stakeholder Roles, Responsibilities and relevant 62443 standards



- **Asset Owner**
 - Part 1-1 – Concepts and models
 - Part 2-1 – Security program requirements
 - Part 2-2 – Security protection rating
 - Part 2-3 – Patch management
 - Part 3-2 – Risk assessment and system design
- **Maintenance Service Provider**
 - Part 1-1 – Concepts and models
 - Part 2-4 – Service providers
- **Integration Service Provider**
 - Part 1-1 – Concepts and models
 - Part 2-4 – Service providers
 - Part 3-2 – Risk assessment and system design
 - Part 3-3 – System requirements and security levels
- **Product Supplier**
 - Part 1-1 – Concepts and models
 - Part 3-3 – System requirements and security levels
 - Part 4-1 – Security development lifecycle
 - Part 4-2 – Component requirements

Role of ISA Secure and Relationship to Other ISA Cybersecurity Consortia



LOGIIC

LOGIIC - (Linking the Oil and Gas Industry to Improve Cybersecurity)
Research and development on cybersecurity topics for automation used by the oil and gas industry

<http://www.automationfederation.org/Logiic/Logiic>



ISAGCA - Bridge the gap between ISA/IEC 62443 standards and market adoption. Lead cybersecurity culture transformation.

<https://isaautomation.isa.org/cybersecurity-alliance/>

ISASecure - ISA/IEC 62443 cybersecurity certification of COTS products and supplier development processes

.....and ISA/IEC 62443 cybersecurity certification of end-user/asset owner operating sites/facilities (technology, people and process)

<https://www.isasecure.org/en-US/>



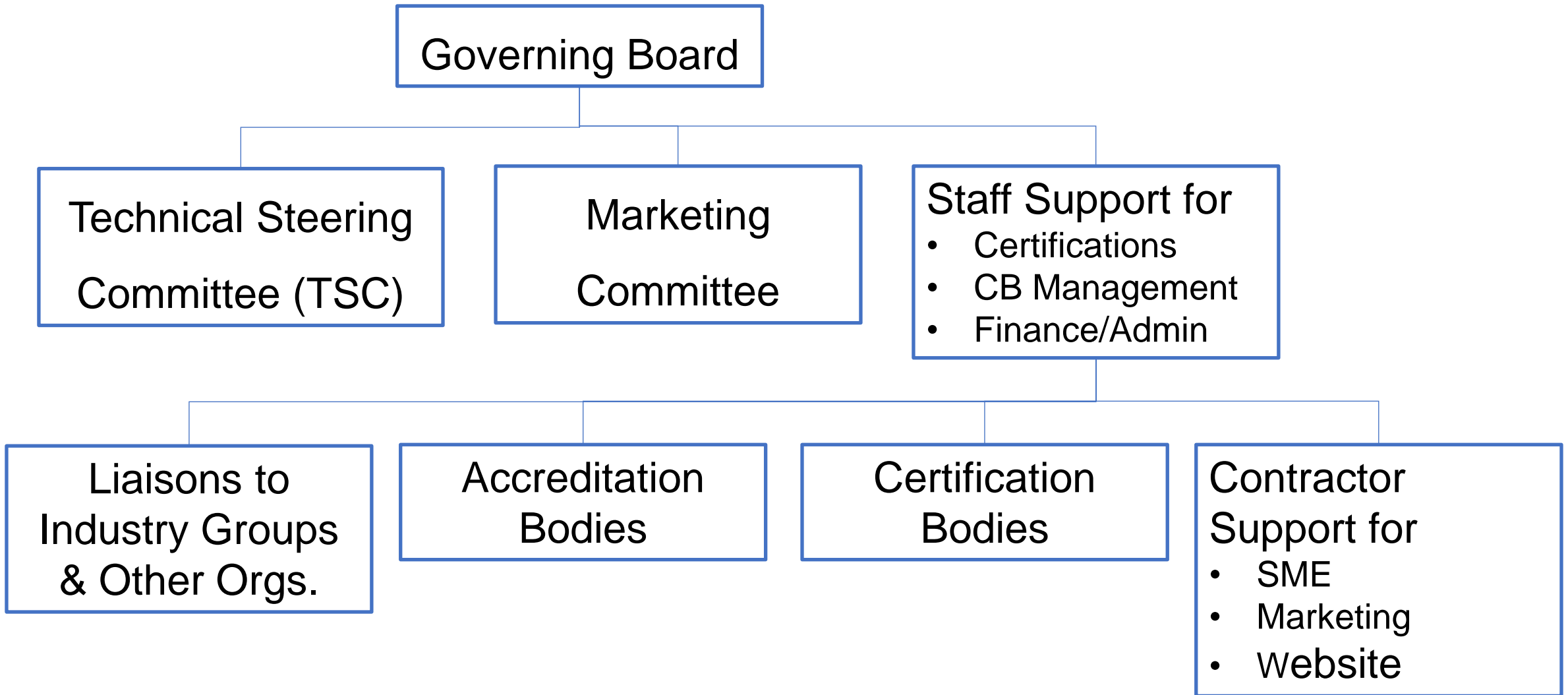
ISASecure

Globally recognized ISA/IEC 62443 certification brand

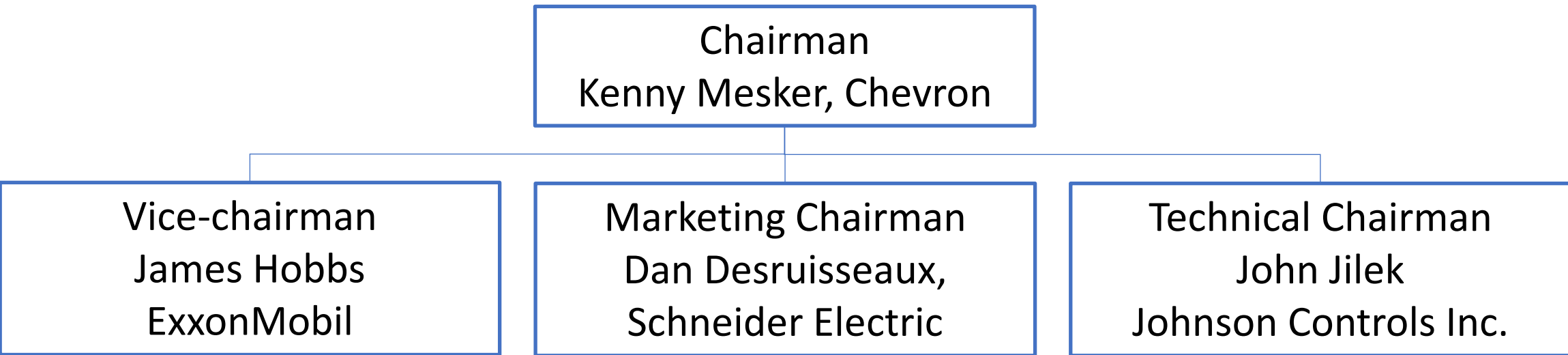
- Started in 2007, first certification in 2011
- Nine certification bodies in EU, ASEAN, Japan, USA, Canada
- Certifies systems, components, development organizations
- Promotes adoption of ISA/IEC 62443 standards in collaboration with ISAGCA and ISA99 standards committee
- OPAF agreement to use ISASecure scheme for assessing prototype components
- New certifications in development for IIOT, sites
- BMS products are showing up for ISASecure certifications



ISASecure Organization Structure



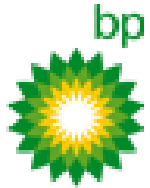
ISA Secure Governing Board



Governing Board Companies

Chevron	ExxonMobil
Honeywell	Johnson Controls, Inc.
Saudi Aramco	Schneider Electric
Yokogawa	ISA99 Committee Liaison-Eric Cosman

ISASecure Supporters Past and Present



ExxonMobil



YPF



Trust CB

Honeywell

Rockwell Automation



SIEMENS
Ingenuity for life

HITACHI
Inspire the Next



IPA
Better Life with IT



SYNOPSYS®



ISO 17011 Accreditation Bodies and ISO 17065 Certification Bodies Participating in ISASecure Program

Accreditation Bodies

1. Singapore Accreditation Council - Singapore
2. ANSI/ANAB-North America, Global
3. Japan Accreditation Board-Japan
4. DAkkS-Germany
5. RvA Dutch Accreditation Council – Netherlands
6. Standards Council of Canada (in progress)
7. Taiwan Accreditation Foundation (in progress)

Certification Bodies

1. CSSC - Japan
2. Exida – USA/Global TÜV Rheinland – Germany/Global
3. DNV GL – Singapore (in progress)
4. TÜV SUD – Singapore (in progress)
5. Applied Risk – Netherlands/EU (in progress)
6. Trusted Labs – Netherlands/EU (in progress)
7. CSA Group – Canada/Global (in progress)
8. SGS-Madrid (in progress)
9. BYHON-Italy (in progress)



Fully Accredited ISA Secure Certification Bodies

Link to [Certification Bodies Contact List](#)

1. CSSC – Japan



2. Exida – USA/Global



3. TÜV Rheinland – Germany/Global



ISASecure is 100% Aligned to ISA/IEC 62443 Standards

Process Certifications - Security Development Lifecycle Assurance (SDLA)

- Shows that a company has a documented process that complies with ***ISA/IEC 62443-4-1*** and confirms the process is being followed by that company.

Product (Component) Certifications – Component Security Assurance (CSA)

- Shows that a submitted product is compliant with the requirements of ***ISA/IEC 62443-4-1*** and ***ISA/IEC 62443-4-2***. Certifies 4 component categories described in the ***ISA/IEC 62443-4-2*** standard including network devices, applications, embedded devices and host devices.

System Certifications - System Security Assurance (SSA)

- Shows that a system (collection of components) is compliant with the requirements ***ISA/IEC62443-4-1 and ISA/IEC 62443-3-3***.

Updates to technical ISASecure certification requirements are found in the errata documents on the ISASecure website; CSA-102, SDLA-102, and SSA-102.



ISASecure Certification Logo/Registration fees

SDLA - ISA/IEC 62443-4-1 \$1,500/year

CSA – ISA/IEC 62443-4-2 \$1,200/year

SSA – ISA/IEC 62443-3-3 \$1,200/year

Certification Bodies invoice separately for professional fees incurred for the assessment services.

ISASecure Outreach Activities

ISCI continues global promotion of the ISA/IEC 62443 standards, ISA cybersecurity education, and the ISASecure product certification program. 2020 events included:

1. Presented at 6 in-person events in early 2020 around the globe
2. Conducted 8 webinars presented by world-class subject matter experts. Over 1500 attendees registered with over 700 showing up for the webinar presentations.
3. Co-sponsored a virtual conference in October 2020 with Saudi Aramco over a period of 4 days with 12 presentations. The conference resulted in over 1200 registrants with 488 attendees showing up for the webinar presentations.

Recorded webinars may be viewed from the ISASecure website learning center web page at:

<https://www.isasecure.org/en-US/Learning-Center/Webinars>



ISASecure Collaboration and New Work Products

1. ISCI is collaborating with the ISAGCA in a joint study to determine how the ISA/IEC 62443 standards can be applied to IIOT devices and systems. Two resulting whitepapers will be published in the 1st half of 2021.
2. Whitepaper describing the ISA/IEC 62443 standards and how the product certifications are utilized by suppliers, integrators and, end-users in their automation security programs. It is available now and the link is:

<https://www.isasecure.org/en-US/Learning-Center/Articles-Technical-Papers>

Product Certification Roadmap for ISA Secure

These certifications are undergoing feasibility analysis by the ISCI TSC. Our intent is to only launch certifications that are fully conformant to the published 62443 standards.

1. **IIOT Device and Gateway** Certification – ISA/IEC 62443-4-2

This certification would be similar to the existing 62443-4-2 certification for **components**. We will align with results of ISA99-WG9 Technical Report and results of the collaboration study from ISAGCA/ISCI. The ISAGCA/ISCI joint study is intended to identify unique characteristics of IIOT devices and confirm that the existing 62443 standards have the coverage necessary to address the unique IIOT requirements identified.

2. **IIOT System** Certification – ISA/IEC 62443-3-3 and ISA/IEC 62443-4-2

This certification would be similar to the existing 62443-3-3 **system certification**. It is also undergoing a joint study supported by ISAGCA and ISCI.

End User Site Certification Roadmap for ISASecure

ISA/IEC 62443 certification offerings in the marketplace have thus far focused on product certifications and services provider certifications (62443-2-4).

Operating Site Assessment – ISA/IEC 62443-2-1 and referenced standards including 3-2, 3-3 and 2-4. This assessment would evaluate an operating site and assign it a standards-based score.

- We don't believe that an auditor/certifier can 'certify' the cybersecurity of an operating site and we would, therefore, only issue a standardized evaluation and relative score.
- Currently site assessments are conducted by security consulting firms. However, each firm's assessment methodology and coverage is slightly different from the others.
- Our intention would be to create a standardized assessment specification based on 62443 that existing firms could use along with ISASecure tools and auditor guidance.
- This program would require supporting functions for auditing firm accreditation and auditor personnel certification.
- The intention is to establish industry accepted cybersecurity practices that become recognized by stakeholders including, end-users, industry groups, regulatory authorities, and insurance companies.
- The commercial real estate sector will likely be the first industry sector to adopt the site assessment scheme.



Links to website listings of ISA Secure® certificates of conformance issued

CSA - <https://www.isasecure.org/en-US/End-Users/Certified-Components>

Honeywell, GE, ABB, Wartsila, Schneider Electric

SSA — <https://www.isasecure.org/en-US/End-Users/Certified-Systems>

Emerson

SDLA — <https://www.isasecure.org/en-US/End-Users/Certified-Development-Organizations>

Emerson, ABB, Wartsila, Johnson Controls, Schneider, Honeywell, Yokogawa, GE

ISA/IEC 62443 ISA Secure® Certification Growth

2020 showed significant growth in the demand for formal adoption of the ISA/IEC 62443 standards by product suppliers. The numbers:

13 Additions ISA Secure® SDLA development process certifications (62443-4-1)

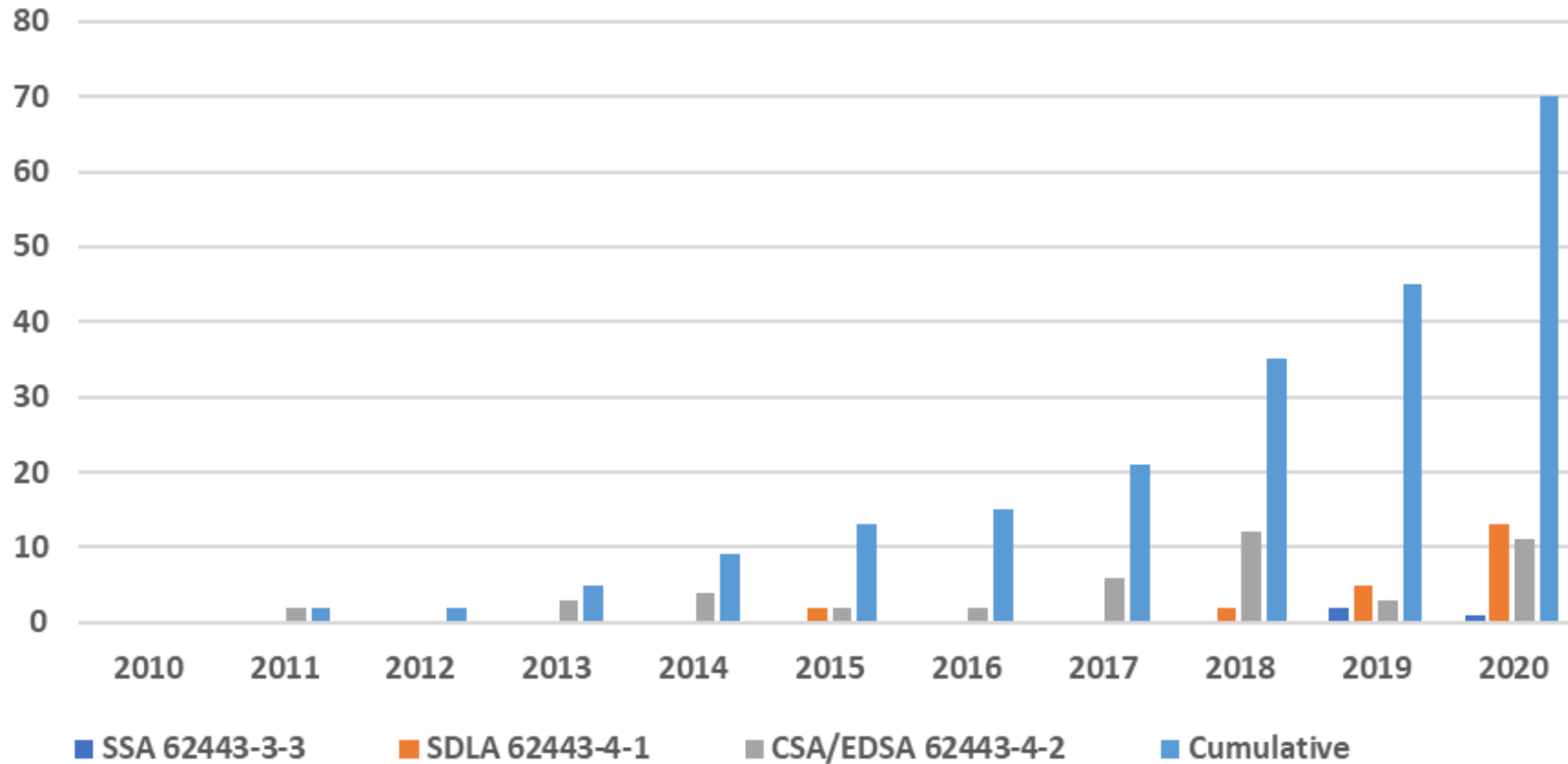
11 Additions for ISA Secure® CSA component certifications (62443-4-2)

1 Addition for ISA Secure® SSA system certification (62443-3-3)

25 Total ISA Secure certifications added in 2020

Historical ISASecure Certification Growth

ISASecure Certifications by Year



ISASecure Annual membership fees

Strategic Member (voting-governing board level)

- \$50,000

Technical Member (voting-technical level)

- \$20,000 (Annual Revenues over \$500 million)
- \$10,000 (Annual Revenues under \$500 million)
- \$5,000 (Annual Revenues under \$50 million)
- \$3,000 (Annual Revenues under \$5 million)
- \$5,000 (Certification Body)

Associate Member (non-voting)

- Government Agency/Industry Group/Other \$5,000
- Individual \$500

Adopter/Supporter Member (non-voting)

- \$10,000 (Annual Revenues over \$500 million)
- \$5,000 (Annual Revenues under \$500 million)
- \$3,000 (Annual Revenues under \$50 million)
- \$1,500 (Annual Revenues under \$5 million)

New Member Benefit-Discounts for ISA Training

1. Visit the 'Learning' page on the www.isasecure.org website to get a discount code for ISA Cybersecurity training. Use the ISASecure discount code and follow the links to the www.isa.org training signup web page.

ISAGCA members are receiving substantial ISA Training volume discounts and the discounts will now be extended to ISCI members. Details about the volume discount offering will be added to the ISASecure website. Please contact Matt Rothkopf, Manager, Learning Consultation +1 (919) 990-9403.

Number of Seats	List Price (Per Seat)	Supporters	
		% Discount	Price (Per Seat)
5-25	2,000 USD	25%	1,500 USD
26-50	2,000 USD	30%	1,400 USD
51-100	2,000 USD	35%	1,300 USD

Please join us in securing automation
that affects our every day lives.

Andre Ristaino

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**GLOBAL
CYBERSECURITY
ALLIANCE**

