International Society of Automation

Program Announcement: Site (System) Assessment

Brandon Price

Chair

ISCI Governing Board

brandon.p.price@exxonmobil.com

Andre Ristaino

ISA Managing Director

Consortia and Conformity Assessment

aristaino@isa.org 919-990-9222

www.isasecure.org

Elevating OT cybersecurity from an art, to a science, to an engineering discipline.

February 2023

ISASecure®

Background

- In January 2023, ISA announced its intent to develop a conformity assessment scheme for automation systems in place at operating sites under the ISASecure brand
- Existing ISA/IEC 62443 product assessment/certification schemes address COTS (commercial off the shelf) components, systems, and supplier security development practices
- New ISASecure scheme adds assessment of deployed systems based on ISA/IEC 62443 asset owner standards
- Applicable to the broad range of IACS and industries, including critical infrastructure

Case for Action

- Consensus specification for assessing cybersecurity of systems deployed at operating sites does not currently exist (standards exist)

- Current ISA/IEC 62443 assessment schemes address target security level for supplier practices and security capabilities of COTS components and systems

- Growing need to measure achieved security level of systems in their deployed configuration for:
  - Factory Acceptance Tests
  - Site Acceptance Tests
  - Cybersecurity insurance underwriting
  - Internal maturity assessments & quality control
  - Public policy language

ISASecure®

Characteristics of Site Assessment

- **Consensus based**: broad industry alignment on process / specification to evaluate conformance
- **Consistent approach**: one conformance specification based on widely-recognized ISA/IEC 62443 industry standards; clarity on what it means to be compliant
- **Assurance-driven**: builds on existing ISASecure assessment & certification schemes to validate real-world security of deployed solutions / systems
- **Industry leading**: encourages further adoption of ISA/IEC 62443 standards and improves overall security of our facilities!

ISASecure ISA/IEC 62443 Operating Site Assessment

Andre Ristaino, ISA Managing Director

ISASecure®

ISA

15,822
MEMBERS

186
SECTIONS

109
COUNTRIES

350,000
CUSTOMERS

STANDARDS

EDUCATION

CERTIFICATION

CONFERENCES

PUBLICATIONS

COMPLIANCE

ISA Consortia Summary

LOGIIC - Research and development on cybersecurity topics for automation used by the oil and gas industry. O&G majors are members. www.Logiic.org

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

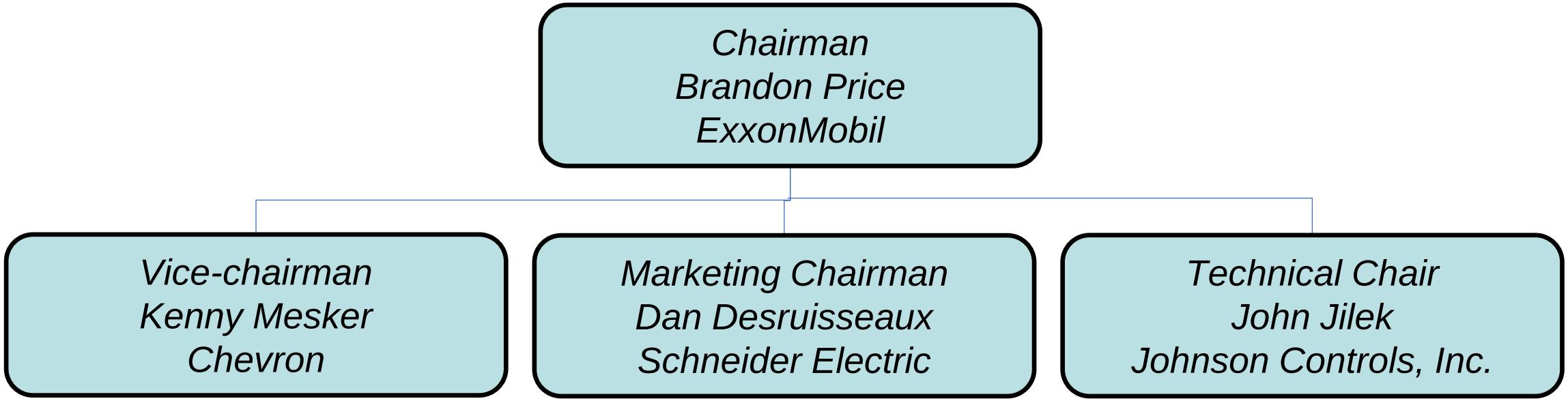
ISASecure - ISA/IEC 62443 cybersecurity certification of COTS products, supplier development processes and automation at asset owner operating sites www.isasecure.org

ICS4ICS – Incident Command System for Industrial Control Systems establishes a standing organization and playbook for responding to cyber attacks on automation in critical infrastructure. Collaborating with FEMA and CISA; began as a program under ISAGCA. www.ics4ics.org

ISA100 WCI – ISA100 Wireless Compliance Institute provides assured interoperability for wireless products conforming to the ISA100.11a (IEC62734) international wireless standard. www.isa100wci.org

ISASecure

ISA Security Compliance Institute Governing Board



Governing Board Companies

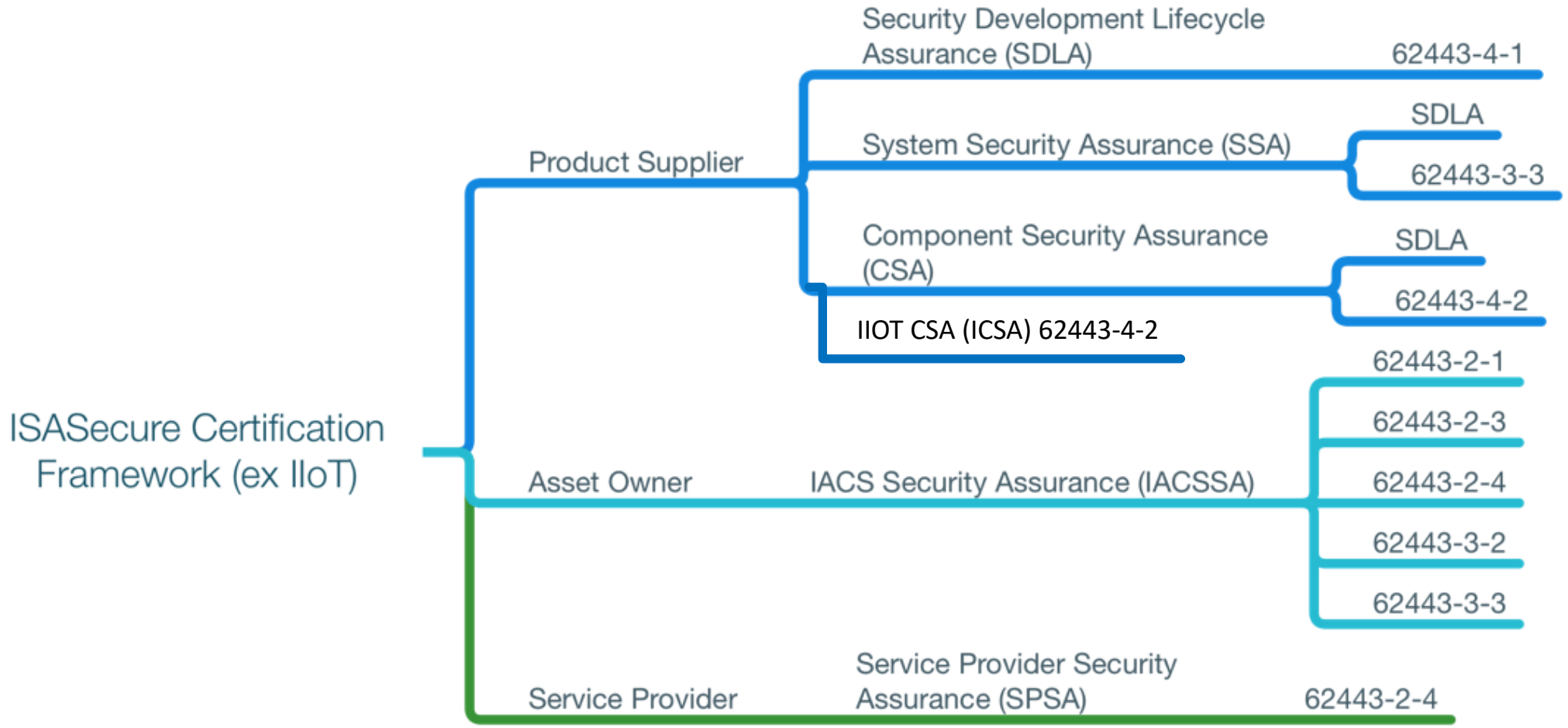
Chevron	*ExxonMobil*	*Carrier Global*
Honeywell	*Johnson Controls, Inc.*	*Saudi Aramco*
Yokogawa	*Schneider Electric*	*ISA99 Committee Liaison*

ISASecure®

Established 2007

ISASecure® Supporters

ISASecure Current Certifications and Certification Roadmap

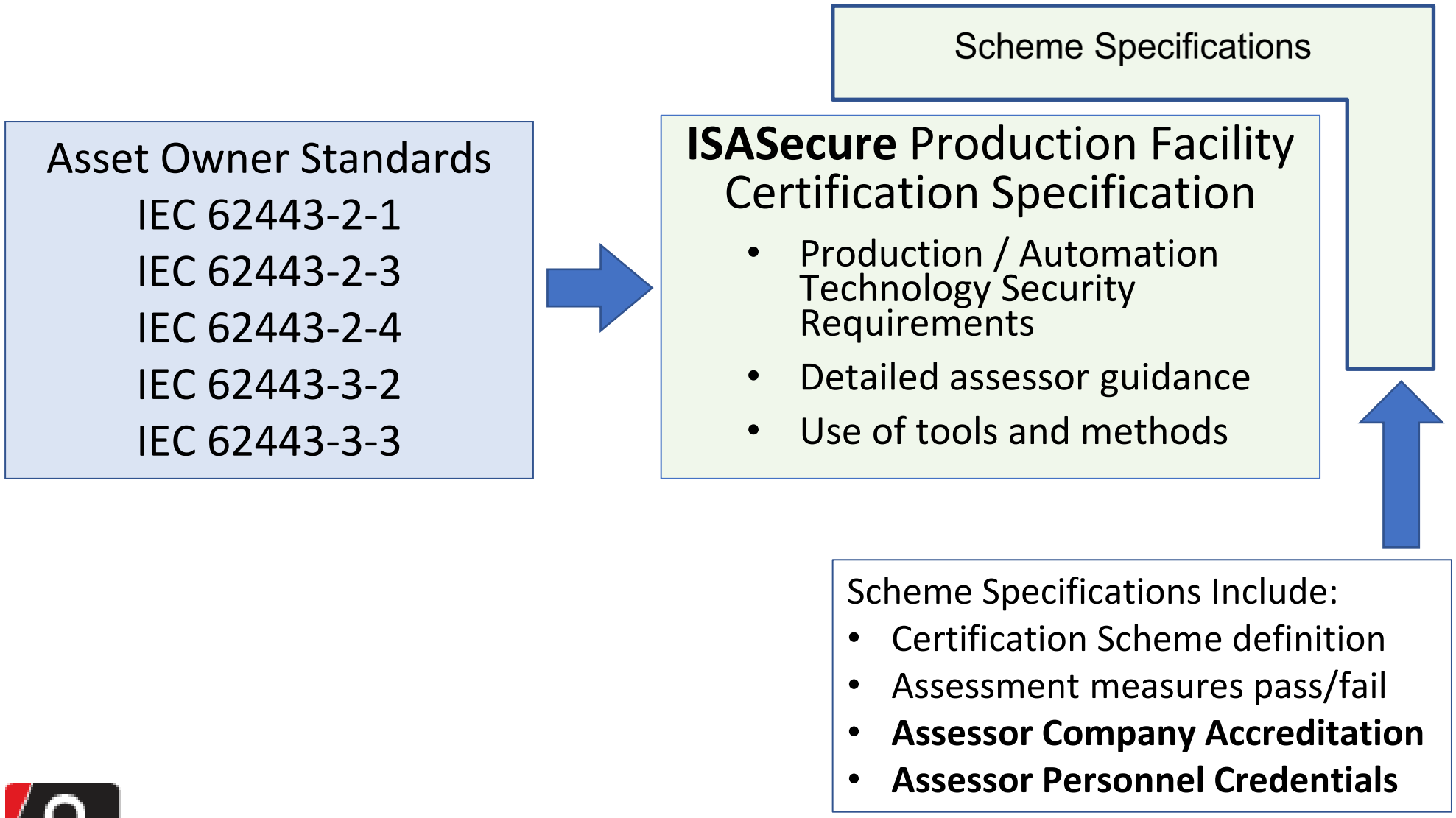


- Dark blue lines are current offerings
- Product Supplier certifications cover all industry sectors
- IIOT CSA launched in December 2022.

ISASecure®

ISA

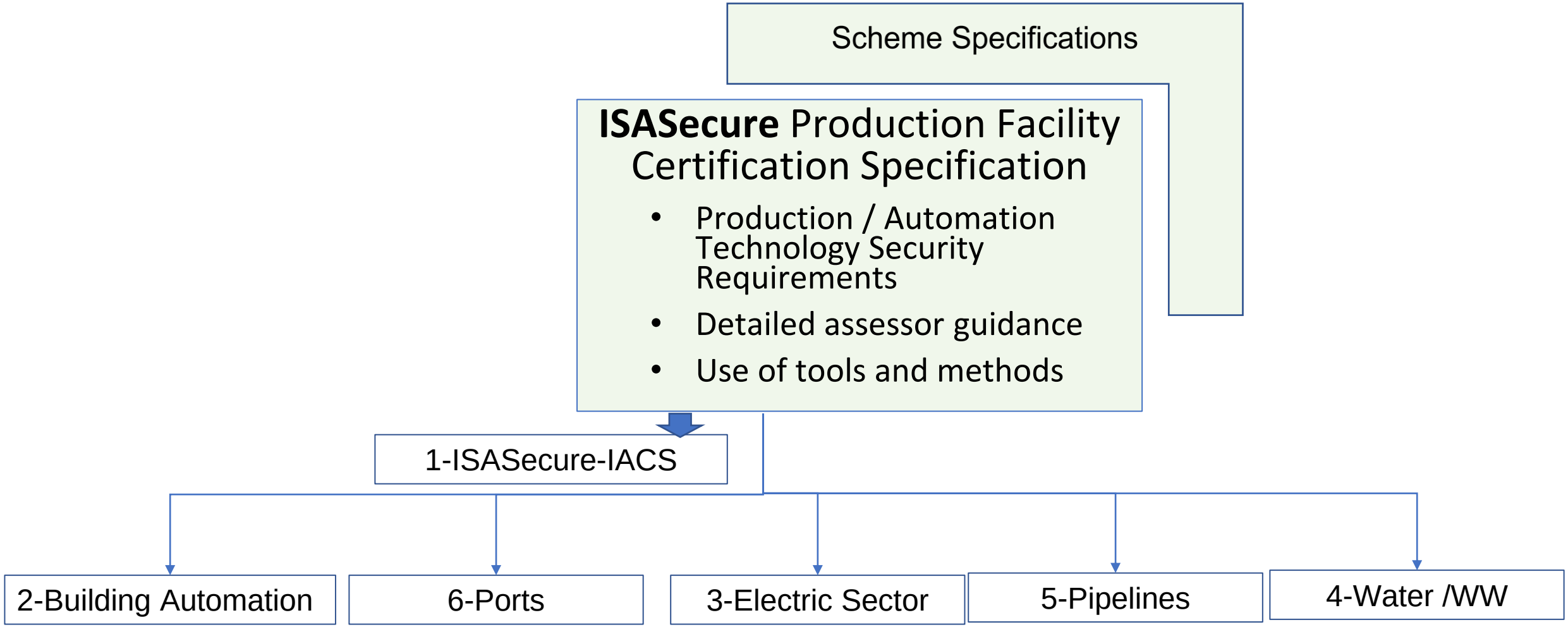
Operating Site Assessment Scheme



ISASecure®

ISA

Future - Adapt Assessment Specification to Other Industry Sectors



ISASecure®

ISA

Program Elements

	SA Specification & Policy Documents (TBD)
1	SA-100 ISASecure Certification Scheme
2	SA-102 Baseline Document Versions and Errata
3	ISASecure-117 Transition Policies
4	SA-204 use of Symbols and Certificates
5	SA-300 ISASecure Certification Requirements
6	SA-301 Maintenance of ISASecure Certification
7	SA-311 Functional Security Assessment for Components
8	SA-312 Security Development Artifacts for Embedded Devices
9	SA-420 Vulnerability Identification Test (VIT)
10	SDLA-312 Security Development Lifecycle Assessment
11	SA-314 Service Provider Assessment
12	SDLA-100 ISASecure Certification Scheme
13	SA-204 Sample Report
	SA Certification Body Accreditation Requirements
14	SA-200 Certification Body Operations and Accreditation
15	ISO/IEC 17065 Conformity Assessment - Requirements for bodies certifying products, processes and services
16	ISO/IEC 17025 General Requirements for competence of testing and calibration laboratories
	Assessor Training and Credentialing
17	SA-Assessment Methods and Tools for Site Assessment Specification
18	SA - ISA/IEC 62443 Foundational Curriculum
19	SA Assessor Policies and Ethics
20	SA Assessor Competency Exam
21	SA Assessor Continuing Education Requirements and Policies

ISASecure®

ISA

Industry Benefits of Operating Site Certification Program-Why Now?

A consistent set of requirements and associated assessment scheme will provide objective reporting that will be useful for all stakeholder groups including:

- **Asset Owners** who will have visibility into their operating sites' security posture; and have an objective, consistent benchmark to determine their standing with their peers and their industry. This will also provide guidance for selecting technology, service providers, organizational development, and negotiating with insurers.

- **Insurance Underwriters** where the assessments will provide objective, consistent metrics to include in their underwriting risk models for industrial environments. Over time, the data can be used as input to actuarial models for analysis. We have been in discussions with insurers who see the value of a standardized 62443 assessment report.

- **Service Providers and Product Suppliers** who will get clarity and transparency regarding their cybersecurity role in automation products, integration, maintenance, and operation support services; and provide structure to SLA agreements. Global organizations will realize benefits for being accountable to one set of international standards.

- **Assessment Organizations** will benefit from increased demand in services due to the attractiveness of a consensus OT assessment scheme based on trusted ISA/IEC 62443 standards.

- **Government, legislators, and regulatory authorities** will have an ISA/IEC 62443 standards-based cybersecurity metric that can be used as a reference for incentives and mandates to secure critical infrastructure. TSA, NERC, others

Supporting Functions -Assessor Company Accreditation

- An accreditation function will be established for the site assessment companies using ISO 170xx accrediting standards, aligned with activities for site inspections
- ISCI has MOUs in place with seven global ISO 17011 accrediting authorities
- Assessment scheme will allow for certification activities or assessment only activities
  - **Certification**-certifies entity conforms to all requirements in a standard
  - **Assessment**-provides report that describes the extent to which an entity conforms

ISASecure®

ISA

Supporting Functions -Assessor Personnel Credentialing

- ISA Training will administer site assessor training, credentialing and, continuing education

- **Two assessor training classes** will be developed for the Site Assessment program
  - ISASecure Production Facility Assessor **5 class days**
  - ISASecure Building Technology Assessor **5 class days**

- **Professional assessor designations / credentialing** will be established for the program:
  - ISASecure Certified ISA/IEC 62443 Product Assessor
  - ISASecure Certified ISA/IEC 62443 Operating Site Assessor
  - ISASecure Certified ISA/IEC 62443 Service Provider Assessor

ISASecure®

ISA

Supporting Functions –Compliance Software Applications

- Software vendors already exist that can add the ISASecure site assessment specification to their application. (institutionalizes the specification in owner's and assessor's processes)
- ISCI will license the site assessment specification to interested parties (ISASecure product certification specifications already licensed to a limited number of vendors)
- ISCI responsible for developing, maintaining, expanding specifications economically; assures lower cost to licensees due to shared effort in ISASecure consortium
- Software vendors update their applications on a prescribed cadence as program expands
- Consensus specification standardizes ISA/IEC 62443 based assessments globally.

ISASecure®

ISA

ISO 17011 Accreditation Bodies Supporting ISASecure Certification Scheme

1. ANSI/ANAB-North America, Global
2. DAkkS-Germany
3. Japan Accreditation Board-Japan
4. RvA Dutch Accreditation Council – Netherlands
5. Singapore Accreditation Council - Singapore
6. Standards Council of Canada
7. Taiwan Accreditation Foundation
8. A2LA USA/Global

ANSI Accredited Program PRODUCT CERTIFICATION

ANAB ACCREDITED ISO/IEC 17021 MANAGEMENT SYSTEMS CERTIFICATION BODY

ilac-MRA

DAkkS Deutsche Akkreditierungsstelle D-PL-18345-01-00

PROD JAB

scc ccn 50 YRS ANS

Singapore Accreditation Council

TAF Taiwan Accreditation Foundation

A2LA

ISA

ISASecure®

ISASecure® Certification Bodies Accredited to ISO 17065/ISO 17025

Site Assessment Scheme will significantly expand global CB participants from the current 10 CB's likely to 25-30 CB's in short term.

Certification Body	Geographic Coverage	Accreditation Status
CSSC	Japan	Accredited
Exida	USA / Global	Accredited
TUV Rheinland	Germany / Global	Accredited
FM Approvals	USA / Global	Accredited
TUV SUD	Singapore / Global	Accredited
BYHON	Italy / Global	Accredited
Bureau Veritas	Taiwan / Global	Accredited
TrustCB	Netherlands / Global	In progress
DNV	Singapore / Global	In progress
Ikerlan	Spain / Global	In progress

ikerlan

BUREAU VERITAS 1828

BYHON

CSSC

exida.com

TÜVRheinland® Precisely Right.

FM Approvals® Member of the FM Global Group

DNV

TÜV SÜD

TRUSTCB

ISA

ISASecure®

Site Certification Budget & Timeline

Cost to Develop - **$1,610,600**

	Source of funds
$1,260,600	Donors and new ISCI participants
$ 250,000	ISA matching investment
$ 100,000	ISCI 2023 Budget Allocation

Timeline

ISA funding approval	Nov 2022
Announce program	Feb 2023
Detailed Plan & Staffing	March 2023
Start ISCI Site specifications	March 2023
Start BCS specifications	TBD (2H 2023)
Complete ISCI Site specifications	TBD (1H 2024)
Complete BCS specifications	TBD (1H 2024)
Go Live with assessments	TBD (mid-2024)

Member / Participant Financial Benefits

- ISCI members receive discounts on selected ISA cybersecurity training classes (similar to ISAGCA)
- Donors receive discounts on specification license fees and assessor training based on their contribution level (TBD).
- Much lower investment in developing and maintaining an ISA/IEC 62443 standards-based site assessment services offering by sharing the burden with other ISCI members.
- ISCI carries the cost to establish and maintain your assessor training and credentialing.

The Ask

Support the development and launch of the site assessment program.

- Donate funding
- Donate resource for specification development
- Publicly endorse site assessment program
- Recruit peers to support the program
- Any one of the above.

1. Complete and submit the ISCI membership application
   - Indicate your membership level desired and donation amount on the form.
2. ISCI will onboard your company and add your representative to the working group(s)

Forms

06-1022 ISASecure Site Assessment Flyer Dec 22 (1).pdf

ASCI Membership Application-ISCI-01 Mar 2023.pdf

ISASecure®

Cybersecurity Resources at ISA

ISASecure ISA/IEC 62443 certifications – https://www.isasecure.org/en-US/

ISA Global Cybersecurity Alliance - https://isaautomation.isa.org/cybersecurity-alliance/

ISAGCA Blogs (tons of great info and free downloads) - https://gca.isa.org/blog

ISA/IEC 62443 Training - https://www.isa.org/training-and-certification/isa-training

IIOT 62443 Component/Gateway Study - https://gca.isa.org/iiot-component-certification-based-on-62443

Andre Ristaino
ISA Managing Director
Consortia and Conformity Assessment
aristaino@isa.org O: +1 919-990-9222 M: +1 919-323-7660

Elevating OT cybersecurity from an art, to a science, to an engineering discipline

ISASecure®

Question and Answers