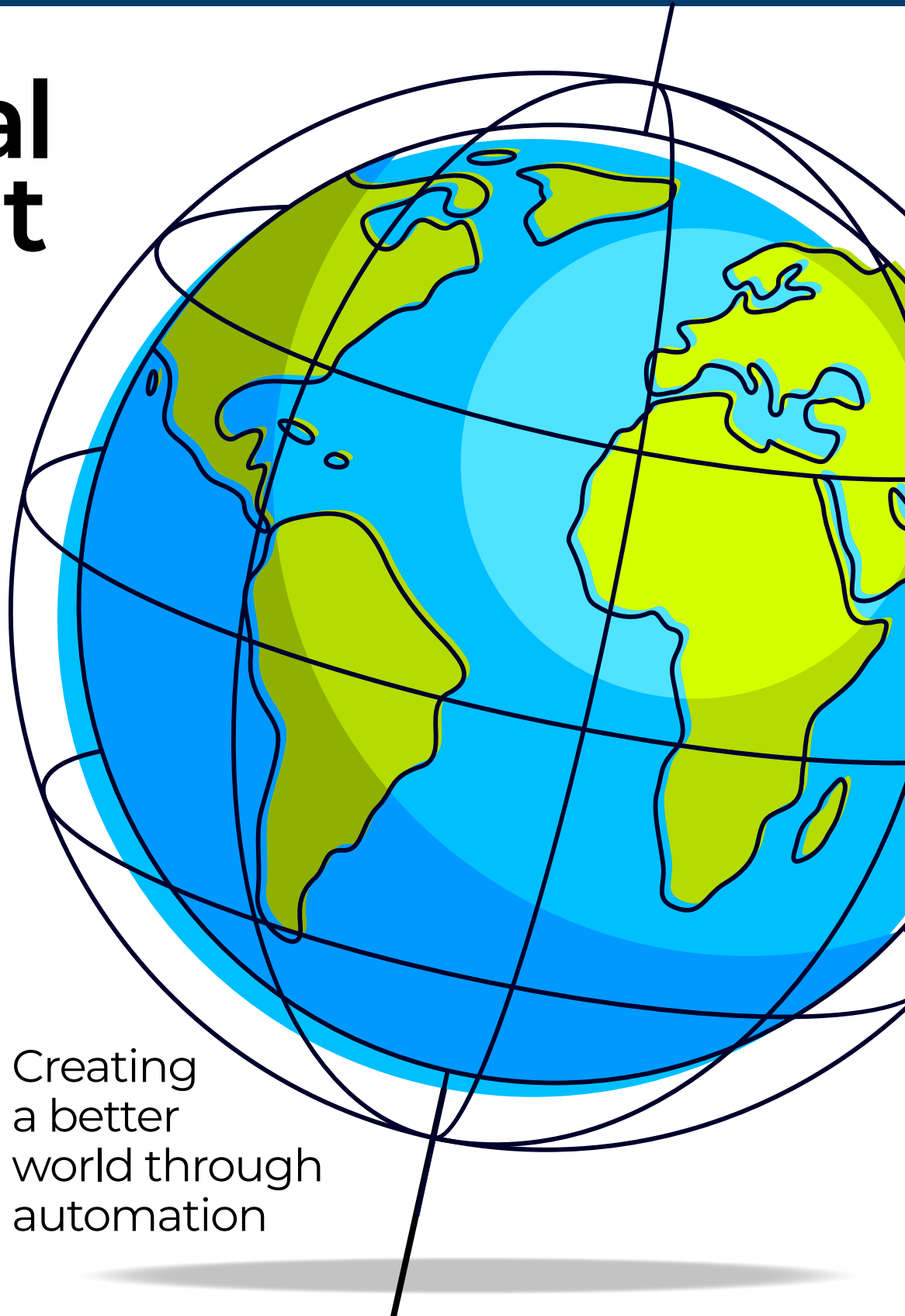


Annual Report

2020



Creating
a better
world through
automation

ISA Responds to Challenges Posed by Global Pandemic

2020 was a year to remember – and one that most would love to forget. The novel coronavirus, known as COVID-19, ravaged the globe with more than 103 million cases and over 2.2 million deaths. Putting the health and safety of our friends and family first, ISA and world lived the year mostly in lockdown. The impact of these global restrictions was significant.

ISA was challenged to deliver on its mission in new and innovative ways. We could not hold in-person events or training courses; our sections could not bring members together. ISA needed to pivot – quickly. We had to come together, apart.

ISA needed to pivot – quickly. We had to come together, apart.

experience, ISA made immediate and effective changes to its roadmap.

Technical content planned for in-person events was redeveloped into a robust virtual events program in four key areas - Cybersecurity; IIoT & Smart Manufacturing; Digital Transformation; and Process Control & Instrumentation.

Training courses were rapidly developed into virtual courses. We delivered at-home, online certification exams for the first time.

Training courses were rapidly developed into virtual courses.

refocused our European operations to delivery of online training which allowed significant expansion of offerings to more regions of the world.

Led by an executive board with more than 420 years of combined

experience, ISA made immediate and effective changes to its roadmap.

Our online, instructor-assisted course revenue increased 30%. We



A revamp of the IT systems – that was underway before the pandemic – continued even as ISA's staff team transitioned to at-home work. The launch of these systems came with a new, members-only, technical discussion ISA Connect. Through the work of the Divisions, ISA Connect Live delivered a new way for members to engage in technical discussions in a live, virtual format.

And even with a global crisis, ISA could not let 2020 go without some celebrations of its 75 years

of serving the automation community. The special anniversary edition of *InTech* is a celebration of our history and our future. And while the Annual Leadership Conference and meeting of the Council of Society Delegates was cancelled, the Council moved forward with a virtual vote to approve changes to the ISA bylaws to enable to Society for the next 75 years.

ISA Connect Live delivered a new way for members to engage in technical discussions.

Our “new normal” is just beginning. ISA stands ready to make the world a better place through automation.

Executive Board



PRESIDENT
Eric Cosman
OIT Concepts, LLC



PRESIDENT-ELECT
SECRETARY
Steve Mustard
National Automation, Inc.



PAST PRESIDENT
Paul Gruhn
aeSolutions



TREASURER
Jon DiPietro
Liberty Digital Marketing



Mark Arkell
JMP Solutions



Don Bartusiak
Collaborative Systems
Integration, LLC



Marty Bince
TEC Edmonton



Nilangshu Dey
Qatar Petroleum



Jim Garrison
aeSolutions



Carlos Mandolesi
Trinity College Dublin



Matthew Maynard
Francis Tuttle Advanced
Technical Center



Mary Ramsey
ISA



Scott Reynolds
Johns Manville



Debashis Sadhukhan
NASA Glenn
Research Center



Dawn Schweitzer
Eastman Kodak
Company



Prabhu Soundarrajan
Honeywell



Ashley Weckwerth
Burns & McDonnell



Dr. Maurice Wilkins
Yokogawa UK Ltd.



Dr. Shari Worthington
Telesian Technology, Inc.
and Worcester Polytechnic
Institute

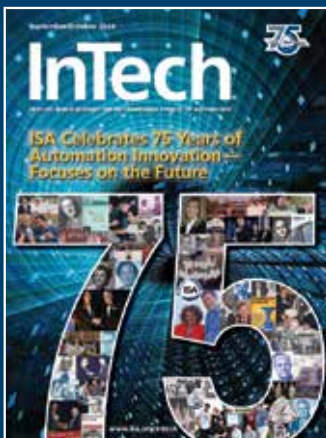
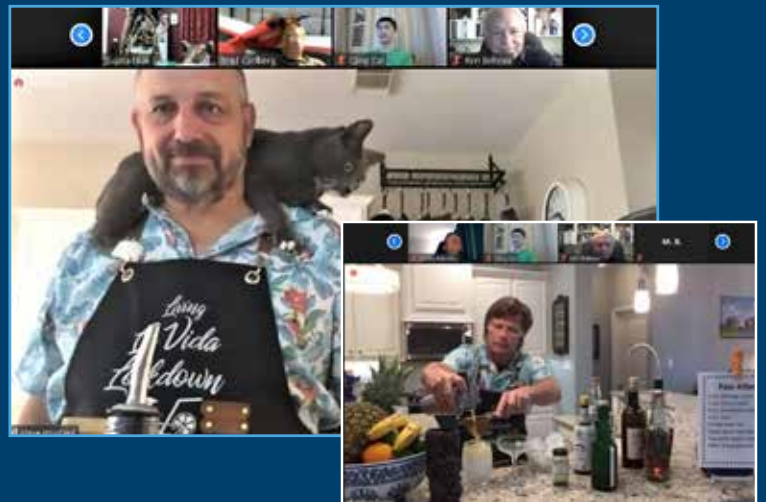
75TH ANNIVERSARY



75 years of advocating for the people and technology that move societies and economies forward

75 years of creating and supporting industries that power our world

75 years of difference-makers and risk-takers on whose shoulders we stand today



Click for video history of *InTech*

Click for ISA historical timeline



^ Living LaVida Lockdown

< Cheers to ISA on founding day

celebrations

VISION, MISSION, VALUES

Vision:

Create a better world through automation

Mission:

Advance technical competence by connecting the automation community to achieve operational excellence

Values:

Excellence

We provide industry-leading, unbiased content developed and vetted by a community of experts

Diversity and Inclusion

We strive to be a global, diverse, and welcoming organization

Professionalism

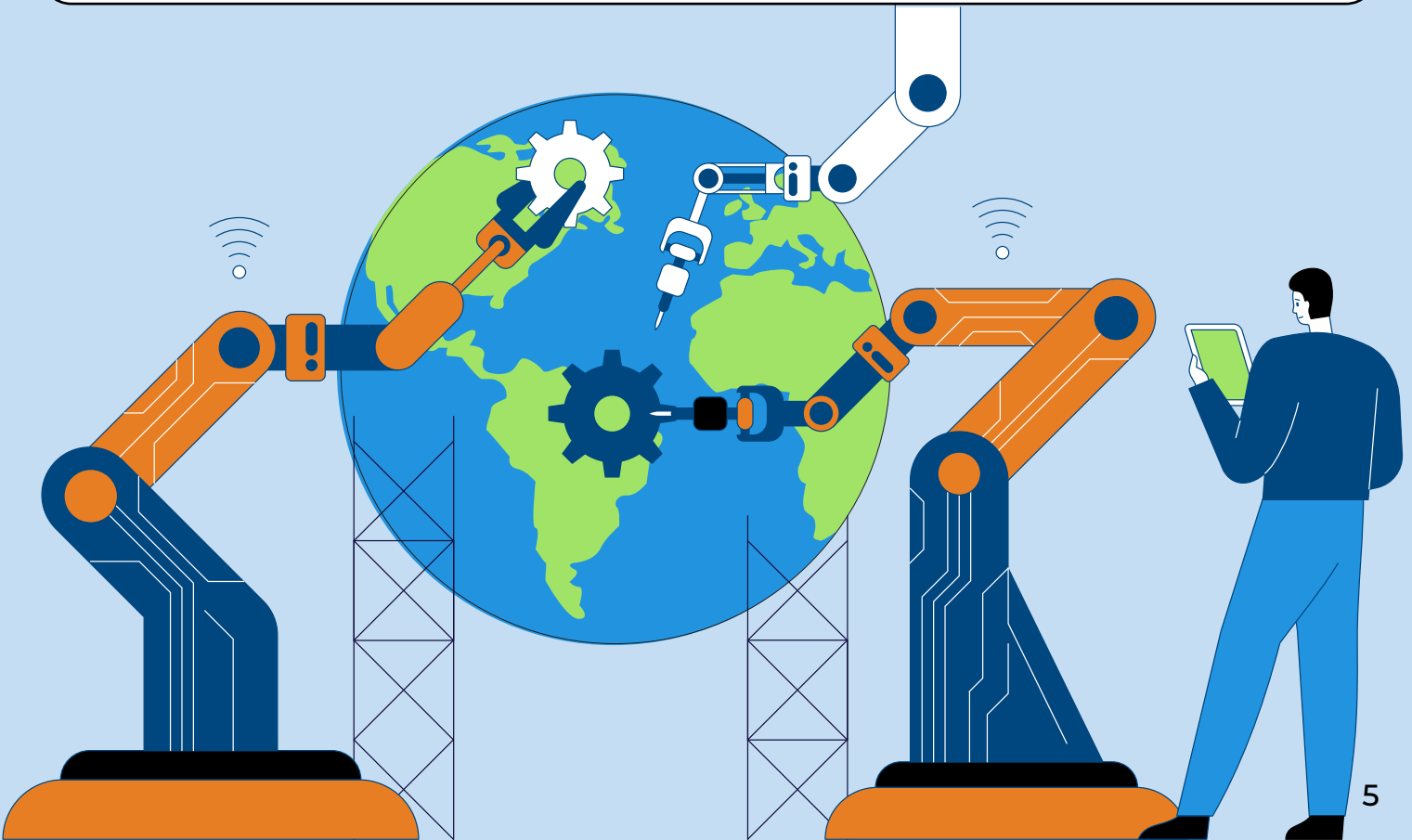
We uphold the highest standard of competence and skill in everything we do

Integrity

We act with honesty, integrity, and trust, respecting others in all that we do

Collaboration

We seek out opportunities to work together for the benefit of the Society, its members, and our profession



STRATEGIC OBJECTIVES

Industry Reach and Awareness

Establish and advance ISA's relevance and credibility as the home of automation by anticipating industry needs, collaborating with stakeholders, and developing and delivering pertinent technical content.



Member Development and Engagement

Enhance member value and expand engagement opportunities to nurture and grow a more diverse and global community to advance the automation profession.



Technical Education and Certification

Become the recognized leader in automation and control education, providing training, certifications, and publications to prepare the workforce to address technology challenges in the most flexible and relevant ways.



Leadership and Business Skill Development

Create opportunities for members to improve critical leadership skills, to build a network of industry professionals, and to develop the next generation of automation professionals.



MEGATRENDS



Megatrends are revolutionary. They are powerful, transformative forces that change the global economy, business, and society. Megatrends both drive and are driven by disruptive innovations. In celebrating our past, ISA identified the megatrends impacting the world of automation.

Workforce of the Future



Industry will require more knowledgeable personnel with practical thinking skills and manufacturing process know-how.

Standards Under Pressure



Global standards are emerging, driven by Industry 4.0, IIoT, and an influx of open standards-based hardware and software.

Manufacturing Technology Transformation



Digitalization will accelerate, pushing manufacturers to transform and enabling innovation.

Environmental, Safety, and Security Evolutions



Societal and business concerns about cybercrime, worker safety, sustainability, and more will require a response

Cybersecurity



Webinars

1

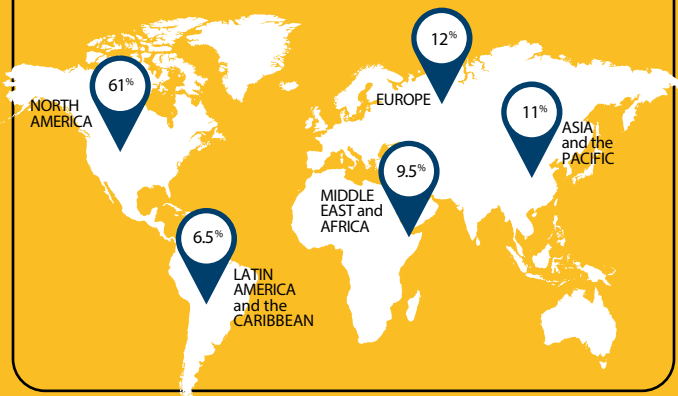
Registrants:
456

Conferences

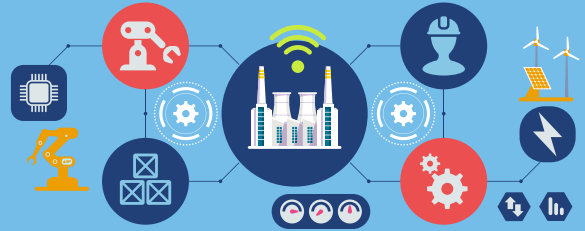
2

Registrants:
903

60% member / 40% nonmember



IIOT and Smart Manufacturing



Webinars

3

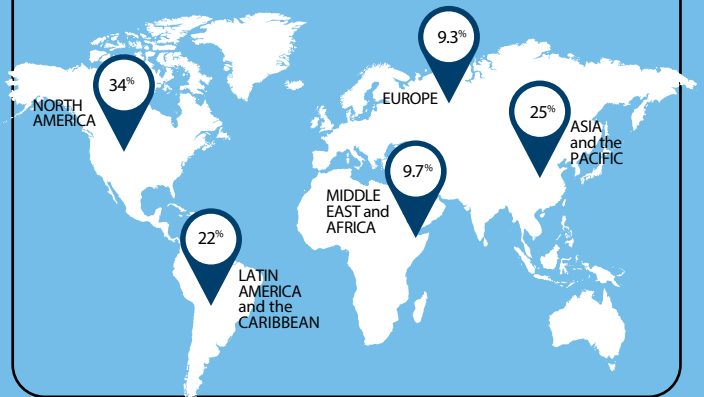
Registrants:
1,145

Conferences

1

Registrants:
1,219

22% member / 78% nonmember



Digital Transformation



Webinars

4

Registrants:

604

62% member to 37% nonmember

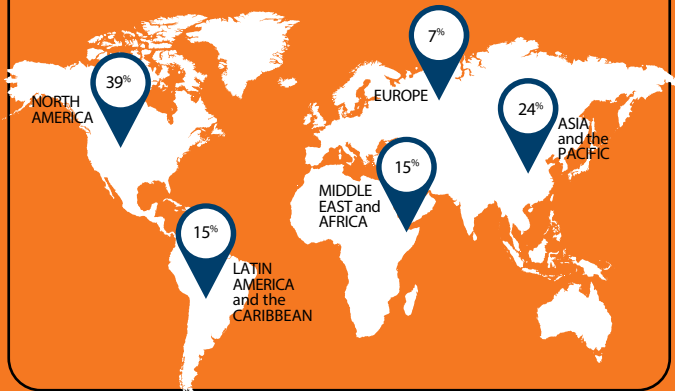
Conferences

1

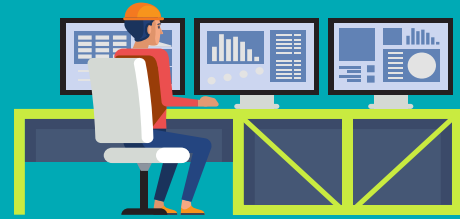
Registrants:

783

70% member / 30% nonmember



Process Control and Instrumentation



Webinars

6

Registrants:

1,681

54% member to 46% nonmember

Conferences

1

Registrants:

1,116

59% member / 41% nonmember



InTech and InTech Focus

6 Issues Published

82 featured articles

205,000+ magazines printed

140,000 digital issues distributed

4 InTech Focus ebooks

21 InTech Plus editions



January/February



March/April



May/June



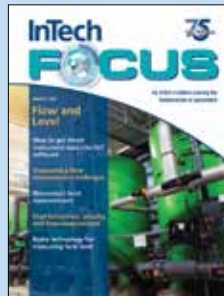
July/August



September/October
75th Anniversary
Special Edition



November/December



March



May



September



November



InTech 75th Anniversary Special Edition

12 Articles
17 Member Remembrances
11 Standards Profiles

26 Titans of Automation
21 Automation Milestones
4 Megatrends Identified

83 topical newsletter editions, each reaching an average of **124,000** recipients

Newsletter editions

23 Automation Insights

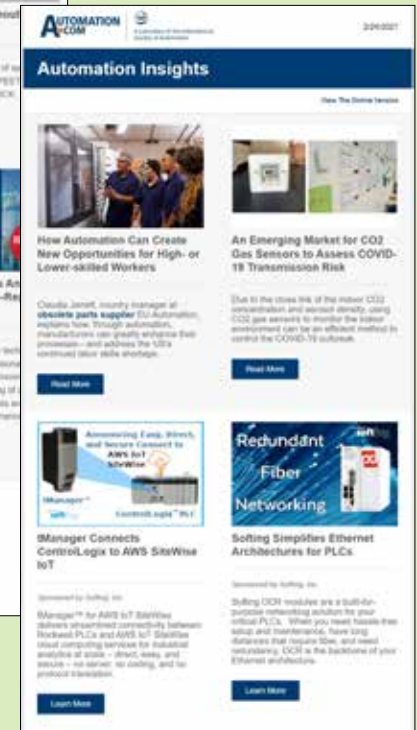
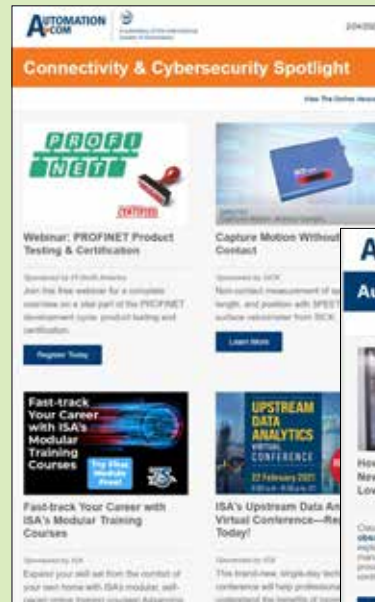
15 Industry 4.0 & Smart Manufacturing

15 Cybersecurity & Connectivity

10 Process Automation

13 Factory Automation

7 Operations & Management





Cybersecurity

6

Webinars

310

average registrants

2

Ebooks



IIoT & Smart Manufacturing

4

Webinars

440

average registrants

3

Ebooks



Digital Transformation

3

Webinars

360

average registrants



Process Control and Instrumentation

1

Webinar

400

average registrants

1

Ebook

5,000+

Webinar registrations

4

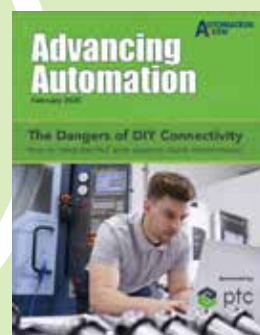
Sponsored ebooks



Bill Lydon's Top Trends for Automation & Control
sponsored by Automation.com



Air/Gas Flow Measurement Solutions Handbook
sponsored by FCI



The Dangers of DIY Connectivity
sponsored by PTC



OPC UA Users and Experts Knowledge
sponsored by OPC Foundation

3

New books published



Manufacturing Execution Systems: An Operations Management Approach



Start-Up: A Technician's Guide, Third Edition

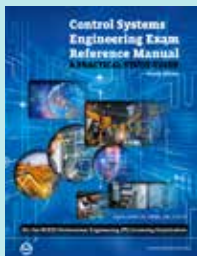


Basic and Advanced Regulatory Control: System Design and Application, 3rd Edition – Revised

Bestsellers



A Guide to the Automation Body of Knowledge, Third Edition



Control Systems Engineering Exam Reference Manual



Calibration: A Technician's Guide



The Condensed Handbook of Measurement and Control, Fourth Edition



Measurement and Control Basics, Fifth Edition



Control Systems Engineering (CSE) Study Guide, Sixth Edition



Troubleshooting: A Technician's Guide, Second Edition



Safety Instrumented System Design: Techniques and Design Verification



Analytical Instrumentation



Control Systems Engineer Technical Reference Handbook

6 New standards published

**ISA/IEC 62443-3-2,
Security Risk
Assessment for
System Design**

**ISA-95.00.08,
Enterprise/Control
System Integration –
Information
Exchange Profiles**

**ISA-TR84.00.04,
Part 1 -
Guidelines for the
Implementation of
ANSI/ISA-61511-1**

**ISA-84.91.01,
Identification and
Mechanical Integrity
of Process Safety
Controls, Alarms, and
Interlocks in the Process
Industry Sector**

**ISA/IEC-TR 63082-1,
Intelligent Device
Management -
Part 1: Concepts
and Terminology**

**ISA-96.03.01,
Guidelines for the
Specification of Heavy
Duty Pneumatically
Powered Quarter-
Turn Valve Actuators**

Highlights

1

ISA and IHS Global Inc. negotiated and agreed to a new five-year contract by which IHS continues to be the primary worldwide online distributor of ISA standards.

2

New liaisons were established with the International Electrotechnical Commission (IEC) by which ISA standards committee members are taking an active role in the adoption and development of two ISA original standards as IEC standards: ISA-88, Batch Control, and ISA-101, Human-Machine Interface.

3

Feature article in 75th anniversary *InTech* provided insiders' perspectives on the developments and impacts of groundbreaking ISA standards in areas including cybersecurity, batch process control, enterprise-control system integration, safety instrumented systems, management of alarm systems, and human-machine interface.

Survey

The Value of Standards

A worldwide survey of automation engineering professionals highlighted the essential role of standards in achieving operational excellence in industry. Responses showed that large majorities believe industry standards make processes and facilities safer and more cyber-secure, help companies prove compliance to regulations, and facilitate training and cross-training in technical jobs.

Value of participating in Standards Committees



Contribute to industry and ISA



Staying up to date



Sharing and accessing knowledge

Which benefits do you believe industry standards deliver?

96%

Standards will be important or extremely important in the future.

87%

Industry standards make processes and facilities safer.

81%

Industry standards help companies prove compliance to regulations.

67%

Industry standards make it easier to train and cross-train people in technical jobs.

63%

Industry standards increase productivity.

57%

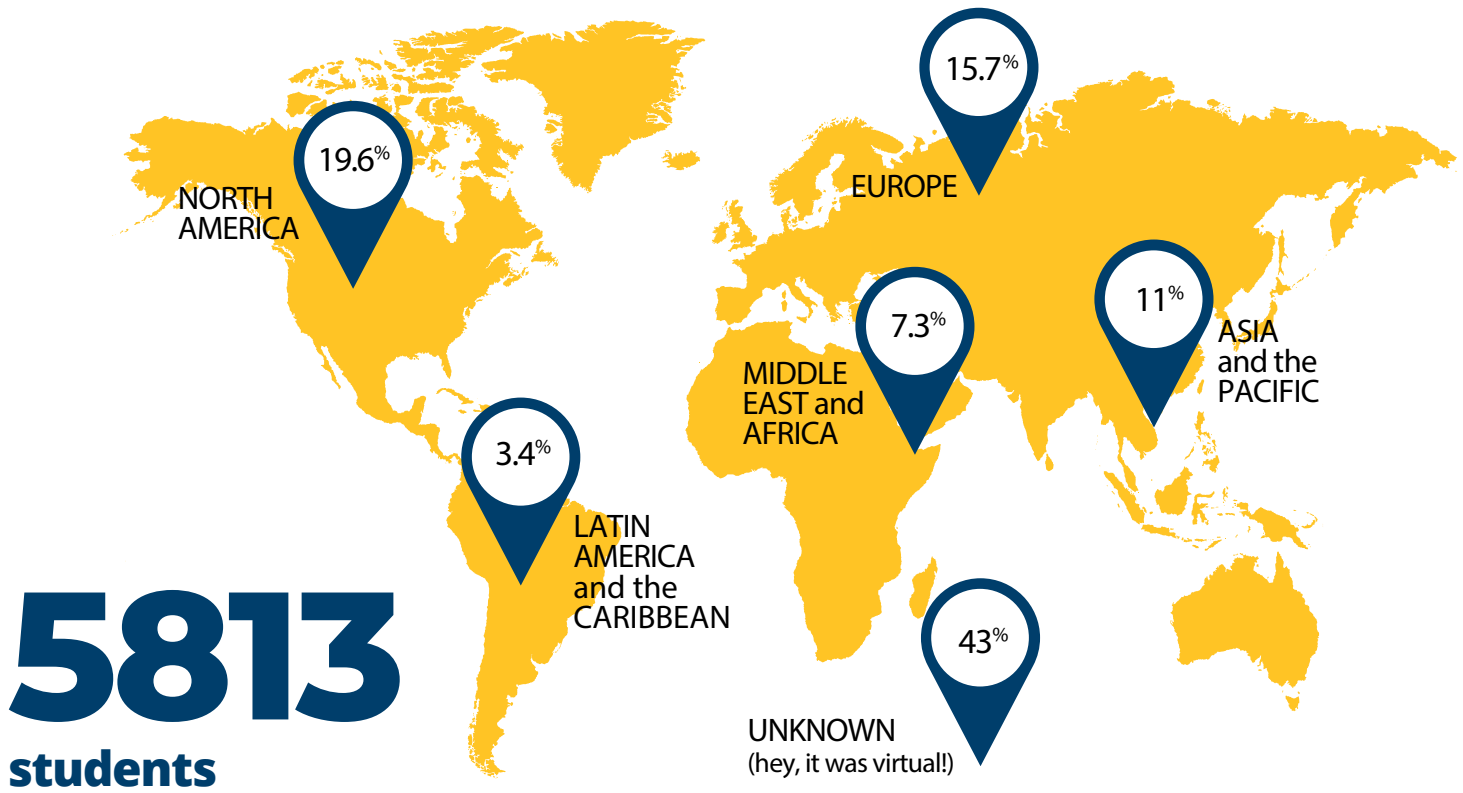
Industry standards make processes and facilities more cyber-secure.

TOP 5 Training Courses by revenue and attendance



Now available digitally

IC30M	SCADA Systems Integration
IC39M	Management of Alarm Systems
EC00M	Certified Automation Professional® (CAP®) Exam Review Course
TS00M	Certified Control Systems Technician® (CCST®) Level 1 Review Course
EC51CTM	Technical Operations & Maintenance Roles in the Safety Lifecycle
IC46M	Overview of ISA/IEC 62443 for Product Suppliers
IC87M	Cyber Sensors: Advancements in Automation Cyber Physical Security
IC85M	Overview of Industrial Wireless Technology



5813
students

CERTIFICATION

ISA Certified Automation Professional® (CAP®)



Certified Automation Professionals:
New: **42**

677



Certified Automation Professional Associate (CAPA):
New: **5**

10

ISA Certified Control Systems Technician® (CCST®)



Associate

32
Total
4
New

Level 1

1591
Total
83
New

Level 2

440
Total
22
New

Level 3

429
Total
15
New

ISA/IEC 61511 Safety Instrumented Systems Certificate Program



Total: **260** New: **31**



Total: **58** New: **13**



Total: **52** New: **11**



Total: **118**

ISA/IEC 62443 Cybersecurity Certificate Program



Total: **1,064**
New: **407**



Total: **462**
New: **154**



Total: **294**
New: **100**



Total: **259**
New: **84**



Total: **248**

MEMBERSHIP

Professional members

12,721

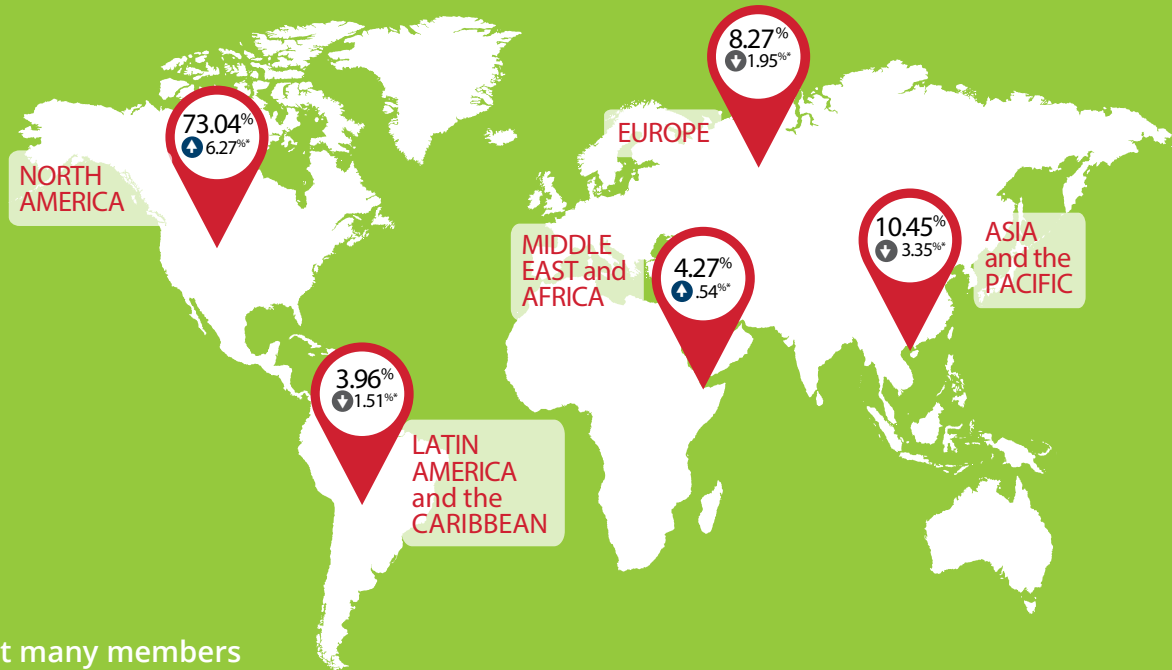
Total

-8.63%

Growth Rate

102

countries



§ In understanding that many members may be experiencing lay-offs, furloughs, and salary reductions, ISA offers a hardship waiver by request.

* This denotes the shift in the percentage of members by area from the previous year.

Student members

2,613

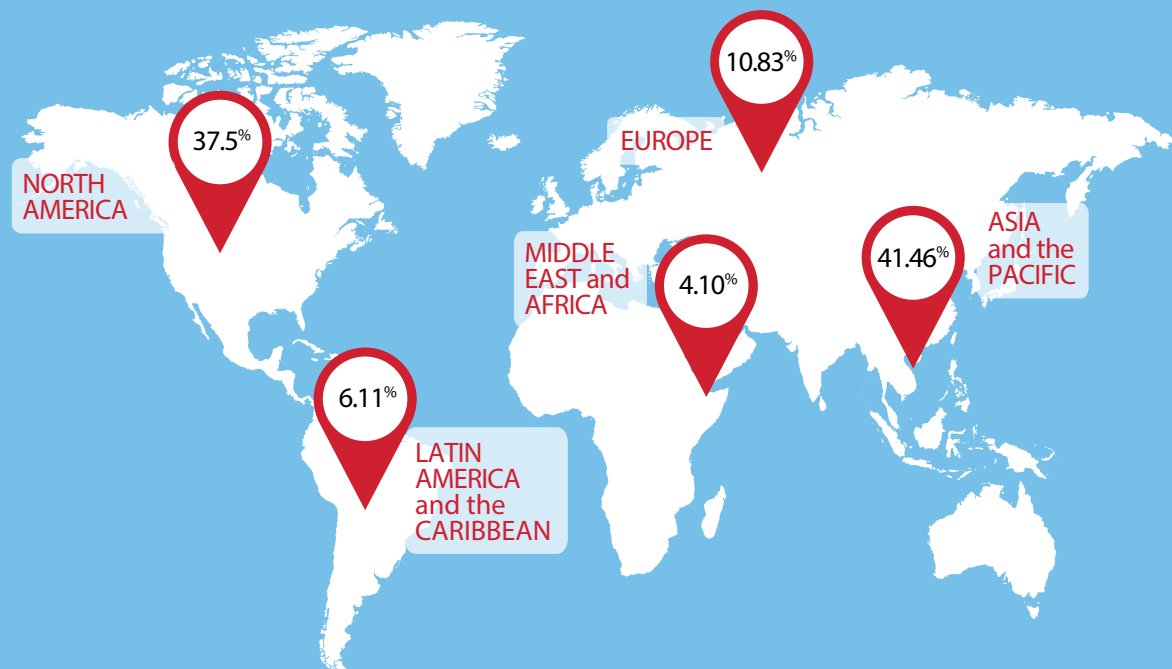
Total

-19%

Growth Rate

53

countries





Online engagement platform
launched in August 2020

Over **600**
topical discussion posts

Most Used Topic Tags

- Connectivity and Cybersecurity
- Instrumentation
- Oil and Gas
- Smart Manufacturing
- Operations and Management

Top 3 Discussion Threads (by replies)

- ISA Digital Twin
- Industrial Networks & Protocols
- What is Advanced Control?



Connect Live – interactive
topical discussions launched
in September 2020

12 sessions hosted by Presidents and
Technical Divisions

SECTIONS AND DIVISIONS

Celebrating Excellence

Bangalore
Section Excellence

Analysis
Division Excellence

120
Professional
Sections

110
Student Sections

17
Divisions



Dattatray Sawant
Section Leader
Excellence



Ed Naranjo
Division Leader
Excellence

EDUCATION FOUNDATION

24,000 USD

scholarships
awarded to 12
recipients



Member Satisfaction Survey

ISA regularly compares itself to other associations through benchmarking key performance metrics. A survey was conducted to explore member needs and perceptions as they relate to ISA's programs and services. The response rate was 15.86%.

Key Findings

31

Net Promoter Score*

9 points higher than 2019

Above the average score of 19 for scientific/engineering associations based on McKinley Advisors 2017 "The Health of Associations in the 21st Century" report.

79%

ISA is preferred membership association

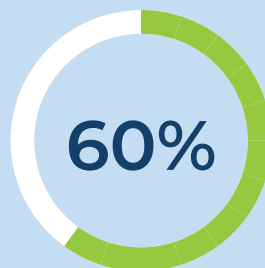
>50%

belong to other associations



The loyalty indicator used in the analysis is Net Promoter Score (NPS), the worldwide standard by which organizations measure, understand, and improve customer experience. The NPS is calculated by subtracting the percentage of those holding negative opinions of ISA from those likely to promote ISA.

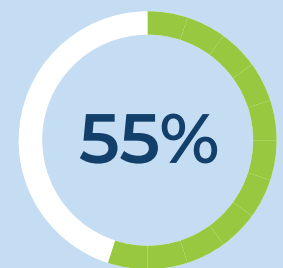
Of total respondents:



from North America



gender is male



over the age of 55

MEMBERSHIP

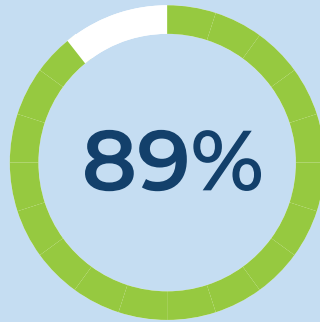
Young Professionals (YPs)

Formally launched in 2020, ISA Young Professionals (YP) is an inclusive community where young professionals can make an impact and influence the future of automation. Through the work of the YP Engagement Committee, YPs discover opportunities to develop leadership skills, enhance professional networks, and engage local and technical mentors.

Member Satisfaction Survey Results Respondents under age 35



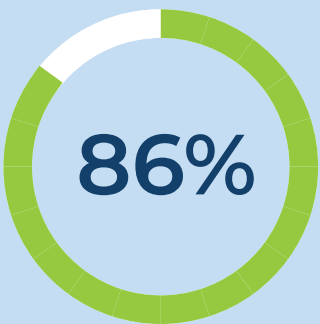
from outside North America



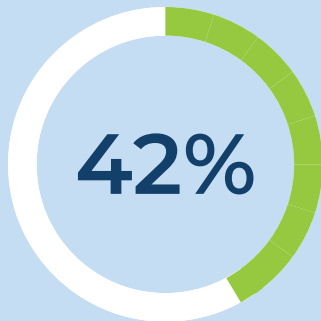
gender is male



members less than 2 years



ISA is preferred membership association



belong to other associations

Net Promoter Score

18

32

points higher than 2019

Key 2020 Accomplishment

Launched ISA Connect Live Fireside Chats – Engaging conversations with ISA's Past Presidents

Fireside Chat with 
former presidents

HONORS AND AWARDS

Fellows



Donald Dunn



David Rahn



John Sorge



Richard Van Fleet

Celebrating Excellence

Excellence in Technical Innovation,

Endowed by Honeywell UOP



Soloman Almadi

Mentoring Excellence



Greg McMillan

Excellence in Enduring Service



Catherine Andrews

Excellence in Technical Presentation



Abdulkadar Susnerwala

Standards Excellence



Donald Dunn



James Haw

Excellence in Education



Himanshu Patel

Volunteer Leader of the Year



Cheri Haarmeyer



Ian Verhappen



Clifford Wuertz

LEADERSHIP

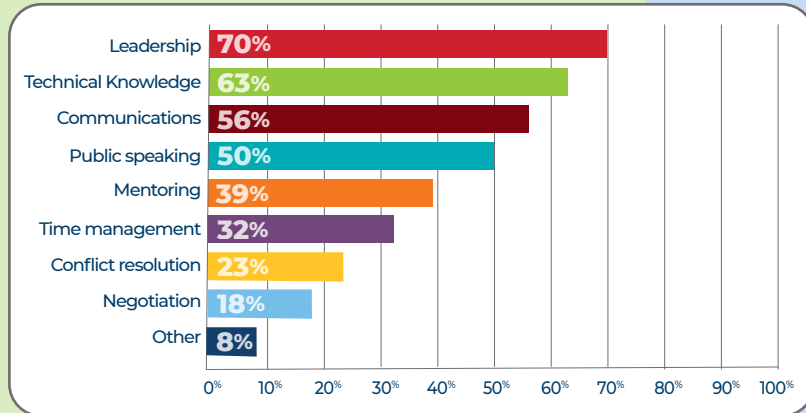
Leader Satisfaction Survey

The response rate of this annual survey: **11%**

Of the respondents, the leaders were from:

Sections	Operations Departments
83.18%	6.07%
Divisions	Technical Departments
14.49%	5.61%
Districts	and Executive Board
12.63%	6.54%

Skills gained by volunteering with ISA



Most rewarding part of being an ISA Leader



Succession



Company Support



New Leaders



39% section leaders served less than **4** years

16% division leaders served less than **4** years

Young Leaders

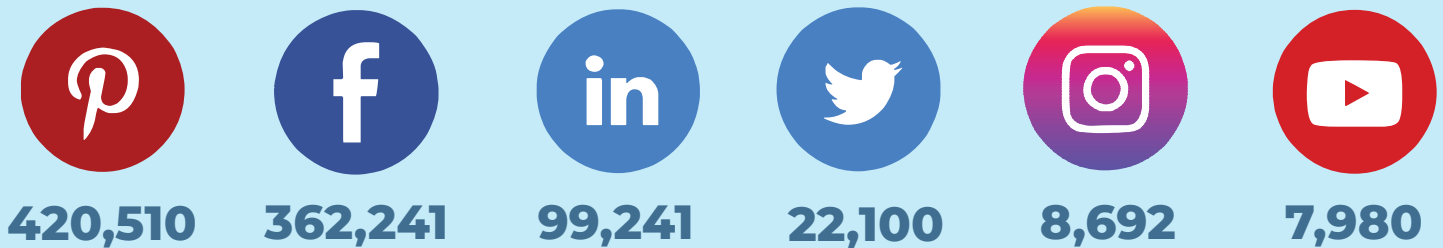


25% of section leaders are under the age of **36**

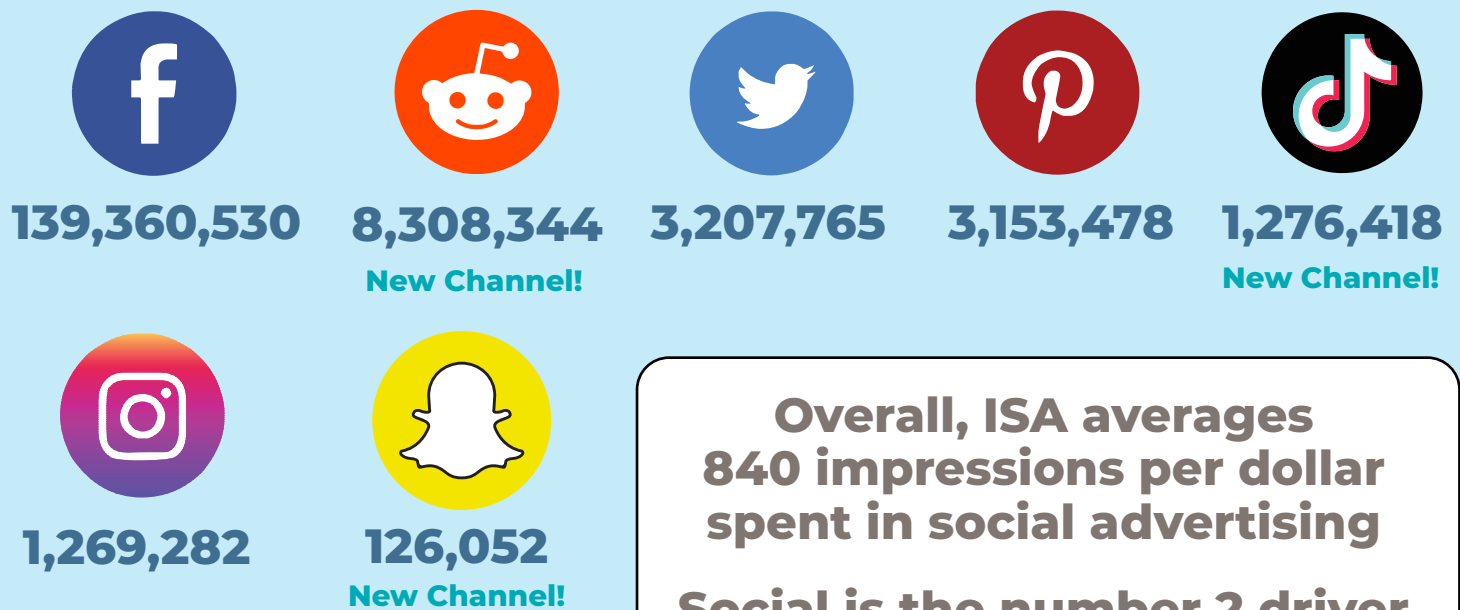
10% of division leaders are under the age of **36**

SOCIAL MEDIA

Followers by platform

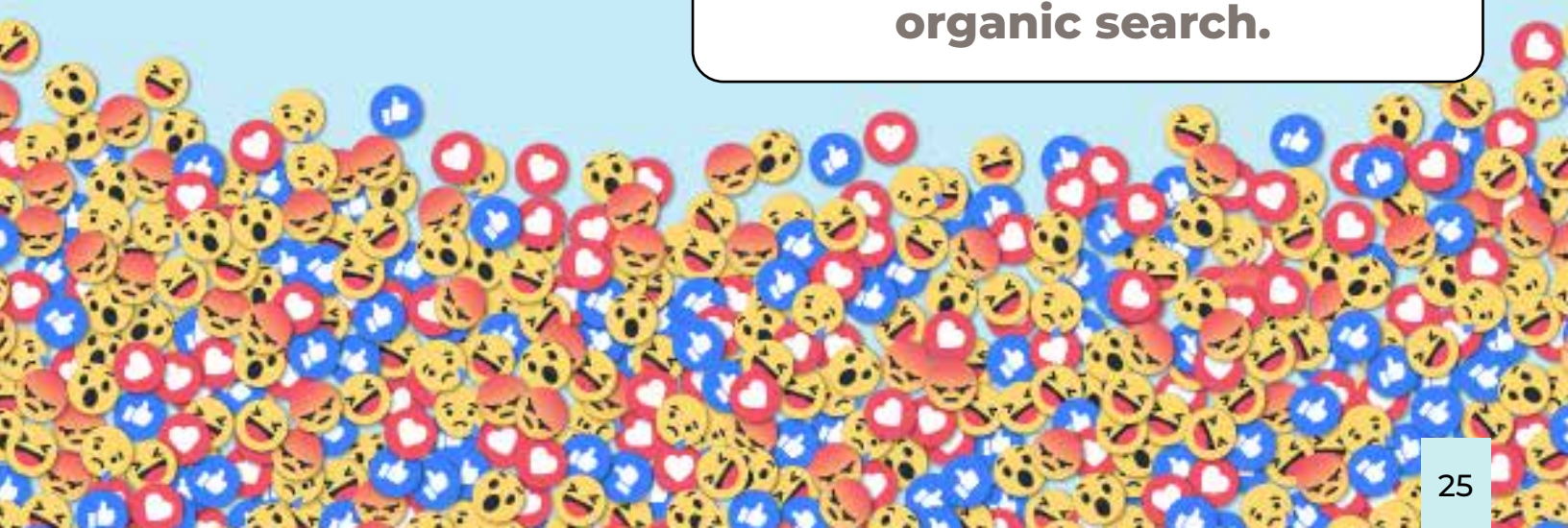


Paid Impressions by platform



Overall, ISA averages 840 impressions per dollar spent in social advertising

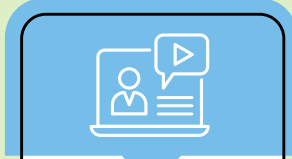
Social is the number 2 driver of all traffic to all isa.org pages only behind organic search.



ISASecure®



6
In-person
event
presentations



8
webinars



Co-sponsored
a virtual
conference
with Saudi
Aramco



Collaborated
with ISAGCA
in study of
IIOT devices
and systems



ISA/IEC 62443 ISASecure® Certification

- **13** new SDLA development process certifications (62443-4-1) including Emerson, Johnson Controls, ABB, GE, Yokogawa, Wartsila, Honeywell, Schneider Electric
- **11** new CSA component certifications (62443-4-2) including Honeywell, GE, ABB, Wartsila, Schneider Electric
- **1** SSA system certification (62443-3-3) Emerson

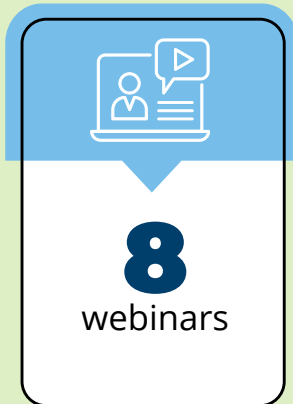
Accredited Certification Bodies

by location

2 Singapore **1** Taiwan **2** Netherlands **1** Spain **1** Italy **1** Switzerland **1** Canada



ISA100 Wireless Certified™



Completed OPC UA project resulting in a formal OPC specification for the ISA100 Wireless application layer



ISA100 Wireless Certification

- Certified **7** products including devices from Honeywell, Yokogawa, Armstrong International and Centro
- Sold **4** ISA100 Wireless rapid development kits (RDK) which reduce the time to develop a working ISA100 Wireless device from 14 months to 3 weeks

ISA GLOBAL CYBERSECURITY ALLIANCE

- Established ICS4ICS program (Incident Command System for Industrial Control Systems) under ISAGCA in a public/private partnership with US DHS and FEMA
- Established an advocacy group to address regulations and legislation
- Began collaborations with universities and INL on formalizing training and education programs for cybersecurity workforce development

Formalized board and elected chairs



(L) **Megan Samford**, Chair
Schneider Electric
(R) **Sharul Rashid**, Vice-Chair
Petronas

Published 2 ISA/IEC 62443 work products



Founding Members



FINANCIALS

2020 Operational Net

Actual: -563,559 / Budget: 35,180

ISA experienced an almost 30% decline in revenue directly related to the COVID-19 pandemic. While costs were reduced 23%, the operating results were a deficit. Even with these results, ISA posted a net profit of over 3.4 million when considering interest and dividend income and realized and unrealized gains from investments.

ISA remains financially sound with total assets in excess of 40 million and liquid assets (current assets plus marketable securities) more than six times the total liabilities.

Revenue by Strategic Initiative

Industry Reach and Awareness



2,039,451

Technical Education and Certification



5,265,416

Membership Development and Engagement



1,127,557

Leadership and Professional Skill Development



121,458

Assets

5,254,710

Current Assets

29,981,095

Marketable Securities

4,572,406

Fixed Assets

1,063,468

Subsidiary and Other Assets

40,871,679

Total Assets

Liabilities and Net Assets

5,758,860

Total Liabilities

31,692,760

Net Assets

3,420,059

YTD Surplus

40,871,679

Total Liabilities and Net Assets