



International Council on Systems Engineering

A better world through a systems approach



2023 INCOSE ANNUAL REPORT

INCOSE

INTRODUCTION

The International Council on Systems Engineering (INCOSE) is a not-for-profit membership organization founded to develop and disseminate the transdisciplinary principles and practices that enable the realization of successful systems.

ABOUT US

INCOSE is designed to connect systems engineering professionals with educational, networking, and career-advancement opportunities in the interest of developing the global community of systems engineers and systems approaches to problems.

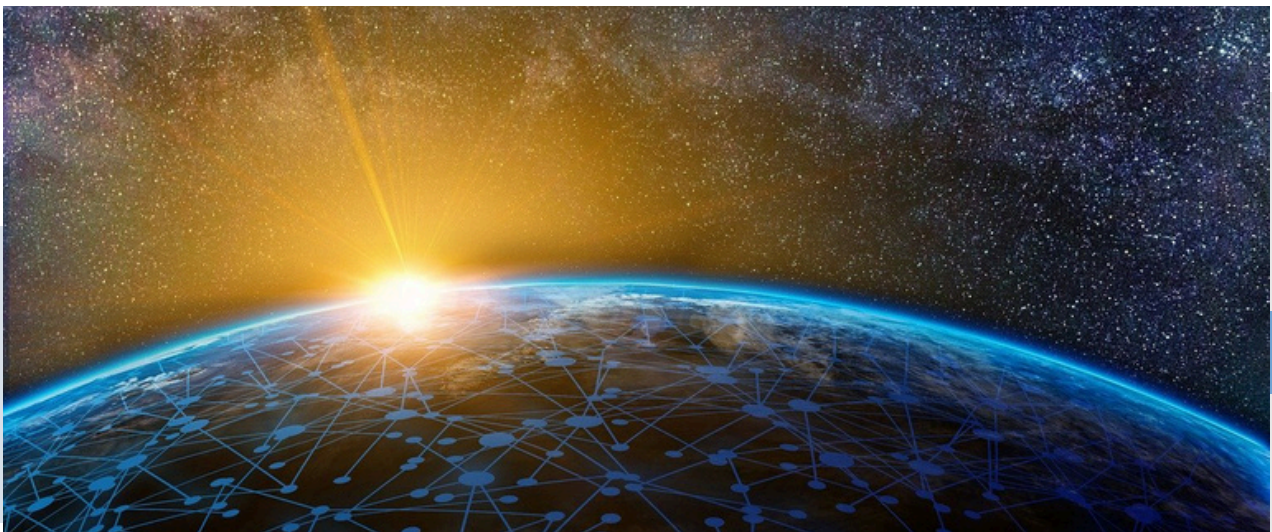
We are also focused on producing state-of-the-art work products that support and enhance this discipline's visibility in the world.

OUR MISSION

Our mission is to address complex societal and technical challenges by enabling, promoting, and advancing systems engineering and systems approaches.

OUR VISION

A better world through a systems approach.



MESSAGE FROM THE PRESIDENT



Members, colleagues, and systems community stakeholders,

It is my honor to present this annual report, highlighting our organization's significant accomplishments in 2023.

The last year of my presidency was a time of significant change and growth for INCOSE. We saw record-setting numbers for our flagship International Workshop and International Symposium events. We recognized outstanding members with awards, published valuable new resources like the Systems Engineering Competency Assessment Guide and the Natural Systems Primer, and launched several new initiatives, including a member survey and SWOT analysis. INCOSE also began hiring a full-time professional staff to align the organization with professional association best practices and maximize the time and energy of our volunteers.

Last year, there was a significant increase in membership, reflecting the growing global recognition of the value of systems engineering. Our chapters and working groups were active in hosting events, developing educational materials, and conducting research that pushed the boundaries of the field. INCOSE's online following grew to record numbers, and the continued engagement of INCOSE in local industry communities worldwide, both virtually and in-person, has propelled our organization toward becoming the world's trusted authority in systems engineering.

This annual report provides a detailed look at INCOSE's achievements over the past year. It includes information about our membership growth, geographic presence, influence on the greater systems engineering community, publications, and many other initiatives.

I am proud of the work INCOSE accomplished in 2023 and am confident that we will continue to make significant contributions to systems engineering in the years to come.

I want to thank our members, volunteers, and staff for their dedication and hard work. Together, we are making a difference in the world.

My sincerest regards,

Marilee Wheaton

INCOSE President 2022 & 2023

2023 INCOSE MEMBERS & ASSOCIATES

INCOSE's influence extends worldwide, with a thriving community of members and associates actively shaping the landscape of systems engineering. This collaborative network spans countries, embodying the organization's commitment to fostering a global community dedicated to advancing the practice and impact of systems engineering.

TYPES OF INCOSE **MEMBERSHIP**

Regular

Systems engineering professionals from corporate management, government & program management, academia, research & development, science and engineering, business development, and many more.

Senior

Individual members qualify for the Senior category if they are at least 65 years of age at the time they join or renew their membership

Student

Students enrolled in universities or colleges pursuing degrees in systems engineering or related fields

Lifetime

Lifelong INCOSE membership

INCOSE ASSOCIATES

In addition to individual members, INCOSE has **Corporate Advisory Board (CAB) Associates**.

A **CAB Associate** is a complimentary membership offered to employees or students of organizations that are members of the CAB. Each CAB organization is allocated a maximum number of CAB Associates based on their CAB membership status. Those Associates can upgrade their membership to individual membership (full or student) at a discounted rate.

All INCOSE Associates gain access to valuable resources not available to the public, including:

- Past symposia papers and proceedings
- SE Handbook
- Systems Engineering Journal
- Technical products
- Past webinar recordings

INCOSE's Corporate Advisory Board (CAB) acts as the "Voice of the Customer" for the organization's leadership team. The CAB comprises organizations working in and supporting systems engineering, including large corporations, government agencies, engineering and consulting firms, not-for-profit organizations, universities, and more. By having this broad representation, the CAB can ensure that INCOSE considers the perspectives of various stakeholders within the systems engineering field. This fosters the development of resources and standards that benefit a wide range of organizations.

To learn more about the CAB and view a list of all current CAB members, visit the [Corporate Advisory Board Webpage](#).

13,057

INDIVIDUAL
MEMBERS

11,702

REGULAR
MEMBERS

602

SENIOR
MEMBERS

726

STUDENT
MEMBERS

27

LIFETIME
MEMBERS

10,062

CAB
ASSOCIATES

23,119

MEMBERS & ASSOCIATES

+9.7%

in comparison with 2022

13,057

INDIVIDUAL
MEMBERS

11,702

REGULAR
MEMBERS

602

SENIOR
MEMBERS

726

STUDENT
MEMBERS

27

LIFETIME
MEMBERS

+11.1%

in comparison with 2022

10,062

CAB
ASSOCIATES

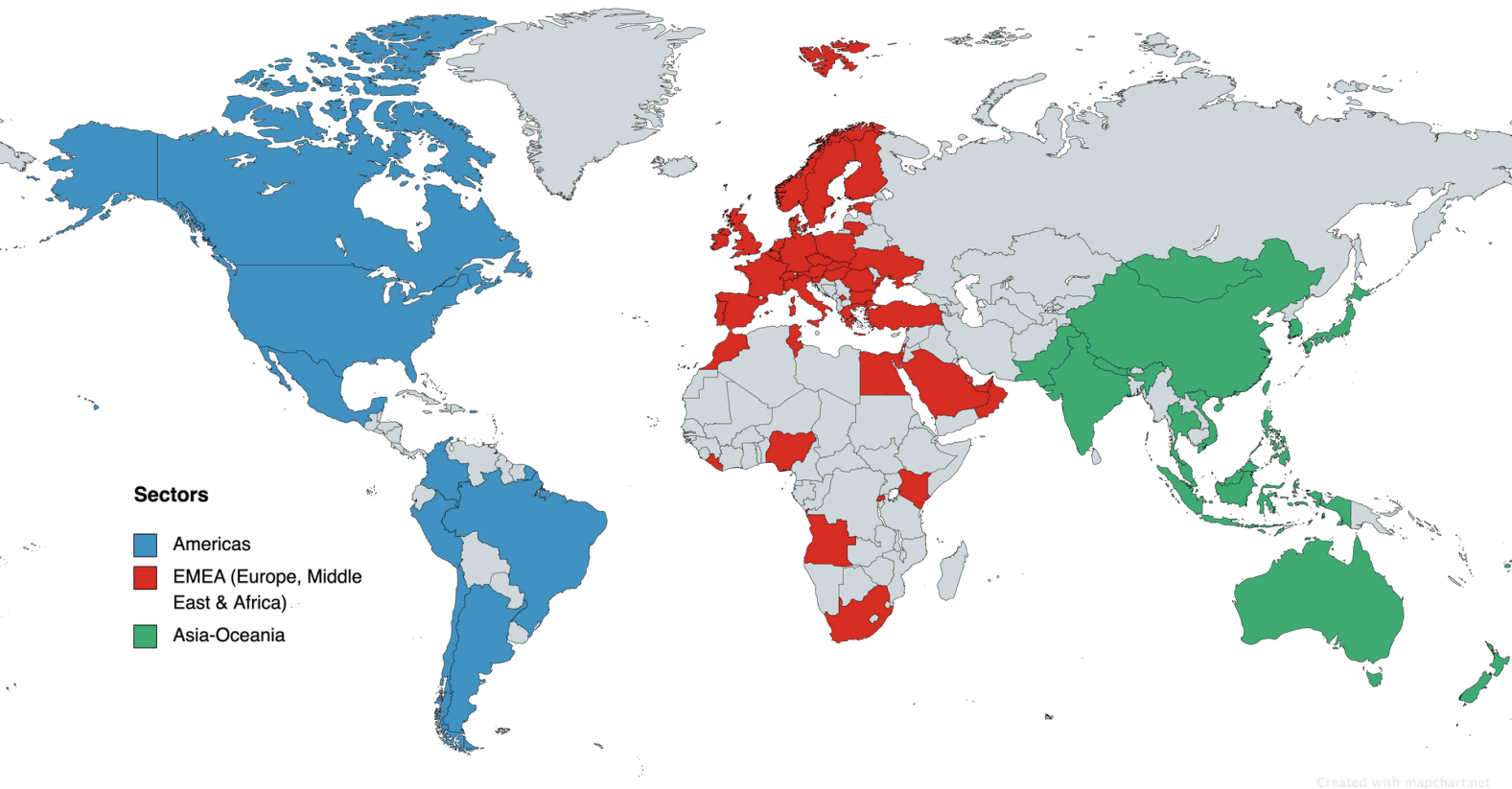
+10.3%

in comparison with 2022

23,119

MEMBERS & ASSOCIATES

COUNTRIES WITH INCOSE MEMBERS



INCOSE members are geographically distributed across a diverse and expansive network, spanning 73 countries and organized into three major sectors:

- Sector I: Americas
- Sector II: Europe, Middle East, and Africa (EMEA)
- Sector III: Asia-Oceania

This global reach reflects the inclusive and collaborative nature of our community, showcasing a collective commitment to advancing systems engineering principles across different continents and cultural landscapes. The extensive presence of INCOSE members in these three sectors underscores the organization's dedication to fostering a worldwide network of professionals dedicated to the continual advancement of systems engineering.

MEMBERS ARE LOCATED IN 73 COUNTRIES

Americas

Argentina
Brazil
Canada
Chile
Colombia
French Guiana
Mexico
Peru
Puerto Rico
United States

Asia-Oceania

Australia
China
Fiji
Hong Kong
India
Indonesia
Japan
Korea, Republic of
Malaysia
Mongolia
Nepal
New Zealand
Pakistan
Philippines
Singapore
Taiwan
Thailand
Vietnam

Europe, Middle East & Africa

Angola
Austria
Bahrain
Belgium
Bulgaria

Czech Republic
Denmark
Egypt
Estonia
Finland
France
Germany
Greece
Hungary
Ireland
Israel
Italy
Kenya
Kosovo
Liberia
Lithuania
Luxembourg
Morocco
Netherlands
Nigeria
Norway
Oman
Poland
Portugal
Qatar
Romania
Rwanda
Saudi Arabia
Slovakia
Slovenia
South Africa
Spain
Svalbard and Jan Mayen
Sweden
Switzerland
Tunisia
Turkey
Ukraine
United Arab Emirates
United Kingdom

2023 NUMBER OF CHAPTERS

Americas

Established	41
Emerging	1
	<hr/>
	42

Asia-Oceania

Established	8
Emerging	1
	<hr/>
	9

Europe, Middle East & Africa

Established	16
Emerging	1
	<hr/>
	17

68 Established & Emerging Chapters

CHAPTERS ARE LOCATED IN 29 COUNTRIES

Americas

USA
Brazil
Canada
LatAm

Asia-Oceania

China
India
Japan
Korea
New Zealand
Australia
Singapore
Thailand

Europe, Middle East & Africa

Belgium
Denmark
Finland
France
Germany
Israel
Italia
Netherlands
Norway
Poland
South Africa
Spain
Switzerland
Sweden
Tunisia
Turkey
United Kingdom

ACTIVE CAB ORGANIZATIONS

AM General LLC
 AVIAGE SYSTEMS
 Aerospace Corporation, The
 Airbus
 Analog Devices, Inc.
 Arcfield
 Australian National University
 Aviation Industry Corporation of
 China, LTD
 BAE Systems
 BMT Canada
 Bechtel
 Becton Dickinson
 Belcan Engineering Group LLC
 Boeing Company, The
 Booz Allen Hamilton Inc.
 C.S. Draper Laboratory, Inc.
 CACI, Inc - Federal
 California State University
 Dominguez Hills
 Carnegie Mellon University Software
 Engineering Institute
 Change Vision, Inc.
 Colorado State University Systems
 Engineering Programs
 Cornell University
 Cranfield University
 Cubic Corporation
 Cummins, Inc.
 Cybernet MBSE Co, Ltd
 DENTSU SOKEN INC
 Dassault Systèmes
 Defense Acquisition University
 Deloitte Consulting, LLC
 Denso Create Inc
 Drexel University
 EMBRAER
 Eaton
 Eindhoven University of Technology
 FAMU-FSU College of Engineering
 Federal Aviation Administration (U.S.)
 Ford Motor Company
 GE Aerospace

General Dynamics
 General Motors
 George Mason University
 Georgia Institute of Technology
 IBM
 ISAE - Supaero
 ISDEFE
 IVECO Group
 Idaho National Laboratory
 Jama Software
 Jet Propulsion Laboratory
 John Deere & Company
 Johns Hopkins University
 KBR, Inc.
 KEIO University
 L3Harris Technologies
 LEONARDO
 Lawrence Livermore National
 Laboratory
 Leidos
 Lockheed Martin Corporation
 Los Alamos National Laboratory
 Loyola Marymount University
 MBDA (UK) Ltd
 MITRE Corporation, The
 Magna
 Mahindra University
 ManTech International Corporation
 Marquette University
 Massachusetts Institute of
 Technology
 Medtronic
 MetaTech Consulting Inc.
 Missouri University of Science &
 Technology
 Mitsubishi Electric Corporation
 Mitsubishi Heavy Industries, Ltd
 Modern Technology Solutions Inc
 National Aeronautics and Space
 Administration (NASA)
 National Reconnaissance Office
 (NRO)

ACTIVE CAB ORGANIZATIONS

National Security Agency Enterprise Systems
 Naval Postgraduate School
 Nissan Motor Co, Ltd
 Northrop Grumman Corporation
 Pacific Northwest National Laboratory
 Pennsylvania State University
 Petronas International Corporation Limited
 Prime Solutions Group, Inc
 Project Performance International (PPI)
 Purdue University
 QRA Corporation
 RTX
 Rolls-Royce
 SAIC
 SPEC Innovations
 Saab AB
 Sandia National Laboratories
 Saudi Railway Company
 Shanghai Formal-Tech Information Technology Co., Ltd
 Shell
 Siemens
 Sierra Nevada Corporation
 Singapore Institute of Technology
 Southern Methodist University
 Stevens Institute of Technology
 Strategic Technical Services LLC
 Swedish Defence Materiel Administration (FMV)
 Systems Planning and Analysis
 TOSHIBA Corporation
 Taiwan Space Agency
 Tata Consultancy Services
 Thales
 The George Washington University
 The University of Arizona
 Torch Technologies
 Trane Technologies
 Tsinghua University

UK MoD
 US Department of Defense
 Universidade Federal De Minas Gerais
 University Of Lagos
 University Of Nairobi
 University of Alabama in Huntsville
 University of Arkansas
 University of California San Diego
 University of Connecticut
 University of Maryland
 University of Maryland Global Campus
 University of Maryland, Baltimore County
 University of Michigan, Ann Arbor
 University of New South Wales, The, Canberra
 University of Southern California
 University of Texas at El Paso (UTEP)
 VG2PLAY
 Veoneer US Safety Systems, LLC
 Virginia Tech
 Volvo Cars Corporation
 Volvo Construction Equipment
 Wabtec Corporation
 Weber State University
 Woodward Inc
 Worcester Polytechnic Institute (WPI)
 Zuken, Inc

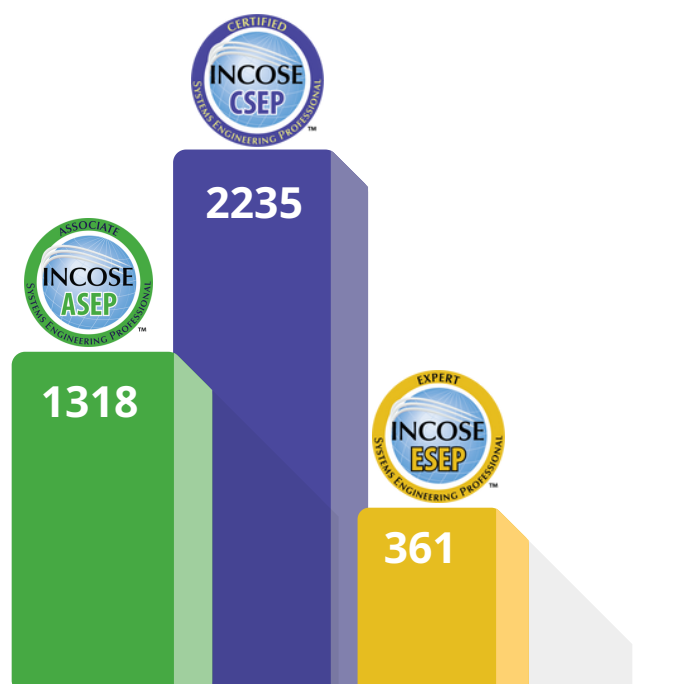
INCOSE CERTIFICATION

A major objective of INCOSE is to promote systems engineering knowledge, and one way of doing this is through our three-tiered certification program. INCOSE offers three levels of certification ASEP, CSEP and ESEP.

The **Associate Systems Engineering Professional** (ASEP) recognizes individuals as knowledgeable but without demonstrated SE experience. The qualification for the ASEP is possession of SE knowledge typical of a junior systems engineer, as evidenced by meeting the knowledge requirement.

The **Certified Systems Engineering Professional** (CSEP) recognizes systems engineering practitioners who have demonstrated knowledge and experience in many aspects of the discipline. The qualifications for this level include both SE knowledge and SE experience that serve various job profiles of an independent, all-round systems engineer.

The **Expert Systems Engineering Professional** (ESEP) certification is for those system engineers who have distinguished themselves by demonstrating both substantial experience and technical leadership. The ESEP has at least twenty years of systems engineering experience and is the person others seek with specific, challenging, technical questions. He or she is not an expert in all aspects of systems engineering but is the expert for some aspects of SE and could perform well in many.



Number of INCOSE Systems Engineering Professionals in 2023

2023 INCOSE **INCOSE EVENTS**

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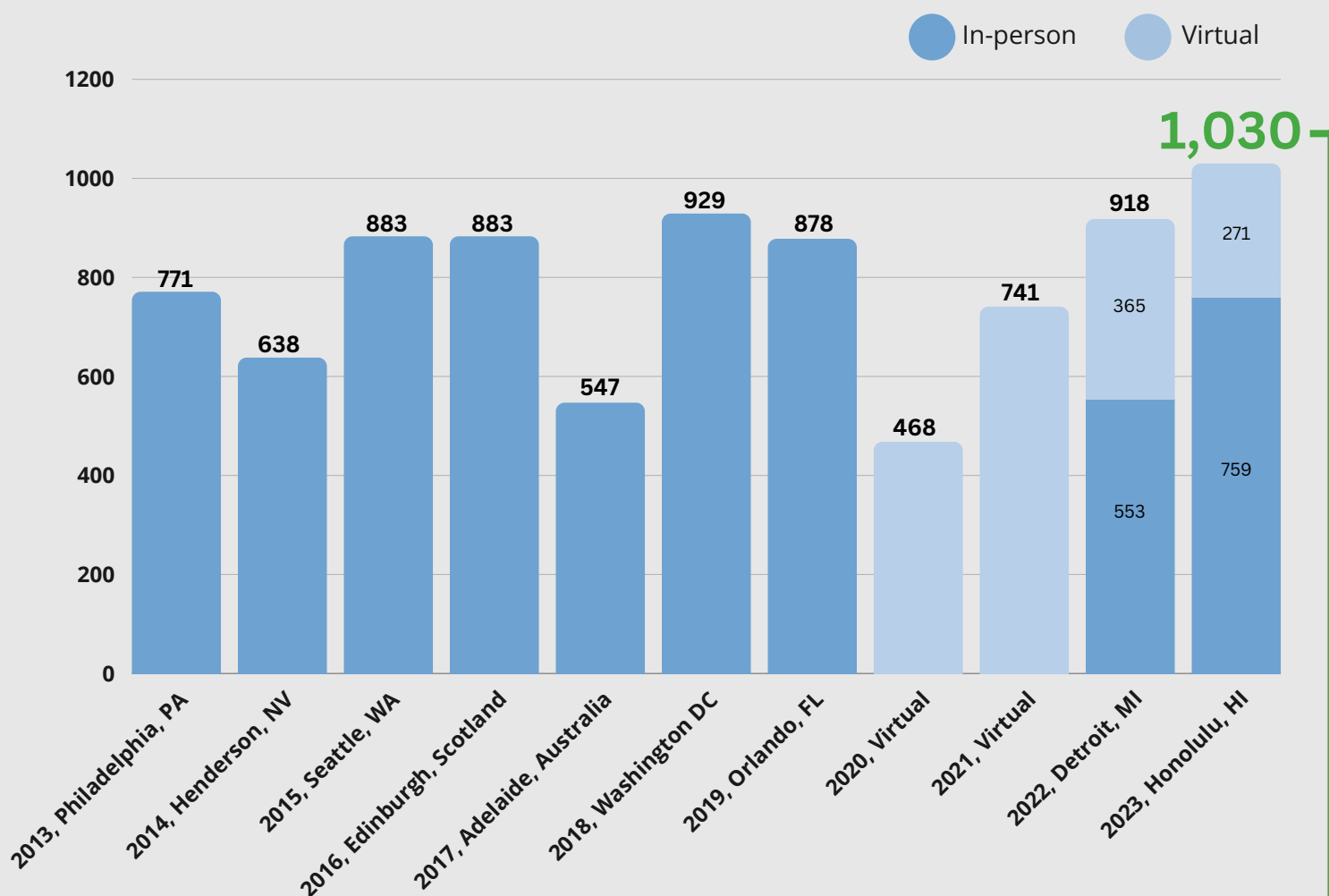
**INCOSE
INTERNATIONAL
SYMPOSIUM**

**INCOSE
INTERNATIONAL
WORKSHOP**

**ADDITIONAL
INCOSE EVENTS
AND CONFERENCES**

INCOSE INTERNATIONAL SYMPOSIUM

The INCOSE International Symposium (IS) is the premier international forum where practitioners, researchers, and educators share their insights, experiences, and innovations, furthering the practice of systems engineering. The symposium has occurred every year since 1991 and is the largest annual gathering of the systems engineering community.



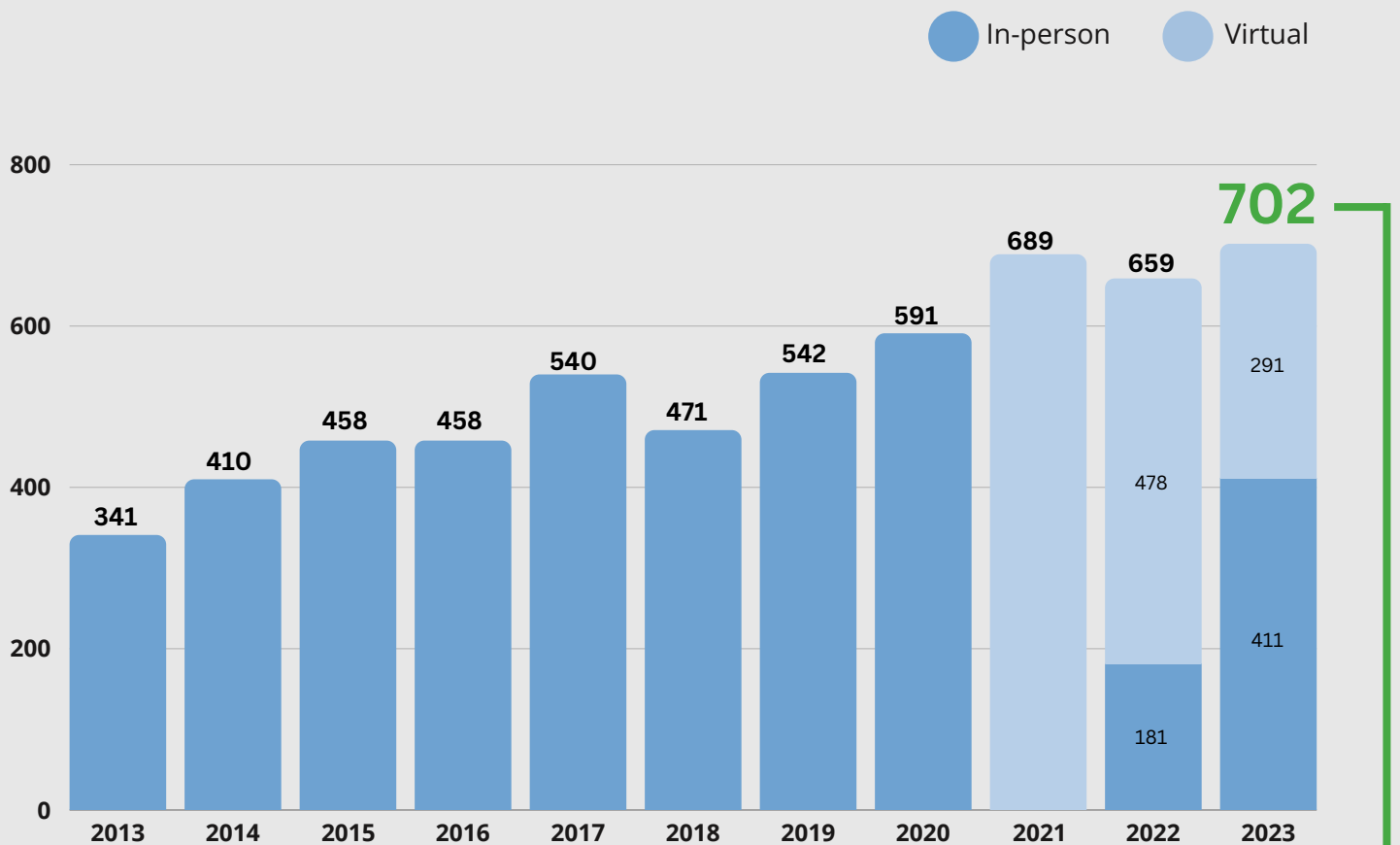
INCOSE International Symposium Attendance Figures (2013-2023)

Record breaking attendance in IS2023

1,030 attendees

INCOSE INTERNATIONAL WORKSHOP

The INCOSE International Workshop (IS) is the premier collaborative systems engineering event where professionals can contribute knowledge and experience to advance the discipline. Unlike INCOSE's annual International Symposium and other conferences, there are no papers, panels, or tutorial presentations. Instead, attendees spend four focused days working alongside fellow systems engineers who are there to make a difference. Systems engineers at all levels and from all backgrounds are encouraged to engage in working sessions and learn from one another as they advance systems engineering.



INCOSE International Workshop Attendance Figures (2013-2023)

Record breaking attendance in IW2023
702 attendees

ADDITIONAL INCOSE EVENTS AND CONFERENCES

In addition to the IS and IW, the INCOSE community also organizes regional conferences, working group sessions, and various domain-specific interest events and training. These events are typically smaller in scale compared to the flagship IS and IW and tend to focus on specific themes or target a particular geographical region.

Any INCOSE Working Group or Chapter can submit an event to be shared with the greater INCOSE membership. Between the ongoing advancements in hybrid event management and the open and welcoming nature of the community, INCOSE brings together the global systems engineering community for learning, networking, and professional development.

Regional conference highlights from 2023 included:



INCOSE PRODUCTS AND PUBLICATIONS

INCOSE develops cutting-edge resources to share its knowledge with the systems engineering community. These resources are developed by INCOSE experts with vast theoretical and practical knowledge, focusing on providing impactful guides for the community.

The leading publications that INCOSE produces are:

- **Systems Engineering Handbook:** a comprehensive reference guide considered the baseline knowledge for the discipline and practice of systems engineering. It is a valuable resource for anyone involved in the conception, development, and support of complex engineered systems.
- **INSIGHT Magazine:** a quarterly publication aimed at systems engineering practitioners. It is a critical resource for keeping up to date with the latest advancements and provides practical guidance and real-world examples for systems engineers.
- **Systems Engineering Journal:** an international scholarly journal and a primary source of multidisciplinary information for systems engineering theoretical foundations. Articles present original peer-reviewed research papers that explore new concepts, methodologies, and theoretical underpinnings of systems engineering.
- **Technical Products:** resources developed and published by INCOSE to provide formal information and guidance on various aspects of systems engineering. These products aim to equip practitioners with the knowledge and tools necessary to excel in the field.

You can find ALL INCOSE Products and Publications in the [INCOSE Store](#).

2023

Highlights



Key Themes

IN 2023
PUBLICATIONS

Complex Systems

Sustainability

Smart Cities

Human Systems
Integration

Future of Systems
Engineering (FuSE)

INCOSE SERVICES

Professional Development Portal (PDP) achieved Full Operational Capability (FOC) V1.0



Systems Engineering Laboratory launched



Technical Leadership Institute (TLI) Cohort 7 inducted and Cohort 9 onboarded



5 Calling All Systems programs hosted



Mentoring Service
Empowering Systems Engineers

Mentoring service established

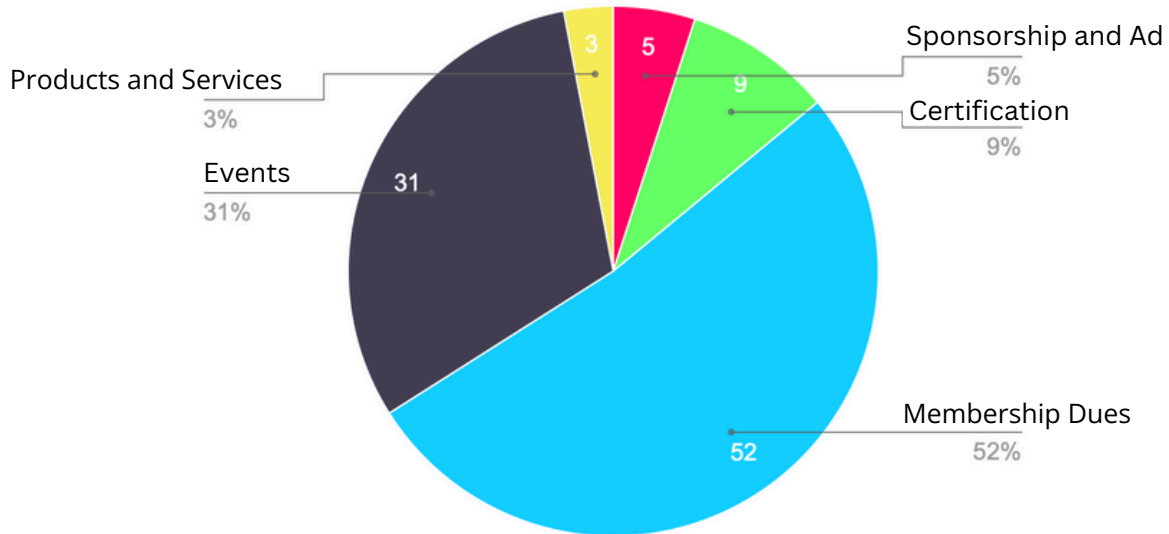
2023 Services
Highlights

For more information about each service, please click on the corresponding logo to visit its dedicated landing page.

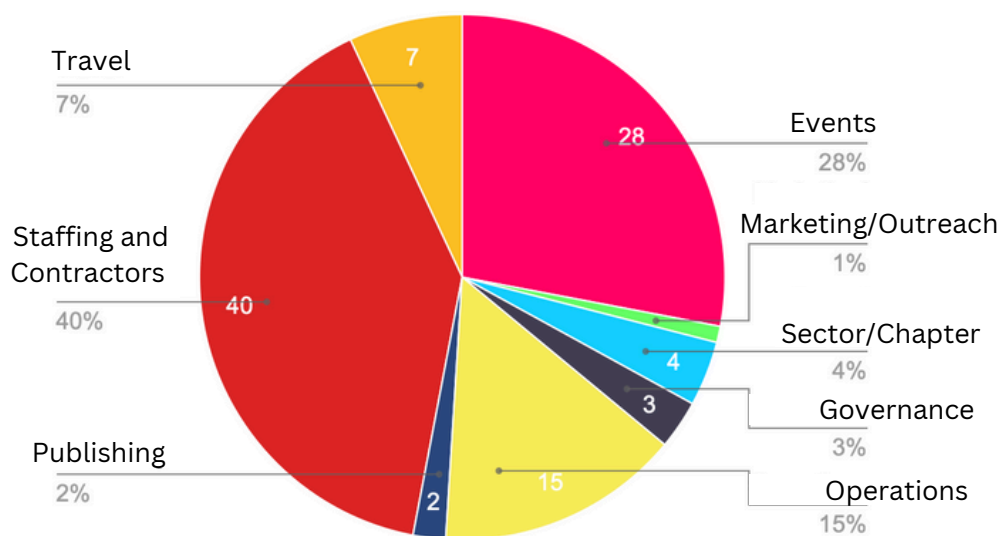
INCOSE FINANCIAL OVERVIEW

INCOSE is pleased to present a positive financial performance for the year 2023. We maintain a solid financial position supporting our vision to create a better world through a systems approach.

REVENUE



EXPENSES



A note on transparency: INCOSE members can request a more detailed financial report, including a complete breakdown of revenue and expenses. We are committed to transparency and accountability to our membership.

INCOSE BOARD OF DIRECTORS

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Ralf Hartmann
President-Elect (Officer)

Donald M. York
Secretary (Officer)

Michael J. Vinarcik
Treasurer (Officer)

Sven-Olaf "SOS" Schulze
Director, EMEA Sector

Serge Landry
Director, Asia-Oceania Sector

Richard Beasley
Director, Services

Renee L. Steinwand
Director, Americas Sector

Olivier Dessoude
Director, Technical Operations

Kirk Michealson
Director, Outreach

Alejandro Salado
Director, Academic Matters

David A. Long
Director, Strategic Integration

Ronald "Ron" Giachetti
Chair, Corporate Advisory Board

Barclay R. Brown
Director, CIO

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Executive Director

Michael Dahlberg
Deputy Director,
Corporate Advisory Board

Tami Katz
Deputy Director,
Technical Operations

Heidi L. Davidz
Deputy Director,
Services



A Better World Through a Systems Approach

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